

AN EXPLORATION OF THE BARRIERS AND FACILITATORS TO APPLICATION
FOLLOWING AN ADULT CONTINUING EDUCATION PROGRAM

by

CATHERINE ALLISON OGDEN

B.A.A., Ryerson Polytechnic University, 1990

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

Department of Educational Studies

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

April 1998

© Catherine Allison Ogden

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Educational Studies

The University of British Columbia
Vancouver, Canada

Date April 21 / 98

ABSTRACT

As adult educators we spend vast amounts of time identifying learning needs and developing and delivering programs to meet these needs. In this way we promote ourselves as change agents, intending that our programs will facilitate the development of new knowledge, skills or attitudes in those who participate in them.

Ironically, despite our good intentions, most of us know very little about the effects of our programs other than what we have witnessed in the classroom. The post-educational experience of learners remains a mystery. We are unsure of what takes place when learners leave our classrooms and return to their lives and try to put the ideas and skills they learned into action. Whether and how they put this new learning into action continues to elude us.

In this study, the post-educational experience of adults was explored through the framework of Application, a complex process that has recently been revisited in the adult education literature. As very little literature is available on application, various other related processes were explored to inform an understanding of application. These processes are described in the literature as implementation, utilization, transfer and diffusion.

Through a qualitative case study design, participant's perceptions of the meaning of application were explored along with their thoughts on the factors that influence application. Nine individual interviews were conducted. At the completion of the interviews, and after a preliminary analysis of the data, a follow-up focus group was held to explore areas of interest and areas requiring further elaboration and clarification.

For the most part, the findings of this study are consistent with findings of a comparable study. Application is a complicated and messy process that is influenced by multiple factors. Instead of one clear path to application, there are many different routes.

Despite the similarity, this study has some interesting and unique findings.

Application is perceived as visible action. Ideas are adapted to fit both context and personal style, and yet an understanding of what constitutes an adaptation is unclear.

Multiple factors seem to influence learners' perceptions about the value of the program ideas, which in turn shape whether and how application occurs. Application appears to occur within a framework of decision making. It is the result of a series of actions versus one instantaneous act.

While helping to illuminate some of the mysteries of the post-educational experience, this study identifies areas for further study. More research is needed to better understand the role of decision making and how this process begins, evolves and ends. The extent to which value is a more significant influence on application also needs to be explored. Awareness of application and the post-educational experience needs to be developed with learners, so they are better prepared for its challenges and better equipped to discuss and provide insights into the process.

TABLE OF CONTENTS

ABSTRACT	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
ACKNOWLEDGEMENT	viii
CHAPTER 1 INTRODUCTION	1
..... A Personal Puzzle	1
..... A Corporate Concern	2
..... Significance	3
..... General Purpose Statement	5
CHAPTER TWO LITERATURE REVIEW	7
..... Key Terms	7
..... A Review of Related Processes: Informing and Understanding of Application	11
..... Implementation	11
..... The Fidelity-Adaptation Debate	12
..... Barriers and Facilitators to Implementation	15
..... Taking Meaning from Implementation: What Does it Mean for the Post-Adult Education Experience?	19
..... Utilization	21
..... Instrumental vs. Conceptual Use	21
..... Factors Influencing Utilization	22
..... Toward an Understanding of the Post-Educational Experience of Adults: Finding a "Use" for Utilization	28
..... Transfer	29
..... Barriers and Facilitators to Transfer	31
..... The Post-Adult Education Experience: Learning from Transfer	35
..... Diffusion	36
..... Influences on the Diffusion and Adoption of Innovations	39
..... Toward a Further Understanding of the Post-Educational Experience of Adults: Insights from the Diffusion Literature	42
..... Bringing it all together: Developing a Framework for Application	44
..... Influences on Application: An Application Framework	47
..... Summary	49
..... Research Questions	49

CHAPTER THREE	DESIGN AND METHODOLOGY	50
.....	Qualitative Case Study and Unit of Analysis	51
.....	Site Selection	52
.....	Research Role	53
.....	Purposeful Sampling Strategies	54
.....	Data Collection Strategies	56
.....	Data Analysis	60
.....	Maintaining Internal Validity and Reliability	60
.....	Limitations of the Study	62
CHAPTER FOUR	ANALYSIS	65
.....	Application	67
.....	Predisposing Factor	70
.....	Educational Factor	74
.....	Innovation Factor	81
.....	Enabling Factor	87
.....	Reinforcing Factor	93
.....	Summary	94
CHAPTER FIVE	DISCUSSION AND IMPLICATIONS	96
.....	Visible Action	96
.....	When Ideas Become Real	98
.....	Adaptations vs. Modifications	100
.....	Value and Interrelationship	101
.....	Decision Making	102
.....	Making Some Sense of it All	106
REFERENCES		111
APPENDIX 1	LETTER OF INTRODUCTION	115
APPENDIX 2	INTERVIEW SCHEDULE	117

LIST OF TABLES

Table 1	A Summary of the Variables Facilitating and Hindering Implementation	17
Table 2	A Summary of the Barriers and Facilitators to Utilization	25
Table 3	A Summary of the Barriers and Facilitators to Transfer	33
Table 4	A Summary of the Barriers and Facilitators to Diffusion	40
Table 5	A Summary of the Barriers and Facilitators to Application	66

LIST OF FIGURES

Figure 1	Application Process Framework	48
Figure 2	Application-Decision Making Framework	103

ACKNOWLEDGEMENT

In looking back at the evolution of this research paper from its early stages to this final product, I am aware of the many people who contributed along the way through their on-going direction, support and encouragement.

Judith Ottoson, my faculty advisor, and my other committee members Tom Sork and Merle Ace, provided much appreciated and sometimes seemingly endless amounts of ideas and suggestions! Their continuous questioning of my reflections, assumptions and rationales helped me to plow deeper and more systematically through my topic.

My family and friends acted as my sounding board, my coach and at more trying times, my counselor! Even my cats played a role by providing endless hours of companionship and entertainment during those long stretches of writing and revisions.

It's been a long journey for all of us but the joint effort has resulted in one of my finest and most valued academic accomplishments.

CHAPTER ONE

INTRODUCTION

A Personal Puzzle

Some time ago, I participated in a work-related continuing education program. While I thoroughly enjoyed the program, I found myself spending more and more time afterwards reflecting on what I had learned in the program and how this learning had informed my practice.

Like many courses and programs I have completed, I am sometimes unaware of what learning has taken place, and how, or even if, I have put this learning to any use. There are many times that I applied my learning directly and many times that I did not. Sometimes I finished a program and returned to work or to my daily routine with vague feelings of "illumination" or, conversely, with feelings of frustration or disappointment. Frequently, the illumination resulted in great bursts of excited activity in an effort to put this learning to use, or a sense of urgency to make some use of it before it was forgotten. Often, what initially felt new and exciting and was accompanied by a great deal of anticipation to get busy and apply it, somehow over time lost its urgency and eventually seemed to all but fade away in its importance. There were also programs I completed where I returned to my life and work feeling cheated. What seemed interesting, relevant, and applicable while immersed in the program, was somehow less interesting, relevant, and applicable when I was back in my natural setting.

What happens in the post adult education experience as knowledge is transformed into practice? While some might argue that this process is merely the product of the success or lack of success of the various approaches to program planning and instructing,

it seems that there is something going on that is more complex and particularly difficult to grasp. The process is elusive, constantly changing and shaped by any number of different factors with varying degrees of influence. This process is individual in nature and, yet, common to many. How the process works, particularly those factors that influence it, is still unclear.

A Corporate Concern

My interest in the post-educational experience of adults stemmed in part from my own experience as an adult learner, as well as from my experiences conducting program evaluations for a municipal government.

At the time of this study, the municipal government offered corporate training that supported the organization's goal of providing better City government. In its effort to achieve this goal, the organization was becoming more customer-focused (both internally and externally), undergoing extensive reorganization, and adopting a business perspective in its determination to be more accountable. The Staff Development Division, created in 1993, was a relatively new addition to the organization's Human Resource Services department. It was financed through a five-year training plan and had the task of providing program offerings that would assist the organization in reaching its goal. With the purpose of helping employees perform their jobs more efficiently and effectively, many of the programs related to change, leadership and supervision, communication and customer service. An understanding of the post-educational experience of the employees was of particular importance to the Staff Development Division, which was interested in assessing the impact of its training. Like many of the senior management of organizations, the City Council was looking for some evidence of a return on its

investment. Staff Development, was faced with the difficult task of trying to demonstrate how this training investment had resulted in improved employee performance. Yet, before embarking on an assessment of training impact, the Division recognized the need first to develop an understanding of the nature and evolution of the post-adult education experience. An understanding of the process must be obtained, before an assessment of the impact of educational programs can be undertaken.

The Division was optimistic that by becoming better informed about the post-educational experience of its customers, it would be better equipped to assess the impact of its existing programs and to develop future program offerings that reflected this understanding. As a contract employee of the organization, I too had an interest in better understanding the post-educational experience of City employees. A better understanding of this process would assist me in the development and evaluation of future programs.

It was hoped that this study would provide a much-needed understanding of the post-educational experience of adults. It intended to explore the process of application as a means to understanding this experience, and to challenge the suitability of selected conceptual frameworks as useful to describing the influences on application. It was of particular importance to me that this process or experience be understood not solely through some imposed theory, but more importantly, through the development of theory that was based on the perceptions of the program participants themselves.

Significance

While many adult educators might agree that application and the post-educational experience of adults is an interesting and worthy area of research, still many more might

argue that the topic has little relevance to their practice. What is most apparent in the practice of adult education is the great amounts of energy spent defining needs and reasons for participation, clarifying objectives, and creating interesting and engaging learning activities; and the comparatively small amount of time spent following-up on what happens to learners when they complete programs. Some assume that if they plan and deliver programs carefully, learners will have less difficulty applying their learning in their home context. Often, we consult our "happiness index" for verification that the program was a success, leaving us assured that our learners will eagerly put the program concepts into practice when they are back at home, at work, or in the community.

Typical program evaluation models like Kirkpatrick's (1987), focus on outcomes that reflect participant satisfaction and changes in knowledge, skills, or behaviour. They also assume that these behavioural outcomes are directly linked to learners' content mastery in the classroom. If learning is understood as a relatively permanent change in cognition or behaviour this relative permanence must be assessed both in the classroom and outside the classroom. It is this understanding and assessment of the post-educational experience that is lacking.

Very little is known about what influences the post-educational experience of adults. Application, one framework for understanding this experience, is described by Ottoson (1995) as a complicated process with multiple influences. A process that involves intent but where intent is no assurance that application will take place. In adult-education application, the "thing" most often applied refers to the ideas, concepts, or skills learned by attending an adult education program. And yet, the thing is not limited to aspects of knowledge or skill alone, as there may be outcomes that are unintended

including new relationships, goals, or a renewed self-confidence (Ottoson, 1995). In application, the thing to be applied adapts to find some degree of fit in the learners' home context, and yet how adaptation occurs is not readily understood. Similarly, to develop an understanding of those factors that might facilitate or hinder application, causing it to occur or not to occur, requires investigation.

The most recent and comprehensive source of information on the state of private sector training in Canada found that in 1986-87, Canadian firms spent \$1.4 billion dollars on training (Statistics Canada, 1990). Given such large sums of money, it is surprising that very little effort is made by the funders of these programs to understand the post-program experience of those people for whom the program was designed. The municipal government, which was described earlier as the site for this research study, spent approximately \$987,000 on staff training and development in 1995. This figure included both corporate training (needs are defined by senior management) and departmental training (needs are defined by individual departments). As accountability and return on investment become more of an issue, this government like many other governments and organizations was keen on developing some sense of the impact of their dollar investment. Assessing impact involves understanding how application occurs and identifying the factors that encourage or inhibit application.

General Purpose Statement

Many of us attend adult education programs for a variety of reasons, and not all of these reasons include the application of program ideas. Participation in programs may be for social contact, professional advancement, social stimulation or cognitive interest; we might also participate because of external expectations, or out of a sense of community

service (Boshier & Collins, 1985). This study focused on those program participants who intended to apply the ideas or concepts of the program when they returned to their work environment. For many, the transition from the classroom to the natural environment is not easy. We may not even be aware of the numerous potential facilitators and barriers interacting and impacting on our ability to apply learning.

The purpose of this study was to explore the barriers and facilitators to application following participation in an adult continuing education program. To do this, the literature review, found in Chapter 2, explores various related processes by taking a critical look at the suitability of each of the processes in conceptualizing the post-educational experience of adults, and demonstrating how each of these processes inform our understanding of application and the factors influencing it. Chapter 3, the methodology, details the design of the study by describing the researcher's role in the study, the rationale for choosing the study site, the strategies employed to select the participants and the approaches used to collect and analyze the data.

The post-educational experience of adults is a complex puzzle, where the various pieces and linkages between the pieces are not clearly known. The literature review that follows is the first step taken in this study toward developing an understanding of the nature of this complex puzzle.

CHAPTER TWO

REVIEW OF THE LITERATURE

As described in the previous section, the purpose of this study was to explore the barriers and facilitators of application following participation in an adult continuing education program. Application is one approach to understanding the post-educational experience of adults. It is a complex process that has recently been revisited in the adult education literature (Ottoson, 1995). Application involves crossing the boundaries of the education context and the work or home context of the learner to put a "thing" into practical contact (Ottoson, 1995). As noted earlier, the thing applied is most often in education described as ideas, principles, or concepts. These ideas, concepts, and principles are the foundation of our skills and capabilities. The outcomes of an educational program may be either intended or spontaneous. They are also not limited to knowledge alone and may describe new relationships, attitudes, goals, or even a renewed self-confidence.

Application, the framework used in this study to conceptualize the post educational experience of adults, is informed by several related processes. Each of these processes focus on learning which crosses either boundaries or contexts (i.e. from classrooms to work sites) or form (i.e. from ideas or policy to action). They are described in the literature as implementation, utilization, diffusion and transfer. This review explores these various processes and demonstrates how they inform our understanding of the post educational experience of adults and subsequently, application and the factors which influence it.

Key Terms

Before embarking on a review of the processes that inform an understanding of the post-adult education experience, some key terms relating to the purpose of this study need to

be identified and described. Central to the purpose of this study is an awareness of what is meant by barriers and facilitators, learning, participation and a continuing education program, relative to adult education and the proposed study.

Generally speaking, barriers and facilitators can be described as those factors that influence application. That being said, an understanding of what is meant by influence must be determined. The Oxford English Dictionary defines influences as the “exertion or action of which the operation is unseen, except by its effects by one person or thing upon another.” Much the same can be said about influence as it relates to this study. Barriers and facilitators to application may not be visible, and yet their effects imply the evidence of these influences. In this way, influences can facilitate or hinder application. Influences that are facilitators will have a positive impact on application, whereas influences that are barriers will have a negative impact on application.

Learning is a complex process defined by countless explanations and theories. Learning is often thought of as a process (the act or process of learning something) or conversely, as an outcome (the thing or the what that was learned) (Merriam & Caffarella, 1991). The outcome approach to learning is most often associated with some form of change, whether it be in behaviour, attitudes, knowledge, skills, appreciations, or values (Verner, 1975). If we compare learning to education we get another perspective on learning: “Learning occurs in the mind of the individual, while education is an external situation or condition established to facilitate learning” (Verner, 1975, p.179). Jarvis (1987) provides yet another explanation: “Learning is wider than education; education is only one social institution in which learning occurs.... Learning is the process of giving meaning to, or seeking to understand, life experiences” (p. 10). While learning can occur anywhere, at any

time, under any circumstances, and can be intended or unintended, education is planned and organized, and provided for by some sponsoring individual or institution for the purpose of achieving a specific set of objectives (Verner, 1975). Merriam and Caffarella (1991) suggest that the key pieces of this complex puzzle called learning are the individual learner, the context in which learning takes place, and the learning process itself.

Learning is used here to mean a process of change. This change may be behavioural which is evidenced by visible action, or it may be a cognitive or affective process which need not be identified with a behavioural outcome (Jarvis, 1987). It may also be intentional or spontaneous. This conception of learning also recognizes that learning is a social phenomenon. It is not merely a psychological process that occurs in isolation, but is rather a process that occurs within a social context (Jarvis, 1987). It is shaped by characteristics of the adult, the program, and the context in which the learning is taking place.

Participation is a way of describing the act of engaging in adult education (Selman & Dampier, 1991). While most adults participate voluntarily, some do not. For example, some organizations may require employees to attend specific training related to their jobs. Selman and Dampier (1991) suggest there are two approaches to understanding participation as it relates to adult education-- the turnstile approach and the engagement approach. In the turnstile approach, the act of entering, and of being counted as one attends a program at a certain time and place, denotes participation. This enrolment-centered approach is found in most formal institutions and is based on an administrative necessity to keep count.

An alternate approach to participation known as engagement, focuses on the ways adults engage themselves in learning beyond the formal education system. This approach places importance on the act of learning rather than the act of enrolling, and recognizes that

adults may engage in learning outside of the formal system. It suggests that adults can and do learn in a purposeful manner without necessarily needing to be in an organized educational activity supervised by an educational agent. In fact, Cropley (1989) suggests that only about twenty percent of adult learning occurs within the framework of organized adult education. Both of the approaches to participation described above are purposeful, and yet it would not be correct to say that learning is evidenced by purposeful participation alone-- learning also takes place as a result of living, arising out of our everyday experiences.

In this study, participation was viewed relative to an organized learning activity, namely, an adult continuing education program. As such, the participation approach was one of enrolment (turnstile) where the participants of the study were identified through consultation of program enrolment records.

As discussed earlier, the reasons adults participate may vary. These reasons may be community service, external expectations, social contact or stimulation, professional advancement, or an interest in the subject matter (Boshier & Collins, 1985). The reasons adults participate in programs have implications for the post-adult education experience. How the post-educational experience evolves is in part related to the reasons for participation in a program. In this study, the focus was on adults who attended a continuing education program with the intent of applying the program ideas when they returned to work.

Now that barriers and facilitators, learning, and participation have been described relative to the study, a final clarification needs to be made with regard to what is meant by an adult continuing education program. Selman and Dampier (1991) provide a general

explanation, suggesting that a continuing education program is a planned set of activities which further one's education to a level considerably beyond that already achieved. A relatively general definition such as this one leaves sufficient room for interpretation. It was assumed for this study that all program participants would have achieved some level of education, and that this level may vary from one person to another. Program participants may be high school graduates, skilled trades' persons, or university graduates. The continuing education program they participated in was not intended to be a direct continuation of previous education or training, but rather to be viewed as further education, and in this case job-related.

To summarize, this study explored the barriers and facilitators of application of learning following participation in an adult continuing education program. In other words, this study explored those factors that influence the post-educational application of learning.

A Review of Related Processes: Informing an Understanding of Application

Now that the key terms related to the purpose of the study have been defined, the remainder of the literature review focuses on a review of related processes. In the first part of the review, implementation, utilization, transfer, and diffusion are explored to inform our understanding of the post-educational experience of adults. In the final portion of the review, these processes are discussed relative to application, for the purpose of comparison and appreciation of the evolution of application as a framework for understanding the post-educational experience of adults.

Implementation

Implementation is a term found in a review of policy literature. There are almost as many definitions of implementation as there are authors of papers. It has been "variously

described as a stage, an action, or a process that is chiefly organizational or political in nature" (Ottoson & Green, 1987). It can be argued that most conceptualize implementation as a process, yet even this differentiation is not sufficient for there are many ways of further delineating process. For instance, implementation has been described as a mutually adaptive process (McLaughlin, 1976; Berman & McLaughlin, 1976; Berman, 1980), an organizational process (McLaughlin, 1976), an interactive process (Ottoson & Green, 1987), a political process (Rein, 1983; Ottoson & Green, 1987) a segmented process (Ottoson & Green, 1987) and an evolutionary process (Majone & Wildavsky, 1983). It would seem that how implementation is operationalized depends on what is being explained, who is doing the explaining, and at what point in time the explaining is taking place (Majone & Wildavsky, 1983). All of this variety, while interesting, makes defining implementation difficult. Yet, if we allow ourselves to ignore these differences we can see that a common thread across the literature is that implementation is concerned with how policy ideas are transformed into action (Ottoson & Green, 1987; Majone & Wildavsky, 1983; Rein, 1983; Chase, 1979; Berman, 1980; Sproull & Hofmeister, 1986). Because it is a transformation issue similar to that of programs ideas it was selected as one of the related bodies of literature to review.

The fidelity-adaptation debate

How the process works and who is involved in transforming policy into action depends on whether one argues in favour of *fidelity* or *adaptation* to the original policy concept in the implementation context. These differing approaches represent an on-going debate in the implementation literature over which approach is most effective in policy implementation (Berman, 1980).

The fidelity approach is rooted in the Research, Development and Diffusion Model (R D D) which is commonly related to the adoption of new innovations (Berman, 1980). Essentially, implementation with fidelity posits that innovative policy be adopted with close correspondence to the original idea (Blakely et al., 1987). Proponents of this approach to policy implementation argue that implementation problems are the result of a lack of specification in policy goals, the involvement of too many people in decision making, and a failure to articulate clear implementation procedures (Berman, 1980). This approach can be described as a planning model in that it prescribes clearly stated goals, detailed plans, and tight controls. The goal is to create policy that is implementation proof (Berman, 1980). Implementation with fidelity suggests a unitary process where policy is designed with a view toward its implementation, or to put it another way, it can be described as a process of setting goals and enforcing the plan which incorporates them (Majone & Wildavsky, 1983). This approach assumes that policy is a real entity that needs only reinforcement. Implementation problems can be eliminated or made manageable by anticipating obstacles and pre-programming implementation procedures (Chase, 1979; Berman, 1980). Where there is evidence of individual coping mechanisms altering the policy as it interacts with the context, these mechanisms are seen as constraining or distorting the implementation of policy, and it is suggested that reward systems ought to be put into place to encourage conformity to the policy objectives and reduce the possibility of distortion (Weatherly & Lipsky, 1977). Clearly, where there is implementation with fidelity to the original policy idea, it is the policy makers and senior managers who are seen to be the key players or agents of implementation.

Where supporters of the fidelity approach would argue that implementation

problems are the result of poorly articulated goals and implementation procedures, and not enough control over who is involved in the decision making, those in favour of the adaptive approach would argue just the opposite. They conclude that problems with implementation occur due to over-specification and rigidity in developing policy goals, failure to engage the relevant actors in decision making, and excessive control of the deliverers (Berman, 1980). It is based on the argument that different organizational contexts and deliverer needs require on-site modification of the policy (Blakely et al., 1987). In adaptive implementation, the importance of goals and plans are minimized as policy is viewed as a point of departure for negotiation among implementers (McLaughlin, 1976). Contrary to the fidelity approach that assumes outcomes can be predicted and controlled, adaptation assumes that outcomes are neither automatic nor assured. Essentially, in adaptation the process rather than the product is the purpose (Berman, 1980; McLaughlin, 1976). The ideal of adaptation is to establish a process that allows policy to be modified and revised relative to the unfolding interaction of policy with its institutional context (Berman, 1980). To put it another way, the purpose of adaptation is not the degree to which it conforms to prescribed policy, but whether the implementation process results in consensus on goals and commitment to policy implementation. As Berman (1980) so aptly states, it is a process of carrying out *local* policy versus *federal* policy.

How the policy is adapted, is not guaranteed. Berman suggests that there are four paths to implementation: (1) non-implementation, where essentially nothing happens; (2) co-optation, where the policy is adapted to accommodate existing procedures; (3) technological learning, where routinized behaviour is adapted to accommodate the new policy; and (4) mutual adaptation, where both the policy and the setting change during

implementation. Mutual adaptation, conceived as the ideal implementation path, asserts the main task of implementers is to find the middle ground between the intent of the concept and the realities of the context (Berman & McLaughlin, 1976; Browne & Wildavsky, 1983). Where the main players in the fidelity approach to implementation are senior managers, clearly it is the lower-level managers or "street-level bureaucrats" (Weatherly & Lipsky, 1977) at the local level who are involved in adaptive implementation.

It is evident from the above discussion that the policy intent, process, and outcomes are inextricably linked to the position one takes on the fidelity-adaptation debate. Yet, it is difficult to imagine how policy would not be transformed as it interacts with its implementation context. Whether these transformations are welcomed or viewed as unwanted distortions, it would seem that both sides would agree that interaction *does* take place. Whether one believes this interaction can be planned for, and controlled, is really the crux of the debate. It seems likely that without around-the-clock supervision to reinforce the implementation of policy objectives in their pure form, it would be difficult to control the path of implementation. Many factors which cannot always be foreseen, and even if they were not always controlled, contrive to act as barriers or facilitators to implementation, impacting whether the policy will be implemented at all, or to what extent the policy and the context will be adapted.

Barriers and facilitators to implementation

Much has been written describing-- and hypothesizing about-- what factors influence implementation (Berman, 1980; Berman & McLaughlin, 1976; Rein, 1983; Sproull & Hofmeister, 1986; Weatherly & Lipsky, 1977; Chase, 1979; Ottoson & Green, 1987). Ottoson and Green provide a comprehensive summation of the factors that shape

implementation. This summation forms the basis of the following discussion (see Table 1).

The major categories of variables relate to the policy, the implementing organization, the political milieu and the environment.

Policy. This category of factors is representative of those characteristics of the policy that affect how it interacts within the implementation context. Included in this category is the theory upon which the policy is based; the research and assumptions which support the theory (supporting assumptions); the goals and objectives of the policy; the change proposed (nature, amount, rate, radicalness, centrality, complexity, form); resources (nature, amount, availability); the specification of the policy (clear identification of purpose, characteristics, resources); the flexibility of the policy; the effect of the policy; and the developers of the policy (motives, intent, position, resources, support).

Implementing organization. Three broad categories of organizational factors are hypothesized to influence implementation: the organizational structure which includes both the formal (goals, tasks, size, roles and standard operating procedures) and the informal (culture, climate, orientation); technical capacity (technology and the resources needed to apply the technology); and the employees (approaches, motivations, support, values, attitudes, beliefs they bring to both work and the implementation task).

Political milieu. The political milieu describes those variables relating to issues of power and control in the development of policy. The variables in this category include the form, strength, use and distribution of power.

Environment. This final category includes those factors that have the potential to both influence and be influenced by implementation. They include timing, the intended

Table 1

A Summary of Variables Facilitating and Hindering Implementation

<i>Factor/Variables</i>	<i>Positive/Facilitating</i>	<i>Negative/Hindering</i>
1. Policy		
a. Theory	solid	unproved
b. Assumptions	defined	unclear
c. Goals	stated	non-existent
d. Change		
• amount	small	large
• radicalness	familiar	unfamiliar
• centrality	central	peripheral
• complexity	few transactions	many transactions
e. Resources	available	non-existent
f. Specification	some	none
g. Flexibility	possible solutions	one right answer
h. Impact	early stages	late stages
2. Implementing Organization		
a. Structure		
• goal	relevant to policy	irrelevant to policy
• task	suitable	unsuitable
• scale	small	large
b. Climate	supportive	unsupportive
c. Technical Capacity		
• technology	appropriate	inappropriate
• resources	available	unavailable
d. Employee Disposition		
• approach	problem solving	opportunistic
• motivation	maintained	declined
• support for change	supportive	unsupportive
• values	congruent	incongruent
• attitudes	favourable/changeable	unfavourable/unchangeable
• beliefs	faith in policy	no faith in policy
e. Employee		
• behaviour	changes	no changes
3. Political Milieu		
a. Power		
• strength	strong	strong
• use	use	use
b. Support	present	absent

4. Environment

a. Timing

b. Intended beneficiaries

needs

no needs

c. Other organizations

controllable

uncontrollable

Note. From “Reconciling Concept and Context: Theory of Implementation,” by J.M.

Ottoson and L.W. Green, 1987, Advances in Health Education and Promotion, 2, p. 377.

Copyright 1987 by JAI Press Inc. Adapted with permission of the author.

beneficiaries, and participating organizations.

Clearly, the number and diversity of factors influencing implementation reflects its complexity. It is not difficult to see how similar groupings of factors might be used to illustrate possible influences on the post-adult education experience. From the perspective of implementation, numerous personal and organizational factors, political forces, and the nature of the innovation itself influence it.

Implementation, a process that focuses on how policy is transformed into action, is also helpful in informing our understanding of the post-adult educational experience and the factors that influence it. How implementation informs this understanding is discussed in the following section.

Implementation, a process that focuses on how policy is transformed into action, is also helpful in informing our understanding of the post-adult educational experience and the factors that influence it. How implementation informs this understanding is discussed below.

Taking meaning from implementation: What does it mean for the post-adult education experience?

As mentioned earlier, implementation is one approach that provides insight into process and the post-adult educational experience. Implementation deals with policy which can be described as “a more or less clearly articulated set of ideas about what should be done in a particular sphere, which is often set down in writing and usually formally adopted by the relevant decision-making body” (The Concise Oxford Dictionary of Sociology, 1994). Adult education deals with ideas, principles, and concepts. While both are similar in that they deal with ideas, they differ in that policy is directed toward solving problems; whereas, adult education may or may not have problem solving as one of its goals.

If we reconsider the fidelity-adaptation debate we are able to see how comparisons can be made between the implementation of policy and the post-educational experience of adults. Central to the debate between fidelity and adaptation is the question of when a policy becomes real. Is it real when it is created (fidelity) or does it become real when the creation evolves through contextual interaction (adaptation)? Similarly, with regard to adult education, one could ask if an idea is real when it is developed as part of an educational program (fidelity), or if it becomes real through the learner's interaction with his or her intended context (adaptation)?

If we assume the fidelity approach, then we assume that the ideas learned by adults in an adult education program will look the same when they are implemented in the home context. Adult educators in favour of this approach would argue that programs which are designed with clearly stated goals and detailed implementation plans, would enable learners' to put the ideas and skills learned in the program into action, in their home context, in a way

that they look the same as the ideas of the program itself. This would confirm the assumption that program outcomes can be predicted and controlled. This approach, which is discussed later, is reflected in the literature on the transfer of learning. Transfer is a process most commonly used to describe how adults bring learning from educational contexts to work contexts in the adult education literature.

It could also be argued that program objectives are neither automatic nor assured. Learners return to different implementation contexts that require adaptation of new ideas if the ideas are to fit within different contexts. Where program planners and deliverers are the control agents of implementation in a fidelity approach, implementation in an adaptation approach is left with the learner, allowing the ideas to be revised and modified as the learner interacts in the intended context.

While both the fidelity and adaptation approaches acknowledge that interaction of ideas in the implementation context does take place, whether one believes this interaction can be planned for, and controlled, forms the basis of the debate. While implementation is discussed in the literature as a process concerned with how policy is transformed into action, it is not difficult to see how a similar discussion can be made about program ideas or learning concepts. How program intent, process, and outcomes are viewed, depends on which approach to implementation one takes. Clearly, the implications of implementation in a discussion of the post-adult educational experience are reflected in the fidelity-adaptation debate. How the post-adult educational experience is approached and understood, depends on to what extent adult educators believe program outcomes can be predicted and controlled through carefully planned programs and detailed implementation plans.

Utilization

Like implementation, there is no single understanding of utilization (Machlup, 1993). In general, utilization can be described as the application of knowledge to solve human problems (Backer, 1993). At the root of this disparity in understanding, is disagreement and continuing debate over how much distinction should be drawn between information and knowledge, the latter of which is usually inferred to be more refined and to have some pre-tested value, such as scientific research (Backer, 1993).

Also contributing to a lack of clarity are questions and disagreement over what is meant by the *use* of knowledge (Machlup, 1993; Patton, 1978). It is unclear if use merely requires cognition or if it also requires action informed by research. To what extent cognition and action are functions of diffusion or utilization, is also unclear.

For the purpose of the remaining discussion, Lester and Wilds (1990) description of utilization, the application of scientific knowledge in public policy and professional practice, will be adopted. This definition differentiates knowledge from information by describing knowledge as scientific. It also allows for further discussion of the fundamental disagreement over whether knowledge use is instrumental (action) or conceptual (cognition). These approaches to differentiating knowledge utilization are vastly different as evidenced by their intended outcomes.

Instrumental versus conceptual use

The instrumental or institutional (Machlup, 1993) approach to knowledge utilization relies on a single action-oriented outcome (Larsen, 1981). This form of utilization occurs when there is an immediate, observable application of research results in decision-making (Patton, 1978; Beyer & Trice, 1982). Knowledge is viewed as practical, and is valued as a

basis for action (Machlup, 1993). Instrumental users of knowledge should be consciously aware of the ways in which knowledge is being used in decision making or problem solving (Larsen, 1981). Much of the research on knowledge utilization reflects this understanding of use and is evidenced by a preoccupation with identifying how research results can be made more useful to policy makers (Lester & Wilds, 1990). This approach is grounded in a rational, scientific model which assumes an objective truth that is above and beyond political perception or persuasion (Patton, 1978). In other words, it assumes that knowledge will be used objectively by all in the effort to search for the best answer. It ignores, for example, knowledge that might be used to further political purposes.

Conceptual use of knowledge, also referred to as enlightenment (Weiss, 1977), is characterised as intellectual knowledge (Machlup, 1993) where research is used for general enlightenment (Beyer & Trice, 1982). The outcomes, or forms of knowledge use, are general and broad and are not characterised by any specific action. It is argued that results from one research study may have little or no impact, but cumulatively over time, the results from several studies may blend together to alter the policy-maker's frame of reference which will ultimately be evident in planning and decision making (Knott & Wildavsky, 1980).

It is only more recently (Backer, 1993) that the concept of adaptation has been introduced in the utilization literature. Yet even this conceptualization of adaptation is one-sided. It makes reference to the adaptation of individuals and organizations in using knowledge, but fails to consider how the knowledge itself might change when it is utilized. This understanding of adaptation is also restricted to instrumental use. There is no acknowledgement that adaptation occurs through conceptual use.

Fundamental to utilization is the assumption that knowledge use occurs in some form at some point in time. It is presumed that utilization (whether it be instrumental or conceptual), not non-utilization, should result when one is presented with knowledge (Larsen, 1981). Presumably, it would be argued that if knowledge utilization does not occur, it is because there is some lack of fit between the knowledge and the user. What seems to be less emphasized is the role of decision making. In general, how potential users make decisions about whether and how to use their knowledge requires further consideration. Except for Backer's (1993) approach to adaptation described above, this issue seems to have been ignored. It is possible that this perception exists due to the indistinct nature of the diffusion and utilization literatures. In Rogers (1995) discussion of diffusion, the roles of both decision making and the context are clearly described.

Interestingly, if we refer back to our earlier discussion of fidelity and adaptation in reference to implementation, we begin to see how these terms relate to our current discussion of instrumental and conceptual use. An instrumental approach to use intends that knowledge will be used immediately and precisely in decision making by policy makers. Implicit in this approach to use is the assumption that the research will be in the form it was received, indicating utilization occurs with fidelity to the original research idea. Conversely, as conceptual use suggests a more general and broad use of knowledge, which over time contributes to changing a policy-maker's frame of reference, it would seem that this approach would not expect that this knowledge be used in the original form it was received, but that it would rather be adapted over time and in response to the policy-makers' context.

Clearly, utilization is a complex process that overlaps with similar processes, such as

implementation. This makes it difficult to establish clear boundaries and a distinct terminology around utilization. Another approach to utilization is to consider the many factors that act as barriers and facilitators, adding yet another dimension to the how and why of knowledge utilization.

Factors influencing utilization

As was noted earlier, there is no one accepted approach to understanding utilization. It should be no surprise to discover that a review of the factors influencing utilization is also an exercise in sorting and sifting, in an effort to try and make some sense of it all. As expected, the factors thought to influence utilization depend on which model of utilization one follows. Much of the research has adopted the two-communities perspective which strives to bridge the gap between producers (researchers) and users (policy-makers), and as a result, concentrates on identifying only those factors that influence this interaction (Dunn, 1980; Lester & Wilds, 1990). Drawing from a number of different sources (Beyer & Trice, 1982; Dunn, 1980; Knott & Wildavsky, 1980; Lester, 1993; Lester & Wilds, 1990; Patton, 1978). The discussion to follow summarizes potential facilitators and barriers on utilization. Five broad groupings of factors have been identified: (1) research product; (2) potential user; (3) political milieu; (4) user organization; and (5) researcher/policy-maker relationship (see Table 2 for a summary of these factors).

Research product. This category describes the characteristics of the research product that are thought to influence knowledge utilization. The extent to which potential users perceive the product to be of value is described as being an important influence on knowledge utilization (Patton, 1978; Beyer & Trice, 1982; Dunn, 1980). This value relates in part to the relevance potential users see for the product, and this relevance is in turn linked

Table 2

A Summary of the Barriers and Facilitators to Utilization

<i>Factors/Variables</i>	<i>Positive/Facilitating</i>	<i>Negative/Hindering</i>
1. Research Product		
a. Perceived value	valuable	not valuable
b. Perceived quality	high quality	low quality
c. Form	acceptable	unacceptable
2. Potential User		
a. Tolerance for ambiguity	high	low
b. Level of education	lower	higher
3. Political Environment		
a. Culture	moralistic	not moralistic
b. Feasibility	feasible	not feasible
4. User Organization		
a. Experience	more experienced	less experienced
b. Climate	supportive	not supportive
c. Structure	rigid	flexible
d. Procedures	strict adherence	manoeuvrability
e. Decision	immediate	in the future
f. Decision making	centralized	decentralized
g. Conflict	low	high
5. Researcher/Policy-maker Relationship		
a. nature of link	direct	indirect
b. level of interdependency	higher	lower
c. timing of dissemination	timely	premature

to their expectations of what this product can do for them. Knowledge that is perceived as valuable is more likely to be used.

Perceived quality refers to the methodological adequacy of the research product such as the research design, sample, and study size (Knott & Wildavsky, 1980; Lester & Wilds, 1990). It is described as perceived quality as it is hypothesized that how policy-makers make decisions about quality may be vastly different from researchers' conceptions of

quality. Research products that are perceived as being of high quality to potential users are expected to have a positive influence on utilization.

The form of the product, its length and its language, are also expected to have an impact on use (Lester & Wilds, 1990). Presumably, products that are perceived as too long or are written in a language that is inaccessible to policy makers would have a negative effect on utilization.

Potential user characteristics. This term describes those characteristics of the individual policy maker that have the potential to influence utilization. The two factors associated with the potential user are tolerance of ambiguity (Patton, 1978; Knott & Wildavsky, 1980) and level of education (Knott & Wildavsky, 1980). While it is likely that there are other factors such as motivation, interest, and commitment, the above factors were identified in the utilization literature and are based on previous research. Tolerance for ambiguity refers to the extent to which users will be able to cope with the uncertainty that the new knowledge will create. Issues and problems requiring decisions to be made may become complicated or clouded by new knowledge, creating a degree of discomfort that users may prefer not to experience. A low tolerance for ambiguity is expected to negatively influence knowledge utilization. Interestingly, in a study of knowledge use by policy makers, Lester (1993) found that policy makers with lower levels of education were more likely to use, both conceptually and instrumentally, research results in their decision making. It was suggested that these policy-makers were more likely to acknowledge an inadequate knowledge base upon which to make decisions, and as a result were more likely to investigate relevant research to aid them in their decision-making.

Political environment. The political environment includes those contextual factors

that permeate the knowledge utilisation process. In a study of the use of research by policy makers at the state level, Lester (1993) found that states with a moralistic political culture were more likely to use knowledge in their decision making as a way to justify their policy decisions. Political feasibility is also identified as being a potential influence on knowledge use. Research that is relevant to the mandate of the agency, or that is likely to be publicly supported, is more likely to be used to aid policy makers in their decision making.

User organization. By far the largest category, in terms of the number of influencing factors, the user organization describes those organizational factors that may inhibit or facilitate knowledge use. Organizations that are more experienced in dealing with research are expected to influence use positively (Lester, 1993). A supportive organizational climate, flexible operating procedures, and an organizational structure that allows access to information and autonomy in decision making, are expected to increase the likelihood of knowledge utilization (Lester, 1993). Decisions that require immediate action, centralized decision-making, and low levels of conflict, are expected to affect utilization positively (Lester, 1993).

Researcher/policy maker relationship. Several factors related to the relationship between researchers and policy makers are hypothesized to influence knowledge utilization. The nature of the link between researchers and policy makers is one factor (Beyer & Trice, 1982). It is expected that policy makers who work directly with researchers, rather than indirectly through publications, will be more likely to put their knowledge to use (Beyer & Trice, 1982). Where there is a greater degree of interdependency between policy makers and researchers, knowledge utilization is expected to be influenced positively (Beyer & Trice, 1982). Where potential users lack a sufficient knowledge base to understand the

research, dissemination is expected to adversely affect knowledge use and is described as premature (Knott & Wildavsky, 1980).

It is not difficult to see the similarity between many of the factors hypothesized as influencing utilization and those that were identified as influences on implementation, nor is it difficult to see how many of these same influences could apply to the post-educational experience of adults. Recognizing the potential link between utilization and the post-adult educational experience in terms of influencing factors, does utilization have anything else to offer in furthering our understanding of the post-educational experience of adults?

Toward an understanding of the post-educational experience of adults : Finding a "use" for utilization

The previous discussion portrays utilization as a process that emphasizes the use of scientific knowledge in public policy decision making. However, it does not seem inappropriate to suggest that a discussion of utilization could include knowledge other than that which is scientific or research-oriented, as well as decision making contexts other than public policy. Relative to adult education, this expanded view of knowledge could include a wide array of content or domain-specific knowledge in the form of ideas, principles, or concepts. At the same time, a broader understanding of decision-making contexts could incorporate decision-making that is work-, home-, or community-related.

Whether a discussion of utilisation is focused on the use of research findings in public policy decision making, or the use of ideas learned by attending adult education programs, the fundamental debate remains whether use is instrumental or conceptual in nature. If an instrumental approach is assumed in adult education, learners will return to their home context and use new ideas in their decision making immediately and with

observable effect. In this approach, ideas are portrayed as practical, forming the basis for action. Where ideas are conceived as more general, for the purpose of enlightenment, use is described as conceptual. As the outcomes are general and broad, observable action is not expected. Instead, it is argued that new ideas will have little impact. It is suggested that only over time, after the idea has been reinforced a number of times, does it change the learner's frame of reference and become evident in decision making.

This distinction between instrumental or conceptual use need not be made in the post-educational experience, as both forms of use are possible. The role of the context that includes the climate, structure and procedures of the user organization, also contributes to a better understanding of the post-adult education experience. Adding yet another dimension to this complex process, is the role of decision making. Adults may decide how, when, or even if, they will use their new ideas; how they use them is not a matter of academic debate alone.

Transfer

Transfer of learning is the most visible of the four processes in the adult education literature. It appears to have gained particular popularity in the training and development literature where it is most often referred to as transfer of training. Transfer is defined as the effective application by program participants of knowledge and skills learned through attending an education program (Caffarella, 1994; Nolan, 1994). It involves assisting people to make changes whether in themselves, other people, other practices, organizations, or society (Caffarella, 1994). Transfer embraces a cause and effect model of change that assumes change in task performance is possible through a change in competencies; and a change in competence is possible through systematic instruction

(Caffarella, 1994). There is some discrepancy over whether transfer involves the ability of learners to move from generalized learning in the classroom to situation-specific competence in the real world, or whether it involves adults learning what they need to know and then being able to perform it in the setting beyond the formal learning event (Caffarella, 1994; Laker, 1990; Nolan, 1994; Swanson & Nijhof, 1994). Much of the literature focuses on developing instructional strategies that mirror the transfer context so the learning event becomes more real. The emphasis is on providing learners with know-how so they will be able to perform in their home context.

Transfer is viewed not as a static concept, but is rather defined within the context of the program (Kiener, 1994). The intent of transfer is to show learners how to apply their learning in their home context. It does not consider to any great extent how the learning might change as a result of coming into contact with these different home contexts. Instead, it focuses on identifying possible barriers to transfer that might exist in the home context, and includes program components designed to overcome these barriers (Fox, 1984, 1994; Caffarella, 1994; Cheek & Campbell, 1994). The transfer process aims to limit the potential negative influence of contextual factors by creating strategies that respond to them. Learners are taught to become aware of contextual factors that may negatively influence their ability to transfer their learning (i.e., lack of time). Strategies are built into the program and into post-program activities to assist learners in responding to potential barriers to transfer. Assumptions underlying transfer parallel those previously discussed about the fidelity approach to implementation. Transfer assumes that if the correct strategies are in place, the learning can be transferred with fidelity to the original program ideas. What follows is the assumption that learning outcomes can

be predicted and to a large extent controlled, guaranteeing their achievement. Where program objectives are not met, it is assumed that barriers and weaknesses in either the program or the application site were missed, and must be re-examined so they can be incorporated into the program plan (Cheek & Campbell, 1994).

Relative to our discussion of utilization, transfer can be said to reflect an instrumental approach. The knowledge gained is practical, and can be applied directly in the learners' home context, where its effect can be observed and documented. Transfer does not place priority on the decision making role of adult learners in deciding how they will use their learning, if at all, in their home context; and it does not consider those program outcomes that may have been unintended.

Finally, transfer can be described as a process that is driven predominantly by psychological factors. The emphasis is placed on facilitating the process of transfer by incorporating into the planning, delivery, and follow-up of programs, strategies which build previous knowledge and experience of learners and which make the learning relevant and ensure the intended outcomes of the program are realized. Its key players are those people or groups who have a role to play in making transfer happen: the program planner and any others involved in planning the program; the instructor; the participants; and those in the home contexts of the participants (such as colleagues, supervisors, and senior managers in a work context).

Like the other processes described, transfer is influenced by a number of different barriers and facilitators. The discussion to follow will explore these various influences.

Barriers and facilitators to transfer

Caffarella (1994) provides a useful framework for organizing the factors that are

hypothesized as influencing transfer. These influences are organized under five broad categories: (1) program content; (2) program design and execution; (3) program participants; (4) organizational context; and (5) community/societal forces (see Table 3).

Program content. The degree of fit between the objectives of the program and the needs of the learners is described as an influence on transfer (Fox, 1994). Where there exists a high degree of fit between the needs of the learners and the program objectives, transfer is facilitated. The emphasis of the content is also thought to influence transfer (Fox, 1994; Parry, 1990). Content that is practical and oriented to the development of skills is said to positively influence transfer.

Program design and execution. Participants who are involved in planning the program are more likely to transfer their learning (Fox, 1994). Since participants help to ensure the program meets their needs they are motivated to transfer their learning to their home context. The inclusion of transfer strategies, before, during, and after the program is also argued as having a positive influence on transfer (Caffarella, 1994; Cheek & Campbell, 1994; Keiner, 1994; Killion & Kaylor, 1990; Nolan, 1994; Parry, 1990; Wenz & Adams, 1991). Identifying possible barriers to transfer and incorporating them into the program so they can be overcome (before), providing practice opportunities to new skills (during), and reinforcing the new learning in the home context with follow-up (after); are examples of some general strategies. Instructor credibility is also identified as a possible influence on transfer.

Program participants. The prior knowledge and experience of the program

Table 3

A Summary of the Barriers and Facilitators to Transfer

<i>Factors/Variables</i>	<i>Positive/Facilitating</i>	<i>Negative/Hindering</i>
1. Program Content		
a. Degree of fit	meets needs	does not meet needs
b. Emphasis		
• practical	practical	not practical
• skill-oriented	skill-oriented	not skill-oriented
2. Program Design and Execution		
a. Participant involvement in planning	involved	not involved
b. Transfer strategies	included	not included
c. Instructor	credible	not credible
3. Program Participants		
a. Prior knowledge		
• level	adequate	inadequate
• conflict	low	high
b. Ability		
• actual	high	low
• perceived	high	low
c. Relevance	relevant	not relevant
d. Motivation		
• internal	present	absent
• external	present	absent
e. Degree of fit	high	low
4. Organizational Context		
a. Climate	supportive	not supportive
b. Support	high	low
c. Resources	adequate	inadequate
d. Structure	flexible	rigid
e. Reward structure	present	absent
f. Time	adequate	inadequate
g. Timing	timely	not timely
h. Degree of fit	high	low
5. Community/Societal Forces		
a. Social conditions	*	*
b. Political conditions	*	*
c. Economic conditions	*	*

Note. Asterisks (*) indicate the effect of these factors was unknown.

participants is identified as an important influence on transfer (Caffarella, 1994). Where a participant's experience and prior knowledge reflect the level needed to engage in the program, and where they are not in conflict with the program objectives, transfer is expected to be facilitated. The degree to which the program participants are able to transfer their learning, and the extent to which they perceive that they are able to transfer their learning, are also possible influences (Fox, 1994). Those who are able and perceive themselves as able to assume ownership of their learning, and integrate it into the structure and process that characterize their home environment, are more likely to transfer their learning. Participants who perceive the new skills as relevant are more likely also to transfer their learning, as are those whose learning needs are consistent with those in their home context. Finally, participants who are personally motivated and who perceive some external reward for transferring their learning will likely be positively influenced.

Organizational context. The climate of an organization is expected to have an influencing effect on transfer (Caffarella, 1994; Fox, 1994). Climate includes both the formal and informal rules, norms, and values of an organization. Organizational climates that are supportive and embrace change are more likely to positively influence transfer. Program participants who are met with support from their colleagues, supervisors, and senior managers, and who have adequate resources are more likely to transfer their learning (Fox, 1994). Organizations with reward structures (Fox, 1994), and those that provide participants with time to transfer their learning (Parry, 1990), are expected to

positively influence the process. Transfer is facilitated when the learning is viewed by the organization as timely, and when program goals are consistent with organizational goals.

Community/societal factors. Caffarella (1994) suggests that the social, economic, and political conditions of a community (society) are likely to have an important influence on transfer. While she does not describe in detail the specific factors and the possible influence they might have, she does provide one example: the support of key leaders in the community. If we consider this example, it is not difficult to see that the support of community leaders would likely positively influence transfer.

The post-adult educational experience: Learning from transfer

Transfer of learning provides yet another approach to understanding the post-adult education experience. It is unique in its emphasis on the individual learner and the importance of building on previous knowledge and experience to make learning more relevant. As a result, the learning is expected to be assimilated better into the ways of knowing of the learner, making the transfer of new knowledge and skills to the home context of the learner more successful. Similar to the fidelity approach to implementation, transfer posits that the post-educational experience of adults can be planned for, and managed, if educational programs are carefully planned and if appropriate transfer-enhancing strategies are put into place. In much the same way that the instrumental approach to knowledge utilization is described, transfer is concerned with the direct application of knowledge and skills. The intent of transfer is to provide learners with the necessary know-how to be able to perform in the real world. Where non-utilization is ascribed to a lack of fit between the knowledge provided in the program

and that of the user, failure to successfully transfer new knowledge and skills is attributed to the lack of planning by educators in addressing all of the barriers of the home context. Solutions to the failure of adults to transfer their new knowledge and skills to their home contexts invariably include a re-examination of programs and transfer sites to uncover missed barriers and weaknesses, so as to incorporate specific program components to deal with them. In transfer of learning, how adults apply learning beyond the classroom is assumed to be related directly to the degree of thoroughness of adult educators in planning and delivering programs which reflect the learning needs of adults, and which incorporate the appropriate strategies to overcome anticipated contextual barriers.

Diffusion

Diffusion is the spread of a new innovation (idea, technology, etc.) from its source of invention or creation to its ultimate users or adopters (Rogers, 1995). It includes both the planned and spontaneous spread of ideas (Rogers, 1995). In the utilization literature, the timing of diffusion or its associated strategies are often cited as influences on knowledge use (Knott and Wildavsky, 1980; Dunn, 1980; Lester & Wilds, 1990). In the implementation literature, Berman (1980) describes this process as macro-implementation, a process that describes the sequential path or passages policy follows from policy makers down to the final implementers.

How diffusion and utilization are differentiated is often a point of debate in the discourse on utilization (Machlup, 1993; Beyer & Trice, 1982; Knott & Wildavsky, 1980). Confusion exists over whether diffusion ends when information is received, or if it requires that information be read, digested and understood (Knott & Wildavsky, 1980). If diffusion ends with cognition, the difficulty is finding some evidence that cognition has taken place,

or that the ideas have been adopted. Like reception, adoption is also a fuzzy concept. It is unclear if adoption is signified by a new receptivity in the mind of the adopter, or if it must include action that embodies reception (Knott & Wildavsky, 1980). Adding yet another layer of confusion is the argument by proponents of both the receptivity and the activity views, that adoption only occurs when the preferences of the adopters or their frames of reference are changed.

It is not difficult to see how the line between diffusion and utilization is blurred. Without a clear understanding of the meaning of the terms and the related stages, it is difficult to describe one process without involving the other. At what point information is transformed into knowledge and at what point utilization occurs is unclear. What is clear is the undeniable interrelatedness of the processes.

Diffusion takes place within a social system (Rogers, 1995). This system can be described as a group of interrelated members that engage in joint problem solving to accomplish a common goal (Rogers, 1995). The members may be individuals, informal groups, organizations or sub-systems (i.e. a group of nurses). It is characterized by the social relationships of those who know about the innovation (i.e., researchers) and those who do not (i.e., policy-makers'). The nature of these relationships influences the conditions under which those who know will tell those who don't know (Rogers, 1995). Knott and Wildavsky (1980) argue that the goal of disseminators should not be simply to provide or convey information, but rather should be to create conditions which will allow what is knowledge to the knowers to become knowledge to those who don't know. Without this emphasis, they argue, diffusion only increases the contacts of receivers with data or information. Rogers (1995) maintains that "the heart of the diffusion process is the

modelling and imitation by potential adopters of their network partners who have adopted previously" (p. 17). Through consultation of research studies, he argues that most innovations are subjectively evaluated versus being objectively evaluated. Greater diffusion effects, in terms of knowledge gain, attitude formation and change, and behaviour change, are realised when innovations are conveyed to potential adopters by like-minded senders who have previously adopted (Rogers, 1995). This means that the senders and the receivers share common meanings, and are alike in their personal and social characteristics. And yet, paradoxically, the nature of diffusion is such that some degree of difference between the sender and the receiver must exist if any new information is to be exchanged.

Underlying diffusion is the Innovation-Decision Process (Rogers, 1995). This process includes five stages: (1) first knowledge of an innovation; (2) forming an attitude toward the innovation; (3) deciding to adopt or reject the innovation (4) implementing the adopted new innovation; and (5) confirming the decision. Discontinuance, or the decision to reject an innovation after it has been adopted, can occur at any time. It most often takes place during the confirmation stage. Discontinuance may occur out of dissatisfaction, or because the innovation has been replaced with a new, better innovation. Similar to adaptation in the implementation process, Rogers (1995) suggests that innovations may be re-invented. Re-invention occurs when the innovation is put to use during the implementation stage. What differs in this approach, is that re-invention is linked to the nature of the innovation itself as opposed to adaptation which is more contextually grounded. Some innovations, like a new technology, may not allow for re-invention during use. Others, like ideas, can more easily be re-invented when implemented.

The following section outlines some of the barriers and facilitators to diffusion (see

Table 4). These influences are categorized to reflect both dissemination and adoption.

Influences on the diffusion and adoption of innovations

Influences on diffusion. The role of the disseminator is described as an important influence on the diffusion process. Knott and Wildavsky (1980) identify three possible disseminator roles: (1) information provider; (2) translator; and (3) change agent. As a provider of information, the disseminator conveys all of the available information about an innovation to the adopter. As a translator, the disseminator becomes an interpreter or gatekeeper of information, conveying only that information which is expected to be relevant to the adopter. As a change agent, the disseminator becomes an advocate for a particular viewpoint, disseminating only that information which supports the point of view, with the goal of influencing the adopter's frame of reference toward some desired change. Each of these roles illustrates how the diffusion process can be directed, shaping the type and quantity of information conveyed.

The nature of the relationship between the disseminator and the adopter, as described earlier, can also influence the conditions as well as the outcomes under which an innovation is diffused. Presumably, stronger relationships will influence diffusion in a positive way, thereby increasing the likelihood of adoption.

The communicability of an innovation is also suggested as having an influence on diffusion (Rogers, 1995). Innovations which are perhaps more complex may be more difficult to communicate, negatively influencing diffusion.

Finally, the structure of the social system, or in many cases the disseminating organization, also can facilitate or hinder the diffusion of an innovation (Rogers, 1995). The structure of the organization, both formal (policies and procedures) and informal

Table 4

A Summary of the Barriers and Facilitators to Diffusion

<i>Factors/Variables</i>	<i>Positive/Facilitating</i>	<i>Negative/Hindering</i>
Dissemination		
1. Disseminator Role		
a. Information provider	*	*
b. Translator	*	*
c. Change agent	*	*
2. Disseminator/Adopter Relationship		
a. Nature of link	direct	indirect
b. Interdependency	high	low
3. Communicability of Innovation		
a. Complexity	lower	higher
4. Disseminating Organization		
a. Structure		
• formal	*	*
• informal	*	*
b. Experience	*	*
Adoption		
1. Innovation		
a. Perceived advantage	positive	negative
b. Compatibility	high	low
c. Complexity	manageable	difficult
d. Divisibility	permitted	discouraged
e. Timing	timely	not timely
2. Adopting Organization		
a. Structure		
• formal	*	*
• informal	*	*
b. Experience	*	*
c. Conflict	*	*
d. Issue saliency	*	*

Note. Asterisks (*) indicate the effect of these factors was unknown.

(interpersonal networks that link people in an organization), can be a significant influence. Some organizations may be highly regulated or controlling, hence limiting what information is disseminated, while others may make it a policy to disseminate all information. The experience of an organization in disseminating information may also influence diffusion. Organizations, which are inexperienced and unfamiliar with how to disseminate information, may negatively influence the diffusion process.

Influences on adoption. Rogers (1995) identifies a number of different influences on whether an innovation is adopted. The degree to which an innovation is perceived as superior to that which it supersedes (its relative advantage) is likely to influence adoption positively. "Dissemination implies not only a disseminator, but also a policy [or idea] worth disseminating" (Knott & Wildavsky, 1980, p.550). Innovations, which are more consistent or compatible with the values and past experiences of the adopters, are more likely to be adopted. The complexity of an innovation is also hypothesized to impact adoption. Innovations that are more difficult to understand and to use are less likely to be adopted. The degree to which an innovation may be tried on a limited basis (divisibility) is also expected to influence adoption. Where divisibility is allowed, it is expected to increase the likelihood of adoption. The timing of the innovation relative to the needs of the adopter is also suggested as having an influence on adoption (Knott & Wildavsky, 1980). Innovations that are timelier are more likely to be adopted.

Like dissemination, adoption can be influenced by characteristics of the adopting social system or organization despite the continued assumption that individuals are relatively autonomous in their ability to initiate changes within their local cultures (Lockyer, 1992). Factors such as the formal and informal structure of the organization, the adopting

experience of the organization in receiving and adopting new information, the degree of issue saliency, and the amount of conflict created, also are likely to have an influence on the adoption process.

Toward a further understanding of the post-educational experience of adults:

Insights from the diffusion literature

Diffusion has been described as the spread of an innovation from its source of creation to its ultimate users or adopters. While discussions around diffusion most often are associated with the literature on implementation and knowledge utilization, previous discussions have illustrated how these processes provide valuable insights into the post-adult education experience. The same can be said about diffusion. Before an idea acquired by attending an adult education program can be applied, it must first be diffused from the creator (the program developer), to the final user (the adult program participant).

The Innovation Decision Process also has implications for the post-educational experience. Within adult education, this process describes how, over a period of time, the first exposure of an adult to a new idea or concept evolves from forming an opinion about the new idea, to making a decision to accept or reject the new idea, to implementing the idea, and finally to confirming the decision to implement the idea.

The diffusion process acknowledges the role of decision-making of adults, a role that seems to be absent in related discussions of knowledge utilization. It acknowledges that adults may choose to reject or adopt new ideas. It also recognizes that adults may even choose to discontinue or reject the idea after it has been adopted. Common sense would suggest that the idea of discontinuance is both welcomed and expected in the ongoing process of learning. Despite the emphasis in this thesis on formal learning, it is important to

acknowledge that adults are exposed continuously to new ideas informally in their everyday living. In either case, they may choose to adopt these new ideas. At a later point, they likely will be exposed to another new idea which, when compared, seems better. A decision may be made to replace the old idea with the new one.

The Innovation Decision Process also acknowledges the possibility that ideas can be re-invented. Re-invention most often takes place during the implementation stage (Rogers, 1995). Once again, the difficulty in distinguishing diffusion from utilization becomes apparent. For the purpose of this discussion, we assume that diffusion includes implementation. The re-invention of ideas in diffusion is similar to our earlier discussion about adaptation in implementation. The difference is that, in diffusion, re-invention is dependent upon the nature of the innovation. Highly complex or technical innovations are not easily re-invented. Ideas or concepts, the innovations we usually associate with adult education, are generally not as complex, lending themselves more readily to re-invention when they are put into practice.

With respect to diffusion and the Innovation Decision Process it needs to be stressed that this process is not isolated, but rather that it occurs within a social system (Rogers, 1995). Adults are members of many different social systems, including their families, the organisations in which they work, and the groups to which they belong. Decisions to adopt and implement are likely influenced by the norms, policies and procedures, and the interpersonal interactions that are parts of these different systems. The difficulty is in identifying which characteristics, and to what extent these characteristics, influence the decisions of adults to adopt and implement new ideas.

Clearly, a discussion on diffusion has implications for the post-adult education

experience. Despite the confusion over terminology, diffusion acknowledges the role of decision-making and that of the social system in determining whether or not and how adoption and implementation occur. Diffusion, like the other processes described, is an example of how a thing is put into practical contact. Whether the thing is a policy (implementation), scientific knowledge (utilization), or a new skill (transfer), an understanding of the process of putting the thing into practical contact informs our understanding of the post-adult education experience.

Bringing it all Together: Informing an Understanding of Application

While the preceding discussion has illustrated how these processes have contributed to our understanding of the post-educational experience of adults, the remaining discussion illustrates how each of the processes contributes to an understanding of application.

Implementation is one of the processes that provides insight into the post-adult education experience generally, and post-adult education application more specifically. While implementation deals with policy, adult education is concerned with ideas, concepts, and principles learned through attending adult education programs. Like adaptive implementation, application conflicts with structure and control, and opts instead for the evolution of ideas in practice. Similar to adaptive implementation, application embraces context as an integral part of the process and recognizes that it does not “occur in a vacuum,” and that the “values of practical contact are not necessarily the values of the thing in pure form” (Ottoson, 1995, p. 13). Like implementation, application only considers an idea to be real when it manifests itself in context. From the perspective of implementation, numerous personal and organisational factors, political forces, and the nature of the idea or the concept itself influence application.

Further insight into application is achieved through a discussion of instrumental and conceptual use as it relates to utilization. While these two terms are described as being mutually exclusive in the utilization literature, this is not the case in the application of adult education. Application embraces both types of actions (Ottoson, 1995). The decision-making role of adult learners is also an important part of the application process. Decisions about whether, when, and how to apply the learning are left with the adult. "Adults need to be able to create and judge situations to put a thing into practical contact. They are unlikely to be given such situations" (Ottoson, 1995, p.9). Influences on application from the perspective of utilization include an array of personal and organizational factors, political forces, the relationship between the creator and the user, and the nature of that which is being applied.

Transfer of learning provides yet another approach to understanding application. The literature describes transfer as a process that can be planned for; such that what is learned in the classroom can be directly applied in its original form upon returning to the home context. Knowledge and skills are developed and transferred without any change or adaptation, suggesting that learning outcomes can be planned, predicted, and controlled.

Application, on the other hand, is characterized by practical contact. Where transfer advocates control, application advocates the release of control to the learners who in interacting with context, strive for the "goodness of fit between idea and context" (Ottoson, 1995, p.13). From the perspective of transfer, a range of factors that include program content, design and delivery, participant and organizational characteristics, and community or societal forces influence application.

Finally, as diffusion is a process that precedes the processes of application, transfer, and implementation, it is important in developing a more complete understanding of how ideas are put into practical contact. Before ideas can be applied, they must first be adopted. The role of the disseminator, the nature of the relationship between the disseminator and the adopter, the communicability of the innovation, as well as a range of organizational characteristics, are all characteristics that influence the process of diffusion and subsequently, the process of application.

In summary, application is the process of putting a thing into practical contact, which is most commonly in adult education those ideas, principles, or concepts learned in an educational program. As there are often outcomes from an educational program which are not intended and spontaneous, this thing is not limited to knowledge alone, and may also describe new relationships, renewed self-confidence, or a new goal.

How the thing is put into practical contact is a function of the interrelationship of the idea or skill with the application context (Ottoson, 1995). As application does not occur in a vacuum, and must compete with existing priorities and structures, the nature of the thing will change shape in an effort to find some degree of fit in context. In other words, application occurs in relation to some other element; it interacts with what already exists. In this way, the meaning of the thing is created in context, suggesting that in application there is no guaranteed outcome.

Application is purposeful and can be both instrumental and conceptual (Ottoson, 1995). Ideas that are put into action shortly after completing an adult education program with fidelity to the original reflect an instrumental approach to application. At the other end of the spectrum, an idea that may be used conceptually, adapted more than once over a

period of time (less emphasis on immediate action), or not traceable to a single source, may be described as an enlightenment or conceptual approach to application.

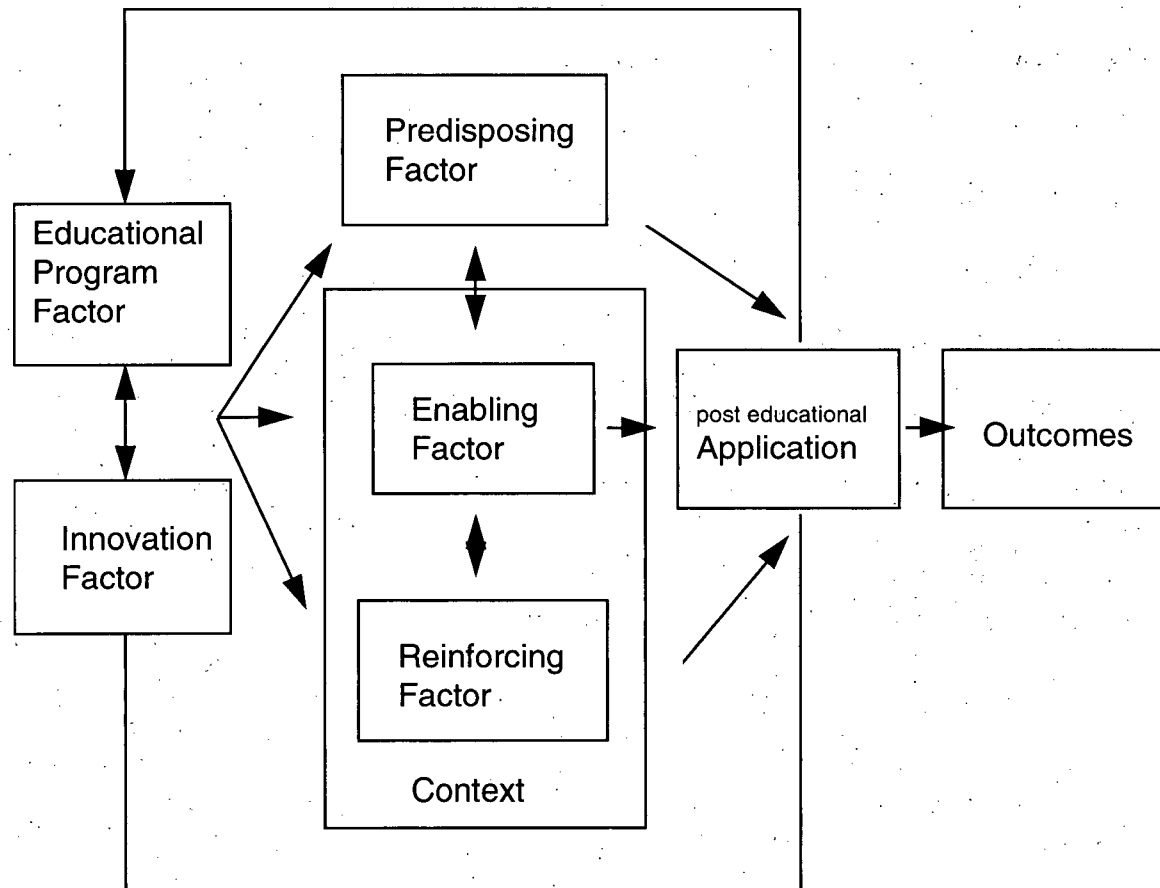
Application requires more than a good idea (Ottoson, 1995). It necessitates crossing the boundaries of the education context and the home context, having the skills to put the thing into practical contact, and seeing the worth of the effort of application amidst other priorities (Ottoson, 1995). Application requires skills of "translation, negotiation, adaptation, and decision-making" (Ottoson, 1995, p.17). It necessitates that control over application be released by disciplines and put into the hands of learners (Ottoson, 1995).

Influences on Application: An Application Framework

Drawing on insights from an exploration of the related processes and research on the PRECEDE/PROCEED framework (Green & Kreuter, 1991), from which the framework was adapted, the Application Process Framework (APF) was created (Ottoson, 1995). This framework explores five possible sources of influence on application: (1) educational factor; (2) innovation factor; (3) predisposing factor; (4) enabling factor; and (5) reinforcing factor. The educational factor includes characteristics of the educational program such as the methods, the instructor, and program organization. Characteristics of the idea or thing to be applied are described as innovation factors, and those characteristics that influence the learner toward application (knowledge, attitudes, and values) are referred to as predisposing factors. The skills of the learner and the enabling characteristics of the application context (opportunity, resources) are included in the enabling factor; and the support that is received for application is described as the reinforcing factor. A reproduction of this framework is given in Figure 1.

Figure 1

Application Process Framework (Ottoson, 1995)



Summary

The purpose of the foregoing exploration was to illustrate how the processes of implementation, utilization, transfer, and diffusion, inform our understanding of the post-educational experience of adults and subsequently of application, the framework used to conceptualize the post-educational experience of adults in this study. What follows is an identification of the research questions and a discussion of the methodology used in this study.

Research Questions

What does application look like in the post-educational experience of the adult learner?

How do participants of adult continuing education programs describe the factors influencing application?

What do they perceive are the factors influencing application?

In what way are these factors perceived as barriers or facilitators to application?

How do participants perceive these factors as relating to one another?

CHAPTER THREE

DESIGN AND METHODOLOGY

This study focused on developing a better understanding of the post-educational experience of adults and how application was reflected in this experience, and in determining what factors participants of adult continuing education programs perceived as influencing application.

This study used a qualitative, case study approach, and utilized semi-focused interviews and a follow-up focus group as the data collection techniques. The decision to use a case study design evolved from an understanding of the sociological perspective of the case study (Hamel, 1993). This perspective suggests the importance of the context in examining a particular phenomenon, which is consistent with an understanding of the application process. The use of semi-structured interviews and a follow-up focus group allowed both the researcher and the participants to play an active role in the data collection. Data were analyzed both deductively, from the Application Process Framework; and inductively, with categories evolving from the data itself. Both member checking and journaling were utilized to help maintain internal validity and reliability.

The organization that served as the research site for the study was selected because of its familiarity and accessibility to the researcher. Knowledge of the large employee base of the organization, and the array of training programs offered to employees, informed decision making around sampling strategies.

The following discussion of the research design and methodology elaborates on the points outlined above, describing both the approach taken to answer the research questions, and the rationale behind the approach.

Qualitative Case Study and Unit of Analysis

The case study was selected as the approach most appropriate for exploring the proposed research problem. Stake (1995) defines the case study by an interest in individual case(s), not by the methods used. Similarly, Merriam (1988) defines the case study as an examination of a specific phenomenon. This phenomenon might be an individual, a program, an institution, a group, an event, or a concept. Relative to this research project, the case was described as one of workplace application.

The unit of analysis defines the case by helping to determine the limits of the data collection and analysis (Yin, 1994). The unit of analysis results from an accurate specification of the primary research questions, and should be apparent upon their review (Yin, 1994). For this case study of workplace application, the unit of analysis was the individual experience with application of the program participants.

While it is clear that a case study is not defined according to specific data collection or analysis strategies (Yin, 1994), a qualitative approach to case study research was selected for the proposed research project. A look at the philosophical assumptions underlying this approach is needed to provide an understanding of why this design was selected. Case study research rooted in the qualitative paradigm maintains that the world is made up of multiple realities. The world is not an objective thing, but is rather a function of personal interaction and perception. As Merriam (1988) suggests, it is a "highly subjective phenomenon in need of interpreting rather than measuring" (p.17). Qualitative research, of which the case study is one approach, is interested in meaning. Its focus is to develop an understanding of how people make sense of their lives and their experiences and how they interpret these experiences and create their social worlds. In qualitative case study research, the researcher

is the primary instrument for data collection and analysis. The advantage of this is that the researcher can be responsive to the context, can adapt techniques, consider the significance of non-verbal aspects, clarify and summarise the case study as it evolves, and explore anomalous responses (Merriam, 1988).

Knowing this about qualitative research and the case study, it is not difficult to see how this approach was suited to the proposed research problem. If we can assume that our understanding of the world is highly subjective, then it follows that our understanding of our experiences with application will also be highly subjective. As such, it is imperative that an approach to studying this phenomenon be focused on interpreting the experiences of those engaged in it-- in this case, the participants of adult continuing education programs. The case study allows the everyday experiences of people in their natural circumstances to be captured, providing a better understanding of the larger complexities of "actors, actions and motives" (Orum et al., 1991, p.6). Where other methods are decontextualized and operate on the premise that all are equal, the advantage of the case study is its consideration of both the individual and the context in which the individual operates. As application involves putting a thing (concept, idea, etc.) into practical contact, a case study design that allowed for consideration of both the individual and the context was appropriate. By allowing for an examination of the experiences of individuals with application in their home contexts, the case study design allowed for a more detailed understanding of the application process.

Site Selection

Marshall and Rossman (1995) identify four characteristics of the ideal site for conducting qualitative research: (1) entry is possible; (2) a high probability exists that a rich mix of the processes, people, programs, interactions, and structures of interest are

present; (3) the researcher is likely to build trusting relationships with the participants; and (4) data quality and credibility of the study are reasonably assured. (The fourth characteristic is described with reference to the sampling strategy selected that is discussed at a later point in the methodology). Because it successfully met all of the criteria described above, a local government with a large employee base was selected as the site for this case study. For the purpose of confidentiality, the municipality will remain anonymous.

Access or entry to the site was made easier as a result of the on-going involvement of the researcher with the site in a variety of capacities. The work of the researcher has been with the Staff Development Division, which is responsible for providing Corporate training to all of the union and non-union employees of the local government. The research was situated within the domain of this Division.

The number and diversity of employees also contributed to the selection of this site. The large, diverse employee base produced a sufficient number of employees who had participated in a continuing education program in the last year, and who were engaged in application or at least had the intent to apply their learning.

As the researcher was conducting an academic study that would provide useful information to the organization that employed her, the researcher was better able to develop trusting relationships with the participants within the relatively short period of time of the study. The researcher conveyed her intent to bring some understanding of application to the study, with the aim of furthering this understanding and providing the Staff Development Division with some useful information about the process of application at this organization.

Research Role

In qualitative research, the researcher is the primary instrument; the presence of the

researcher in the lives of those who participate in the study is fundamental to this paradigm whether these presences is sustained or brief (Marshall & Rossman, 1995). The role of the researcher may vary according to the degree of participantness, revealedness, intensiveness and extensiveness desired, as well as the focus of the study (Marshall & Rossman, 1995).

In this study, the researcher participated as an interviewer and a focus group facilitator. As application does not necessitate visible use of learning, other forms of participation, such as that of the observer, were not necessarily appropriate. The researcher's involvement with each participant was brief, but personal. The researcher conducted one in-depth interview with each participant and facilitated his or her participation in one focus group. The researcher's involvement with the participants occurred over a three-month period.

Defining the researcher's role also involved some reference to interpersonal considerations such as building trust, maintaining good relations, respecting the ideal of reciprocity, and sensitivity considering ethical issues as they arose (Marshall & Rossman, 1995). It was the intent of the researcher to communicate an open-door policy. The researcher discussed her role in the setting with the participants, was available to answer questions or address any concerns, respected the decisions of participants not to participate, and willingly negotiated the terms of reciprocity.

Purposeful Sampling Strategies

Case study research designs commonly use purposeful or criterion-based sampling strategies (Merriam, 1988). Criterion-based sampling requires that one establish the criteria, bases or standards necessary for participants to be included in an investigation; a sample is then found that matches these criteria (Merriam, 1988). As it was not feasible to engage the

approximately 1000 people who participated in training programs at the study site over the last year in a qualitative study, sampling criteria were established. Three criteria were used to sample participants for this study: (1) the length of time passed since the completion of the program; (2) the inclusion of participants from a number of programs; and (3) a demonstration of engagement in application or an intent to apply the ideas of the program after its completion

First, participants had to have completed a continuing education program approximately two months prior to the data collection period. While it was unclear how much time was needed for application to occur, two months seemed a reasonable amount of time for participants to initiate application and not too long a time for them to have forgotten their participation.

Second, a decision was made to include participants from a number of programs rather than one particular program. To limit the selection of participants to one particular program would have placed significant emphasis on the characteristics of the program as influencing application. The Application Process Framework, which was identified as the conceptual framework for this study, identified a number of factors as influences on application of which the program was only one. A focus on a particular program would also have identified the program, rather than the process of application, as the case being studied.

Third, as the study was one of application, prospective participants needed to be engaged in application or to have had the intent to apply their learning when they completed their program. As application involved purposefully putting ideas, concepts or principles into practical contact (Ottoson, 1995), prospective participants had to be able to demonstrate that they were engaged in application or that they had intended application when they

completed their programs.

Once prospective participants had been identified as having participated in an adult continuing education program and having completed this program 2 months prior to data collection, a list of names was compiled. All of those on the list were contacted by letter (see Appendix 1). Because of the current involvement of the researcher with the organization, the Staff Development Division on behalf of the researcher sent out the letter. Those interested in participating in the study were asked to contact the researcher or the Division. Out of the 1000 or so employees who participated in training in the past year, only 10 individuals contacted the Division to communicate an interest in participating in the study. Each individual was contacted by the researcher for a brief telephone interview. In the interview, the prospective participants were asked to respond to a series of questions that were devised by the researcher to assess intended or current application.

A list of participants who satisfied all of the sampling criteria was compiled in the order that they were received-- there were nine names in total. All of these nine employees participated in the study.

Data Collection Strategies

Semi-structured interviews and a follow-up focus group were selected as the data collection strategies for this case study.

Interviews

Interviews were selected as a data collection strategy because they are a useful way to generate large amounts of information quickly (Marshall & Rossman, 1995). In this study, nine interviews were scheduled and conducted over an eight-week period. Each of the interviews was approximately one to one and a half hours in length. Of the nine

interviews conducted, two were lost-- one was the result of an audio recorder malfunction and the other was due to the fault of the researcher in setting the wrong speed setting on the recording device. A repeat interview was conducted with one of the interviewees. In total, data from eight interviews was available for analysis. Additional interviews were not required, as repetition in the responses was apparent.

In qualitative research, interviews are "more like conversations than formal events with predetermined response categories" (Marshall & Rossman, 1995, p. 80). In this study, the interviews were designed to be semi-structured. Guided by a list of key questions to be explored (Merriam, 1988), the interviews were meant to ascertain responses to a number of key open-ended questions while at the same time allowing room for clarification and probing. The key questions that formed the interview schedule related to the factors thought to influence application as conceptualized by the Application Process Framework (see Appendix 2). It was hoped that this approach would ascertain the participants' perspectives of the influences on application. It was hoped also that despite specific questions being asked, the interview would evolve more like a conversation with new and perhaps unforeseen directions and questions evolving from the responses of the interviewees to the predetermined questions-- a fundamental assumption of qualitative research (Marshall & Rossman, 1995).

During the interviews, the researcher found she played a more directive role in the interviews than was anticipated. In addition to asking open ended- questions, the researcher had also to provide prompts to elicit responses from the interviewees. These prompts represented the variables relating to each of the factors of the Application Process Framework. For example, a general question asking participants to consider any aspects of

the educational program that might have influenced their application was followed by requests for them to comment on specific possibilities such as the instructor, the organization of the program and the program methods. In this way, the researcher played a more active role in shaping or limiting the responses of the interviewees.

In qualitative research, data analysis does not begin at any particular moment. "It is a matter of giving meaning to first impressions as well as to final compilations (Stake, 1995, p. 71). While the goal of the researcher was to ensure on-going analysis of the interview data so that one interview would inform the next, this goal was not realized. The researcher spent more time than anticipated in transcribing the interviews, which prevented her from having an adequate amount of time for analysis between interviews.

Periodic and informal checks for accuracy and understanding were conducted with the participants during the interviews to maintain the internal validity of the data collected through the interviews. This measure is consistent with approaches taken in qualitative research to ensure internal validity, or the ability of the researcher to understand and present the perspectives of those involved in the phenomenon under study (Merriam, 1988). On a similar note, each participant received a copy of the interview transcript to review for accuracy of representation (Schumacher & McMillan, 1993). The interviews were tape recorded and transcribed verbatim so that the recording of the interview data would not interfere with the flow of the interview, and would be systematic and facilitate data analysis (Merriam, 1988). All of the participants consented to having their interview tape-recorded and transcribed.

Focus Group

The focus group technique was selected as a strategy for collecting data because it is

a “carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment” (Krueger, 1994, p.6). Focus groups can be conducted for many different purposes, with the purpose for this study being to follow-up on the information gathered in the interviews. Of the nine interviewees, four were able to participate in a two-hour focus group which was conducted one month after the interviews were completed. As focus groups typically involve no more than seven to ten participants (Krueger, 1994), one focus group was sufficient for this study. A preliminary analysis of the interview data was undertaken to uncover any themes, patterns, and differences in the data. Those themes or patterns that the researcher identified as requiring further elaboration served as the basis for discussion in the focus group. Like the interviews, the focus group was tape recorded and transcribed verbatim. Reliability of the data obtained in the focus group was maintained in a fashion similar to the interviews. Informal member checking was sought during the course of the focus group, and each participant was sent a copy of the transcription for review.

Research Journal

Along with the above mentioned data collection strategies, a journal was kept. The journal recorded the personal frustrations, reactions, and assessments of the researcher (Sanjek, 1990). In written form, the journal was an account of my ideas, mistakes, confusions, and reactions to my experiences. Information relating to any decisions I made during the course of the study was also recorded. Journal notes were hand-written and recorded in a notebook.

All of the interview and focus group data was stored in computer files with each file representing a different data collection strategy. Within these files, the data was stored

according to the source of the data with the circumstances of each entry identified. Each participant was assigned a code name to maintain the confidentiality of the information gathered.

Data Analysis

While preliminary data analysis occurred following the interviews and prior to the focus group, intensive data analysis began when data collection was complete. Categories of data were in large part created deductively from the Application Process Framework. The data were identified as *units of information* (Merriam, 1988) and were organized into categories that reflected the influences described by the Framework. The units of information were either phrases, sentences or paragraphs that were found in the data. Each category of data was assigned a colour code and each supporting unit of information was highlighted or coded with the same colour. This coding occurred on copies of the transcript and was not difficult to do given that the interview questions and the additional prompts provided were linked directly to the Framework. The coded units of information were then lifted from the individual transcripts, grouped by category, and saved in separate computer files for further analysis.

Maintaining Internal Validity and Reliability

Internal validity is concerned with how the research findings match reality (Schumacher & McMillan, 1993). In qualitative research, where multiple realities are postulated (not one objective reality), the construction of reality of each study participant and the ability of the researcher to interpret and communicate these constructions, are the essence of maintaining internal validity (Schumacher & McMillan, 1993). Schumacher and McMillan (1993) suggest a number of strategies that were employed to increase internal

validity. To begin, an effort was made to use the participants' language in the interviews and in the focus group. The interviews were also conducted in the natural work settings of the participants, which reflected more accurately the reality of the application experiences of the participants. Disciplined subjectivity on the part of the researcher was employed also. During data collection, a reflexive journal was kept to assist the researcher in recording any bias. Searching for negative instances and checking and rechecking the data for possible rival hypotheses was also employed as a strategy for balancing bias in interpretation (Marshall & Rossman, 1995). The faculty advisor, who has conducted previous research on application, also reviewed the analyses and critically questioned the interpretations.

Reliability refers to the extent to which one's findings can be replicated (Merriam, 1988). This definition of reliability is problematic in the social sciences because human behaviour is constantly in a state of change. Qualitative research is not interested in defining the laws of human nature, but is rather interested in describing and explaining the world as it is interpreted by those in it. So instead of applying the term reliability in a traditional way, this study applies an understanding of reliability that focuses on the extent to which the results of a study make sense, and are consistent and dependable (Schumacher & McMillan, 1993). In this study, a number of steps were taken to ensure the reliability of the results of the study. To increase the agreement on the description of the factors influencing application between the researcher and the participants, both the interviews and the focus group were audio recorded. In a similar vein, accuracy was informally checked through member checking during the data collection. Each participant was asked to review a copy of his or her interview transcript for accuracy of representation. All participants had the opportunity to review for accuracy the synthesis of the interview data when it was presented

at the focus group. Discrepancies in the data that were an exception to patterns were observed, recorded, analysed, and reported. The role of the researcher, the criteria for selecting participants, the social context, the data collection and analysis strategies, and the analytical framework for the study are described explicitly.

Limitations of the Study

The use of a Framework in developing the interview schedule for this study is perhaps the greatest limitation. As the interview questions were developed around the factors of the Framework, the data that was collected is to some extent shaped by the Framework itself. Although the participants' perceptions were obtained, it is only their perceptions as they relate to the factors of the Framework that were discussed. It is also unclear if these factors would have been identified by the participants as influences on their application if the researcher had not suggested them.

Also contributing to this limitation are the questions themselves. While every effort was made to ask the questions using language that would be familiar to the participants, the abstract nature of the questions was a challenge for the participants. This seemed to be related to both the questions themselves and to the participants' lack of familiarity in thinking about their post-educational experience in the ways suggested by the questions. When many of the questions were asked, the participants responded with quizzical looks and requests for elaboration or clarification. For the most part, the researcher had to prompt the participants by providing them with examples of possible influences for them to comment upon. While it was not always difficult for the participants to discuss these examples, such as the quality of instruction received, they were not always able to link their discussion of these examples back to application. In the case of the example provided, links

were often not made between whether and how the quality of instruction received influenced application.

In retrospect, it might have been better to have had a more general conversation with the participants around their post-educational experience with perhaps only one or two common, predetermined questions. This would allow the participants to reflect upon their experience in ways and in terms that would be meaningful to them. It would then have been left to the researcher to analyze the data to identify themes, which in turn could have been compared to the framework to determine a level of fit. In other words, the application of a technology, or an approach to analysis that was entirely inductive (versus primarily deductive from a conceptual framework), might have revealed a very different story of process and influence.

While the inability of this study to produce generalizable findings might also be considered a limitation, it was not within the intent of this study to do so. It is also not the intent of all qualitative research. The purpose of this study was to stimulate thinking about the application process and the factors that influence it. Finally, it is not clear what time frame is sufficient for application to occur. While a two month time frame was selected based on the same time frame used in a previous study of application (Ottoson, 1995), it is still unclear as to how much time is required for application to occur.

Given the complex nature of the processes involved and the scope of the study, clearly this study is only an initial examination of the influences on the process of application of learning. Studies on a larger scale, incorporating more extensive data collection strategies may yield a fuller and more complete picture of the application process.

As with any qualitative study, the role of the researcher as the primary agent of data

collection and analysis remains a contentious issue. How to remove the bias of the researcher is a difficult if not impossible task. While efforts were made to be aware of any researcher bias and opportunities were provided for the participants to review and comment on the interview and focus group transcripts, these were merely tools to reduce the risk of threats to internal validity and reliability. The meanings were still reconstructions that involved interpretation on the part of the researcher. This must be taken into consideration when reading the results.

CHAPTER FOUR

ANALYSIS

The municipal government employees, who participated in the study, represented a cross-section of departments and levels. Participants came from police, fire, parks and recreation, permits and licenses and library. Three of the participants worked in supervisory roles and one held a senior management position. The other participants included a police officer, a fire and rescue trainer, a permit checker, a systems administrator and a human resource assistant. All of the participants had completed more than one Staff Development program in the past year. For most, the program discussed was the one completed most recently. The programs the participants completed are known as *soft skills* programs and are intended to promote interpersonal skill development. The various programs the participants discussed in the context of this study were Conflict Resolution and Negotiation; Facilitated Decision-Making, Level 1; Communicating for Results; Time Management; Essentials of Supervision; and Training Delivery, Level 1.

As discussed previously in the methodology, the themes generated by the analysis relate to the factors thought to influence application as conceived by the Application Process Framework. The themes are also a function of the interweaving of the interview and group data. An analysis of the comments of participants as they relate to these factors is found below along with their thoughts on what they understand the term application to mean (see Table 5 for a summary of the influences on application).

Table 5

A Summary of the Barriers and Facilitators to Application

<i>Factors/Variables</i>	<i>Positive/Facilitating</i>	<i>Negative/Hindering</i>
1. Predisposing		
a. Motivation		
• skill development	met	not met
• skill reinforcement	met	not met
• career development	met	not met
b. Prior Knowledge/Experience	reinforces	conflicts
c. Attitudes/Beliefs		
• perceived value of subject area	valuable	not valuable
• perceived importance of skill development/skill practice	important	not important
2. Educational		
a. Instructor		
• experienced	more experienced	less experienced
• knowledgeable	more knowledgeable	less knowledgeable
• organized	more organized	less organized
• role	multiple roles	one role
b. Methods		
• practice time	ample	insufficient
• work-related examples	apparent	not apparent
• group interaction	substantial	very little
• case studies	relevant	irrelevant
c. Organization		
• structure	structured	unstructured
• flow	seamless	choppy
d. Format	intact work group	
e. Learning Environment	supportive	not supportive
3. Innovation		
a. Value		
• work	valuable	not valuable
• personal life	valuable	not valuable
• previous learning	reinforces	contradicts
b. Timing		
• content perceived as essential	anytime	
• task or project specific content	timely	not timely

c. Underlying Theory/Approach	apparent	not apparent
d. Complexity	straightforward	complex
<hr/>		
4. Enabling		
a. Reference material	available	unavailable
b. Feedback and Verification	apparent	not apparent
d. Opportunity to apply	opportunity	no opportunity
e. Level of Conflict		
• workload	low	high
• existing policies and procedures	low	high
f. Culture		
• informal	supportive	not supportive
• formal	supportive	not supportive
• senior management	supportive	not supportive
<hr/>		
5. Reinforcing		
a. Intrinsic Reward	yes	no
b. Support		
• supervisor	yes	no
• co-workers	yes	no
<hr/>		

Application

Defining Application

Prior to interviewing the study participants about their experiences with application and their perceptions of the factors influencing application, an understanding of how they conceptualized the term needed to be determined. When asked to describe what the term application meant to them, all of the participants equated application with using or doing something with the information and/or skills they had learned in the training program. For instance, one participant, Larry, described application as "Applying what you've learned in a program or course into the workplace; how you use the information that you've picked up as a result of the program." Similarly, Jane defined application as "Just how you use something. Whatever you're given you turn around and use it in your workplace. The way you use any kind of skill or technique."

Likewise, Carol suggested application meant "To use it after a course. To go right back and use whatever it is."

During the focus group session, the participants' perceptions of use were further explored. The group was asked to consider whether they thought use necessitated some action that is visible to others. Initially, the group suggested that visible action was a requirement of use. Carol linked visible action to her own behaviour reinforcement. "I have to kind of recognize as I'm doing it that this is a change I'm doing (or) I forget all about it and I'm back into my old mode." Mike linked visible use or doing to the ability to remember the program content. "If you're never able to use it in the workplace then you're going to forget it." At the same time, Mike suggested that some ideas may not be used immediately, but are in the back of the mind and come forward when needed, contributing to a sense of familiarity with the idea when it comes to mind. "If something comes up I always find ... that some of the tools that you've got or the instruction you got, it's in the back of your mind and it comes forward."

Adding another dimension to the discussion of use, participants were asked to consider whether thought could be equated with use-- if a person thought about something in his or her head, which was not visible to others, would this be considered use? Discussion about the connection between thought and action and use did not result in a clear consensus as the group members had varying opinions. For two of the participants, Pete and Mike, thought was clearly not use. They believed that while thought could lead to use, thought alone did not constitute use. Mike said, "If I'm not going to pick it and use it I'm not going to call it use even though I've maybe thought about it." At the same time Pete said, "You've got to be doing it... thinking about going

to the store and buying groceries is not doing it, actually going there and buying the groceries is doing.”

In trying to understand how there might be different meanings of use, the group discussed learning styles and content type as two possible explanations. Relative to learning styles it was suggested that some people like to take action immediately while others need to think and reflect and work things out in their head. Mike, who indicated he takes action said, “I like to try something and if it doesn’t work out, well I tried it.” Carol, who considered herself more of a reflector suggested, “Some people have got to sit there and think and then sort of rethink. To them it’s just the thought of it, so they think and they work it out.... Somebody else (may) say they’re not (doing) anything but that may be the way they’re doing that.”

In terms of the learned content, it was suggested by Mike that use was a function of whether the content was a new skill or a new way of thinking, intended to create new thought patterns, requiring no further action. He said, “If it was a taught skill that required some result like it requires me to go ahead and think about it and use it then that to me is use. But if it’s a skill that’s been taught as a thinking tool and I’m thinking something well then that would also be use if it doesn’t require any further action.”

Discussion around supervisors’ expectations of the kind of use that should result from participating in a training program formed the remainder of the discussion of the group. All of the members of the group felt that their supervisors had no expectations about the kind of use. Two of the group members who work in a supervisory role expected a visible change in behaviour to be evident when their employees put to use the ideas they learned by attending a training program. These supervisors believed that if

there was no change in behaviour, application or use did not occur. This perspective was clearly communicated by one of the supervisors, Mike, who said, "If somebody has to go somewhere you know that it's a weak spot that they have (and) you're definitely going to look for a change when they come back."

Experience with Application

For the most part, the study participants described their experience with application as positive. In all cases this positive feeling was linked to the participants' perception of the program ideas as valuable and relevant to their job. For example Jane said, "I feel really gung-ho when I get back into the workplace and when you're in the course I find that the information I'm sort of turning it around to see where I could use this in the workplace."

Similarly, Paul said, "In the past where I would turn around and make up my own mind, you know I believe this or whatever. It's [the program that] made me sit back, try and relax, think about it, take both sides into account and understand where the difficulties lay and make my judgment from that which I think has been a lot more beneficial to myself. It's helped me in my job, let's put it that way." In some cases, the participants linked their positive experience with application to an increased feeling of confidence in the ability to apply the ideas or skills learned in the program. As Carol mentioned, "There were some things in the class I felt like I was confident enough to apply it right away--things you felt like you could accomplish right when you got back to the work site. The things you could practice."

Predisposing Factor

The predisposing factor refers to those individual characteristics that influence the

learner toward application (Ottoson, 1995). The prior knowledge of the learners in the program content, the experience of the learners with the subject matter, the motivation of the learners in attending the program and their attitudes and beliefs with respect to the subject area of the content, were all characteristics that predisposed the learners (or not) toward application.

Motivation

The learners were motivated to attend the training program for a variety of reasons, and many of them had more than one purpose for attending. Their motivations for attending fell into two broad categories: (1) skill development; and (2) professional or career development. These reasons for participation are consistent with those described by Boshier and Collins (1985). It was not clear if the participants attended their programs voluntarily or because they were required to attend by their managers or supervisors.

For those learners whose motivation was skill development, some went with the intent of learning new skills. For instance, Pete indicated that he went with the intention of learning "Guidelines, do's and don'ts, and I guess how other people do it as well." Larry indicated that he attended the program "Simply because I knew I needed skills in that area. I needed some more information to help me to be successful." Similarly, Paul suggested that his motivation for attending the program was to acquire "Tools to doing my job better."

Others viewed the program as an opportunity to refresh themselves in a skill area or to supplement or reinforce an existing skill set. For instance John said, "I would look upon it as more of a refresher ... how you would use certain techniques... techniques that

would be consistent with what I've learned before or maybe another way of using it."

Likewise Jane indicated, "I've taken a few things in the past but I like to sort of build ... if you take one maybe a couple of years ago I find it useful to take again just to build on or to refresh yourself."

Professional or career development was a motivation for those who took the course, at least in part, to increase their marketability for a job change or promotion. As Pete mentioned, "It also looks good if you are looking to advance your career. I want to get into Permits and Licensing into their Property Use Inspections, so when you fill in an application and you say I've taken so many courses, I've taken these courses here, they know hey this person doesn't mind taking courses to better themselves and so on." For John, taking the course could help him in an upcoming interview. "In the interview process I could say yes, this is what I've done to make myself a better person."

The degree to which the reasons, provided by the participants, for attending the programs were in fact their real reasons for attending is not clear. It is possible that these reasons were provided because they would be viewed as more socially acceptable.

Participants who may have attended a program because they had heard from others that it was fun, or who viewed the program as an opportunity to have a few days off work, may have been reluctant to admit this in a formal interview setting. It is possible that they may have felt that this would embarrass them or give their opinions less credibility in the eyes of the researcher.

In the focus group session, the participants were asked to consider times they may have been required to attend a training program and if this had any influence on their application. Mike, who had attended a mandatory program in the past, indicated that

despite being required to attend, he still found something of value in the program. He said, "I think that the courses that have been sanctioned as mandatory courses that maybe I wasn't so keen on I felt sort of a little bit of a wall ahead of time so I'm not going to take it in because just out of principle because I wasn't explained why. I'm usually a fairly positive person ... I don't know what it would be but (there is) always something I'd get out of it." This would seem to suggest that the relevance of the program content might be more influential in facilitating or hindering application than the motivation for attending the program in the first place.

Prior Knowledge/Experience

The learners attended the program with varying degrees of prior knowledge of the program content and experience with the subject area. For some learners like Pete, the content was new. "I would say it was entirely brand new." For others, it reinforced or built upon previous learning and experience in the subject area. For instance, John said, "I would say probably only about 10 or 15 percent new and 85 percent would be material I've gone over before." At the same time, Larry indicated, "[The content was] not necessarily new but it refined it and it definitely focused on time management."

While the study participants did not clearly link application with prior knowledge and experience, it would seem that application is facilitated when the program content reinforces prior learning and experience. It could be supposed that where the content does not reinforce prior learning, application is hindered. It is also apparent that application may be facilitated for participants who lack prior knowledge or experience with the program content because they may be more open to new ideas rather than resisting them due to existing preconceptions about the knowledge or skills to be learned.

As Mike said, "I didn't have too many things already stuck in my mind; that's the way I do them no matter what. I think that when you go in there with this sort of a little bit of a void in your head that there's room for more information. You allow that to get in there."

Attitudes and Beliefs

Throughout the interviews many of the participants expressed some of their attitudes and beliefs about the value of the subject area and the importance of skill development. For example, with respect to practice or skill development Pete said, "Practice makes perfect." In describing the value of the content area studied John said, "Communication is one that I've always felt was one of the largest links to being a good superior; understanding people, being able to work with different people. If you can't communicate with those people its obviously going to be a difficult task to be their supervisor. It's a very important skill to learn." While the participants did not describe how their attitudes and beliefs influenced their application, it is likely that application would be facilitated if the program or subject area was perceived as valuable and the role of the program in developing skills was seen as important.

Educational Factor

The educational factor describes those characteristics of the educational program that facilitate or hinder application: instructor, methods, organization, flexibility, format and environment (Ottoson, 1995). Comments made by the study participants with respect to these characteristics are found below. As in the previous discussion of the characteristics of the predisposing factor, the participants, while having much to say, did not always link their comments back to application. The researcher who tried to infer

from their comments how application was facilitated or hindered made most of these linkages.

Instructor

The participants attended a variety of City programs and all were impressed with the quality of instruction received. Some of their comments indicate that they thought their instructors were knowledgeable, experienced and organized. For instance, Pete said, "She knew her stuff. I guess she's been an instructor for quite some time and she was very organized." Likewise, Jane said, "She was just so knowledgeable with such a good background in a wide variety of backgrounds that she could say yeah I dealt with this all the time and this is what you would do. She has the experience and can give you examples, practical examples."

Instructors were also praised for their ability to play multiple roles in the classroom. John commented on his instructor's ability to shift between the roles of facilitator and instructor as needed. He said, "I perceived that she would give you an instruction; let you work as she would move from group to group and facilitate within those groups and then she would measure her time with that group. So if one group was not really clear on the concept she would spend more time with that group" Mike made reference to the ability of his instructor to act as a coach in providing him with feedback during skill building activities. He said, "[When we] went in our small group she would come sit in the room and just listen and offer comments and you know feedback whether it was good or bad."

It would seem from these comments that application is facilitated when the instructors are perceived as more knowledgeable, experienced, and organized, and can

play a variety of roles such as instructor, facilitator and coach.

Methods

Discussions around the program methods indicate participants were pleased with having opportunities to practice and interact with one another in small and large group discussions. Practice helped in remembering the content and in building confidence in its application, while interaction provided participants with the chance to share common issues and problems and generate ideas and solutions. For instance, John said:

The teacher would use a type say a Sherman Tank so we'd brainstorm what that meant and then we'd brainstorm the tactics we would use in discussing with them. So the value there is although you may have some of your own ideas on how you would deal with that personality, the other people in that group also contributed their own ideas. So I found that valuable, that type of learning tool, that group discussion.

Similarly, Mike said, "We would review a section and then we'd take that same material and work it into a discussion or a small group discussion ... it just didn't go up and then it was gone."

Practical examples, related to the content being presented, were also cited as helpful in making the learning more relevant or real. As Jane mentioned, "Almost everything she has an example for and you go 'yeah that makes sense' and people are really intrigued by these, you know, all these different mediation-- different stories." Likewise, Paul described the examples as "Day-to-day. They're things that actually a person can see, feel, and touch."

Some participants expressed a desire for the case examples to be more relevant to

their situation so they could see how the information would be applied in context. For example, Mike said, "They could have more variety seeing that there were a lot more work places within the City, you know, they sort of stuck to sort of one setting." As Sharon mentioned, "For some people, the actual information didn't fit in other contexts.... It was hard to sort of look at it in different situations."

It would seem then that programs with sufficient practice time, that provide work-related examples and which allow for both small and large group interaction, help to facilitate application.

Organization

With respect to organization, participants commented that the courses were well structured, with a good sense of flow from one topic to another. As Pete mentioned, "It was fairly well structured. There might be a few stories from other students of what had happened and (she) might go through it really quickly and say you could have done this, this and this.... Other than that it was fairly well structured." John said, "It did seem to flow really well. It seemed to be very timely and well structured. I would think she probably had a little difficulty if she had to slow down. There would probably be a need to almost add a half day if things had really slowed down. But you know I didn't really see that occur." Carol also said, "It was really nice because it did all flow. It didn't feel chopped or at all."

These comments made by some of the participants suggest that programs which are structured and which seem to flow seamlessly from one topic to another, facilitate application.

Format

One of the learners, Larry, suggested that the delivery of the program to an intact work group would facilitate application. He believed that if all of the members of a work team shared a particular learning need and attended the program together, application would be more successful. He attributed this success to a reduction in the amount of conflict or barriers faced and a stronger reinforcement. In his words:

It would be nice if when you have for instance a divisional or an office situation where everybody's got a push on time.... I think the whole division should take it as a group, that way you're not having one person coming in and trying to do it second hand.... [Intact group delivery would] reinforce the whole learning process. You'd have everybody then looking at each other and saying yeah that could work. Yeah I interrupt you or gee whiz prioritizing, being held accountable, would really help.

The idea of the intact group was further explored in the focus group session. For the most part, the group also felt that learning as an intact group fostered better support and reinforcement of the new ideas. As all of the learners would have the same information, a greater sense of buy-in to the ideas would be created and subsequent application would be facilitated. For example, Carol said, "I was thinking that, right off the bat the support was so much different, everybody was getting the same information at the same time and you were working with the group." Similarly, Mike said, "People were saying yes, these are the things that I want to do, these are where you know we'd like to make changes as a group so when you're coming back to apply it, you know we agreed with it." Sharon also agreed that "A good thing you get out of the group is that everybody knows where you're coming from. Here's the thing we're trying to do, here's

what we want to accomplish and here's where we're trying a new way of thinking.

Everybody is receptive and you all start at the same point."

While it was generally felt that learning as an intact group would facilitate application, some concerns were expressed by Mike around the composition of the group and how this would impact the learning process. While it was recognized that the buy-in of the management of a workgroup was important in application, it was also felt that the presence of management in the classroom might intimidate learners and prevent them from actively engaging or participating in the learning. In this way intact groups might inadvertently be a hindrance to application. Mike said the following:

If the whole group are represented from top to bottom and they're still wearing those hats and they haven't shed that sort of hat before they walk in the room you might not get anything from anybody because they know that the person sitting in that one chair who signs the time cards or whatever, is looking at everyone sitting there (and) watching exactly what you say because man if you cut me down you're going to pay big time for this and that's the way it works out there....When you try and teach a new philosophy, when you're thinking of something or new ideas, a lot of times people get so intimidated depending on whose there. But if the boss steps back and out of the picture and the group still carries on with their workshop or class, then that boss doesn't get the feedback (and) the course was completely useless because their thinking won't change. That person is not receptive to those people's ideas.

Flexibility

Limited flexibility existed in defining and meeting the goals of the program.

Some program participants recalled times the group was allowed to wander from the stated goals of the program to address individual or group concerns, while others recalled a fairly rigid structure. For instance, John said, "There were some time constraints....

There was her own subject matter to get through so she kept the course flowing. I don't think that I can think of an example where we had to go backwards onto something. I think the way it was flowing; the time was consistent with each period we got to do a subject or task in a group.... I would say there was quite a tight timeline there to be followed so I don't know how much flexibility was built into it." Although, he experienced a rigid program structure he did not indicate that the program was rushed in any way or that additional time was needed.

Paul indicated he would have liked to spend more time on certain topics but recognized that this was not always possible in an instructional setting with a variety of individuals and learning needs. "I would of probably would have liked to spend more time in certain areas (where) I'd had the problems, but looking at it from the broad point of view the teacher has objectives that they have to complete. I'm sure that if a person was quite adamant about it they would of dealt with things a little bit differently but I don't recall anybody being adamant about their situation and how to deal with it."

It is difficult to determine to what extent flexibility in a program is an influence on application. The comments of these participants would seem to suggest that flexibility is not a significant influence as the participants did not seem to be overly concerned about what appeared to be a fair amount of rigidity in the goals and timing of their

programs. It could be that the participants perceived that should they need to adjust the goals or timing of the program, some flexibility existed. As Carol said, "I think there was a schedule. There were topics she wanted to cover but I didn't feel rushed in any area. It seemed the timing was really good... It flowed and I think if there were things the class was really on she wouldn't drop us. There was a proper finishing to things." It may also be that flexibility is only an influence on application when it appears in extremes, where too much flexibility or rigidity results in application being hindered.

Learning Environment

Carol made reference to the learning environment as an important characteristic relating to the educational factor. She felt a supportive environment facilitated her learning. In Carol's words, "I felt this was really a supportive environment. I thought... the class felt very supportive. The way she related to the class, the way she brought us all back together. (She was) very non-judgmental You can feel the difference because I didn't feel lost or if I did, I felt that I could put my hand up and say that just because the learning environment was trusting and there was lots of communication."

Innovation Factor

The innovation factor describes characteristics of the idea or thing to be applied. The participants offered comments pertaining to the value, timing, theory behind, and complexity of, the program ideas.

Value

An interesting discovery in this study was the apparent link between participants' experience with application and their perceptions about the value of the content. The degree to which participants found the program ideas valuable depended on how

satisfactorily the content addressed a number of different factors; the first being the relevance or applicability of the content to their job. Paul, who found the content of the course helped him in doing his job, described his experience with application as positive.

He said:

It was positive, very positive. I've only been in this job for about six months but so far a great deal of it is conflict resolution and that course was very helpful

In the past where I would turn around and make up my own mind-- it's made me sit back, try and relax, think about it, take both sides into account and understand where the difficulties lay, and make my judgment from that.... I think (it has) been a lot more beneficial to myself. It's helped me in my job let's put it that way.

Participants, who felt the content they learned in the program was a reinforcement of the ideas they had learned in previous courses, indicated they had a level of comfort with the content. While not stated explicitly, it seemed that these participants also had a more positive experience with application. For instance, John said:

[The] same techniques and styles were taught as I'd got in previous courses. So it reinforced that it wasn't just here's the flavour of the month type of idea. It's something that's been around, that's been discussed before or I'm comfortable with that or I was comfortable with it previously but now there's another opinion associated to that same style and thought and technique.

The participants' perceptions about their readiness for the program content also appeared to be a factor that influenced their post-educational application. Some of the participants indicated that they took away from the program only those ideas that made

sense to them and that they could see themselves applying. Ideas that were more sophisticated and which seemed to build on other program ideas were discarded. As Carol indicated, "I felt that I really came away with what I thought 'oh, I could do that'. Like I noticed in the class there were points that I was jotting down that yeah I could do that and there were other points where I was thinking I have to do this before I'm there."

For the most part, it seemed that when the value of the program content was measured against these factors and met, application was facilitated. In instances where they were not, or were only partially met, application was hindered. Interestingly, those participants who indicated they had negative experience with application because the content of the program failed to meet their reasons for attending the program, maintained that the program was still worthwhile and the content still valuable and subsequently applied in their personal life, or by using bits of the content in their present work. Larry mentioned that while he may not have found an application for the content at work, he had found it valuable in his personal life. He said, "I might not be doing it at work like there may be a different application that I've found....There's some value in my personal life that I took away ... and I'll be using that in a different level but not necessarily work-wise." Similarly, Pete indicated that although the program was not what he had hoped it would be, it was still helpful to him. He said:

I don't know if it was really ... as usable as I hoped it would be.... In my situation we negotiate directly with the City of Vancouver for a contract negotiation and (in) any labour problems (or) that sort of thing. So when it said Conflict Resolution and Negotiation on the title of the course I was hoping there was also going to be negotiation skills involved. I think that the part that we did learn

helped me a lot more than I thought it would.

Timing

The timing of the program ideas related to both the attitudes and beliefs the participants held about the content as well as the situational or job-specific challenges participants were experiencing. Those participants who believed the ideas and skills presented were invaluable or essential felt the content would always be timely. As Mike indicated:

I don't think with this course there would be a wrong time to take it. I wish we had this last year. I think the sooner anybody can take that type of course the better. I don't think it would make a difference if it was ten years or yesterday. I think that there's a lot of valuable stuff in there no matter when you were to take it. I wish I would have had it earlier but I'm happy I've taken it since.

For other participants whose motivation to attend the training was to develop specific knowledge and skills to assist them in a more immediate problem or task, the timing was more important. As John said, "I think it was the right time for me because I had a specific goal in mind." Some of these participants indicated that it would have been more beneficial to learn the ideas and skills prior to, or during the time they were involved with the problem, project or task. For instance Pete said, "We've only had one meeting since whereas we had probably a ton of those meetings prior. So if I'd had the training then ... the meetings did run fairly smoothly but I think they would have been smoother. Similarly, Jane said, "I don't know that there would have been any other time that would have been any more useful than when your in the middle of a conflict. It's nice to sort of have it right then but I didn't find that there were any other times it would

have been useful.”

While the participants did not directly link timing and application, their comments suggest that application would be facilitated by content that is perceived as timely.

Theory behind the Program

When asked to consider whether the program seemed to have an overall philosophy of approach that linked the ideas of the program, the participants indicated that it made sense or that there seemed to be a structure to the subject matter. For instance, Larry said:

It hung, it came together. Being successful was really I think the overall approach. You know not only with your job, getting the job done as quickly and efficiently as possible, but also managing. I liked the way they brought in managing your life as part of that and how that would help. I agree that you get just as much stress off the job as you can on the job and I think applying time management in your whole life, not just your job, was a good philosophy.

John also agreed there was a structure to the program content. He said, “There was a structure to the whole of the subject matter that everything did flow and was attached to another thought.”

Again, while the participants were not explicit in indicating whether the appearance of an underlying theory or approach influenced their application, it can be inferred that participants would be more likely to view the content as valuable if they perceived the various points were reflected in an overall approach. This perception of the content as valuable would in turn be more likely to positively influence the learners toward application.

Complexity

When asked to consider whether they thought the ideas presented were straightforward or difficult to understand most of the participants indicated the ideas were simple or straightforward. Some attributed this to how the material was presented such as in steps or stages. As Larry said, "It was just straightforward. I felt it was simplistic. That's what made it work. It was very easy to understand, very easy to apply. You know just making a to do list, prioritizing.... (She) broke it down and then stepped it up so that it was very easy to understand." Jane also felt the program was easily understood. She said, "I mean just to understand it and the stuff makes sense to you and that you can you know you can do it. It definitely makes it easier to go back and not have sort of a missing chunk out of there that I know I'm supposed to do this thing but I don't understand it. It came across as being very clear and logical. It would seem that in these cases, application was facilitated. The ideas were easy to understand and led to a perception that they would subsequently be easier to apply. Once again, a perception of the program ideas as valuable is developed, and application facilitated.

At the same time, Pete felt the content of his program was complex and would require more time be spent on it before a good understanding could be achieved. As a result, he felt his application was hindered. He said, "I would say [the content was] complex. I would say it hindered it (application) because being so complex you don't really understand it. You want the time to go in depth into it ... not in two days. In this case, the degree of perceived complexity seemed to create a perception of the content as less valuable, which in turn had a negative influence on application.

Enabling Factor

The enabling factor describes the skills of the learner and the characteristics of the application context (Ottoson, 1995). Reference material, follow-up courses, prior knowledge of the application context, the opportunity to apply new knowledge and skills, the degree of fit or level of conflict experienced during application, the culture of the department or workgroup, and the ability of the learner to analyze, synthesize and translate the ideas in the application context, were all described by the participants as factors influencing their application.

Reference Material

A number of the participants identified the importance of having program-related reference materials or manuals they could refer to when they returned to their work environments. This material was used as a general content refresher or as a preparatory aid for direct application. In this way, it can be said to facilitate application. For instance, Pete said, "I would say that it's relevant to have the book. I'm sure that if I'm facilitating a meeting I'd just go through that." John and Jane also mentioned that they found it helpful to have course materials they could refer to. John said, "I take the material with me. I mean I have it there. I have made reference to it..... I know there are parts I won't remember and I'll just look back and refresh myself and say you know there was something specific there that she was getting at that would be a helpful tactic." Jane said, "I found it very, very helpful. You have your book and everything to follow-up on and to be able to go back and look at that information again. I find it useful."

Feedback and Verification

Pete expressed a desire for feedback and verification, after the course, to assist

him in his application. He suggested that a follow-up course would be one possible approach. A follow-up course would create an opportunity to receive feedback and verification on successful application as well as feedback and suggestions on skill areas needing improvement. It was Pete's feeling that this additional feedback and reinforcement would facilitate application. He said, "To see how you're doing, see how you're applying what you've learned, if you're on the right track (and) if you're not on the right track then change your direction."

Opportunity to Apply

Some learners expressed a lack of opportunity to apply their newly acquired knowledge and skills when they returned to their work setting. This lack of opportunity hindered their application. For instance, Pete said, "I haven't really had ... we've had I think one meeting since that so I haven't really had to use it." Likewise, John indicated, "I haven't really applied the exact skill I was looking for because I haven't dealt with the problem that I'm foreseeing right now in a higher rank. So it's still been avoided and it's more along the lines of there hasn't been an opportunity available to me."

Degree of Fit/Level of Conflict

The degree of fit or the level of conflict either perceived or experienced by the learners as influencing their application, varied. Some learners did not experience any conflicts or problems of fit in their work context. An absence of conflict or problems of fit seemed to facilitate application, just as the appearance of conflict or problems of fit seemed to hinder application. John mentioned that the content of his program did not conflict with the culture of his department. He said, "I felt comfortable discussing the subject matter. There's no one in my job place that would make it seem absurd to be

taking a course like that.”

Larry suggested that his workload demands made it difficult for him to apply the ideas of the program on a consistent basis. He said, “It’s just the volume. The whole fire service is changing rapidly and training of course is on the leading edge of that so we are constantly in a state of flux here. It’s very difficult with the amount of stuff coming down. Everybody wants their stuff done now.”

Jane described how it was sometimes difficult for her to determine how the content fit in with the existing policies and procedures of her work place. She said:

I guess that’s sort of the difficult part in dealing with ... trying to adapt what she’s telling you and seeing how it fits in ... like when do you bring human resources in and when is it sort of beyond conflict and it’s now a (disciplinary issue).... At what point are you supposed to start documenting it and bringing in the sort of things we’re supposed to do for discipline and yet stick to the program with you know being informal and you know I just want to talk and get this out right now. It’s always that kind of stuff, incorporating all this stuff to the department here.

Mike talked about how the culture of his workplace dictated what ideas he would be willing to apply. He said, “I took some of the stuff seriously. Some of the stuff I just said there’s no way-- that’s not going to happen in my workplace. These guys just wouldn’t accept that. They would laugh at me. I took a lot of the steps and went okay yeah that would work great.

Culture

For some learners, the culture of their department was a factor identified as influencing their application. For John, the culture of his department dictated which

courses were acceptable on both a formal and informal basis. To avoid being unwarrantedly categorized by fellow employees, certain courses would be avoided.

Other courses recognized by the department as acceptable would be completed to receive educational credit towards a pay increment. John said, "I wouldn't come back and start talking to everybody that I just took a Yoga course.... People have certain ... within the police force would consider a person had certain characteristics based on the type of courses they took.... There's a list of accepted courses so you can't just go off and take knitting 101 and get educational credit."

Another participant, Mike, felt the culture of his department limited his application. As a middle manager, this learner expressed frustration over the reluctance of senior management to participate in City training. It was felt that this reluctance to change perpetuated ways of doing things that conflicted with his new knowledge and skills. Thus, preventing him from applying his skills with senior management. Mike speculated that this resistance might be due to a belief that the old way is O.K. or that a recognition of other ways of doing business would be an acknowledgment of their not knowing and a threat to their power and authority. He said:

I guess I find with this course and a lot of other ones that sometimes there is not enough of the senior management who take these classes or workshops and what happens is you're trying to use this information and hopefully everyone is thinking along or has some understanding of it to improve themselves as well. But because senior managers (say) you know we don't have time to take this sort of stuff ... a lot of times I'll sit back on my own and I won't say it out loud but I'll think god I wish those guys would take this stuff because it would really help

their approach. I mean there's some brutal managers in our system, just brutal, and their very hard on the staff.... I mean your training all of the middle of the group and they're supposed to improve the relationship with the people below them but they can be so undermined you know. We could revert right back to the same attitude that's being brought down from senior management Everything we've learnt you can just say why am I bothering, what's the point. I mean if these guys aren't going to change.

Two other participants were in the midst of a culture change and expressed the inevitability of clashes occurring as old ways of thinking and doing come into contact with new ways of thinking and doing. They viewed their application as an opportunity to initiate change by fostering new understanding and acceptance of ways of knowing and doing in others. Paul said:

The way we're starting to run the fire department is like a business. So there's going to be clashes no doubt about it.... The new culture is clashing with the old and the courses, you know the ability to reason, to understand, and that sort of thing, gives you a better ability to deal with the clash and to try and help the other person understand the reason for the changes.

Similarly, Sharon said, "I'm the new kid on the block so I'm the one that comes in after people have been there ten, twenty years and I came in there with a whole, a really different way of thinking and then also trying to figure out how do I sort of fit in without alienating the entire world."

In the focus group session, some discussion took place around how conflict relates not only to the ideas themselves, but also to how the ideas or message are

delivered. Pete suggested, "Your approach and your delivery is really important in how you try to deliver that message." This implies a necessity to consider the context prior to application so that conflict can be anticipated and alternatives or adaptations to the ideas developed so a better fit between the ideas and the context can be established.

Based on these comments of the study participants, it can be said that culture very clearly plays a role in facilitating or hindering application. When the formal and informal cultures of a work place embrace or support the ideas of the program, application is facilitated; when they do not, application is hindered.

Analysis, Synthesis, Translation

For the most part, the learners described adapting the program ideas to fit either their work context or their personal style. In some cases the learners were not aware they were making these adaptations because they perceived them as mere modifications. The learners did not perceive the ability to analyze, synthesize and translate the program ideas as a skill, instead thinking of this process as a natural occurrence or result of attending an educational program. While not perceived as skills, it would seem that the ability to analyze, synthesize and translate the ideas of a program so that they make sense in context and to the personal preferences of the learner, is a facilitator of application. Ideas that are adapted to make more sense will be more valuable, and as a result, more likely to facilitate application.

John discussed his adaptation in relation to his work context. He said, "I made notes on how I would use it. She's giving it in a generic setting and then I'm applying it to where I wanted it to fit. I kind of think that in a communications course it's quite obvious. I'm sure people are going there wondering how they are going to apply this at

work. I really think that would be an obvious one.”

Larry and Jane described how they adapted their program ideas to reflect their personal style of preference. John said, “I modify it a little bit to use it here but for the most part I could see the application and just applied it to the job with not a lot of modification. Instead of putting a flag up I use the head set. I find that by putting a head set on and you listen to some nice quiet music I can work and it’s also a signal to the other guys.” Jane said, “You just adapt it to your own , so that they don’t go my God Jane’s been at a course all week and that kind of thing. But sometimes I find if I adapt it a little bit to just what my personality is, or what they an expect from me, it comes across that much easier.”

Reinforcing Factor

The reinforcing factor describes the support that is received for application such as reward structures and/or the efforts to create support prior to application (Ottoson, 1995). John works in a department with a formalized reward structure in place where pay increments are based on educational achievements rather than solely on seniority. John said, “The formal structure backed by union and management is towards education period. It’s built right into our contract now, our grade pays. As of this August our increments are based on educational values.” While, this system rewards learners for attending educational programs, it is not clear that this incentive program facilitates application.

Larry attributed successful application to receiving support from his co-workers. He said, “[If support wasn’t there] it would have been a waste of time. If they’re not going to buy into it, if they’re not going to sign-off, it would be impossible.”

Mike saw no need for outside reinforcement or recognition and felt intrinsic reward was sufficient in facilitating application. He said:

I'm not looking for a gold star because I think that you make your own gold stars.

But I would like to have something on a list. There should be a record somewhere of the courses that are taken by employees (record keeping system)....

I don't know if you'll be marked on it or say like get a gold star or free cup of coffee... just the recognition that yeah I took it.... I think that the reward comes in knowing that you took it, interacted with people and enjoyed it or didn't enjoy it.

During the focus group session, participants were asked to explore why they had never experienced any instances of lack of support for participating in training programs. For the most part, participants attributed this to their supervisors either being disinterested or too busy to engage themselves in discussing the program beyond issues of approval to attend or post-program satisfaction. For example, Mike said, "When I want to take a course, the boss looks at it and he decides whether or not it's for supervisors or it's suitable for me and he'll sign it off. And [he'll] usually [ask] how was the course and that's about it.... I guess you could say it's lack of interest."

These comments suggest that the absence of characteristics of the reinforcing factor play a role in influencing application. It would seem that when learners perceive others support them in their application and/or they are rewarded for their efforts, application is facilitated.

Summary

As a reflection of the participants' perceptions of the meaning of, and influences on application, this analysis identifies application as primarily a visible and immediate

action. It also supports previous research on application by Ottoson (1995) who suggests application depends on many varied and interacting influences. Rather than there being one clear path to application, there is instead a mesh of influences that interact to shape application. The findings of this study also demonstrate the suitability of the Application Process Framework in conceptualizing the various factors influencing the post-educational experience of adults. As discussed in this chapter in detail, these influences are captured within the general categories of the educational, innovation factor, predisposing, enabling factor and reinforcing factors. Captured within each of these categories are the specific influences that interacted to facilitate or hinder the application of the program participants (refer to Table 5).

In addition to supporting findings of previous research on application the study also reveals some new and interesting findings. These findings are discussed in the chapter to follow.

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS

The focus of this chapter is a discussion of some of the interesting findings of this study which challenge or expand our understanding of application and the factors that influence it. What follows is a discussion of application as visible action; when ideas become real; how ideas are adapted; the significance of perceived value as an influence on application; and finally the role of decision making as the single, most important influence on whether, when and how application occurs.

Visible Action

It was not surprising to discover that most of the participants of this study equated application, or using or doing something in the workplace with the ideas learned in an educational program, with visible action. This perspective is consistent with the instrumental approach to knowledge utilization which relies on a single, action-oriented outcome where knowledge is viewed as practical and valued as a basis for action (Machlup, 1993). Implied in this definition of visible action is the understanding that learners are consciously aware of how they are putting the ideas they have learned into action, such that they can cite and document the specific ways that they are being used (Larsen, 1981).

The participants of this study, argued that visible action was required to reinforce their memory of the content and their behaviour in applying the content in real situations. This supports the claim that visible action is not only purposeful but also conscious. At the same time, the participants also acknowledged that they did not always apply the program ideas immediately. Instead, situations would arise where the ideas would be

recalled and applied with a sense of familiarity but not the same conscious intentionality as they suggest accompanies visible action. This would suggest that while learners may be able to acknowledge some other form of application other than visible action, they are neither entirely sure of what this would be or how to name it.

The all too familiar and common perception of application as visible action necessitates some questioning about why such a perception persists. It may be that as educators, we have perpetuated this perception by focusing our efforts on making programs ever more useful to learners. We need only look to the literature on transfer of learning, a process described at length in the adult education literature, for proof of this preoccupation. Much of the literature on transfer focuses on developing instructional strategies that mirror the transfer context so the learning event is more closely aligned with reality (Kiener, 1994). In this way, it could be argued that if the learning addresses the challenges and problems that occur in the workplace the program content would be more useful to learners. Transfer goes one step further in its intent to show learners, in a simulated setting, how to apply their learning in their transfer context. The cause and effect model of change that transfer embraces, assumes changes in behaviour or performance are possible through changes in competency, which are in turn possible through systematic instruction (Caffarella, 1994). This creates an expectation that if useful programs are created, program participants will learn the necessary know-how to directly apply the program ideas in the workplace where their effect can be observed and documented. In other words, educators, learners and others alike, can expect that the application of program ideas will result in visible action.

While educators may have a role in perpetuating the perception of application as

visible action, there are other considerations that need to be examined. Relevant to this discussion is the degree to which the nature of the content itself drives whether application is visible. Can content aimed at developing some new understanding result in visible action as readily as content related to the development of skills? If it can, are there differences in what will be visible? If it can't, is this some other kind of application? Whether and how program content is a determinant of whether application is visible action is unclear. While the participants of this study decided that program content geared toward the development of skills required visible action and content that focused on developing a new perspective or a new understanding did not, a discussion of whether both types of content could result in visible action and what this visible action would look like, did not occur.

A final point for discussion is the extent to which application as visible action is a function of individual styles and preferences. The participants of this study would suggest that some learners are more inclined to do while others are more inclined to reflect. This would suggest that for some learners application is rarely visible, or it is delayed, as learners move from a position of reflection to a position of action.

Clearly, there is room for further exploration of application as visible action to include some study of why this perception of application persists and the extent to which visible action is a function of the program content or individuals' styles and preferences.

When Ideas Become Real

At what point ideas become real is another dimension of the post-educational experience of adults. A source of debate in the literature on implementation, fidelity posits that ideas are real when they are developed as part of an educational program and

will be the same when they are implemented (Blakely et al., 1987). In contrast, adaptation describes an idea as being real only when it interacts with the learner's home context and finds a degree of fit within that context. The participants of this study side with adaptation, but suggest those ideas are adapted or changed to reflect both the context and the personal style of the learner. A consideration of the personal style of the learner in a definition of adaptation appears to be missing. While Rogers (1995) acknowledges that personal fit, or as he suggests compatibility, is worthy of consideration, he views it as a potential interference in the process of deciding to adopt a new idea rather than as a point of departure for the adaptation of the program idea.

It would seem that in a discussion of adapting ideas to find some degree of fit there would be a logical place for how individual learners strive to find some fit within themselves. What constitutes the Self or an individual's personal style requires some definition. Perhaps the Self can be described as those characteristics that define a person and distinguish one person from another such as values, attitudes, and beliefs. It may also be that some elements of the Self are more influential than others in determining how an idea will be adapted.

Whether, when and how the Self and the context interrelate to determine how ideas will be adapted is unclear. It may be that the two act simultaneously, or that one occurs before the other. Perhaps the ideas must find some degree of fit with the learner before some degree of fit can be found within the application context. It may also be that one is more influential than the other in determining the nature of the adaptation. And yet it is also not known if ideas must be adapted to fit both context and personal style before they are real, or if they can be real if either of these criteria is met.

Some insight about when adaptations are made was gained from the participants of this study. Feedback from the participants of this study would suggest that the process of adaptation begins in the classroom. Within the classroom, the participants were noting both mentally and on paper how they would use the program ideas when they returned to their workplace.

This discussion of when ideas become real raises some interesting points. It confirms the perceptions of the participants of this study that ideas are adapted, but suggests that adaptations are made to find some fit with both the context and the learner's personal style. It also raises questions about the relationship between context and personal style and when the process of adaptation begins.

Adaptations vs. Modifications

A related discussion to when an idea becomes real is the question of what constitutes an adaptation. Nowhere in the implementation literature or the more recent literature on application is there a definition of an adaptation. Interestingly, the participants of this study considered their adaptations to be mere modifications because the ideas were not significantly altered. Instead, they had a close resemblance to the original program idea. For instance, one participant in wanting to notify his co-workers that he was busy, adapted the idea of using a red flag as a signal by deciding instead to wear red earphones. And so we return to the question of whether this modification would be considered an adaptation.

It would seem that fundamental to defining an adaptation is determining what degree of change is necessary for an idea to be adapted. Perhaps ideas which have been adapted, but which continue to be traceable to the original idea, are in fact adaptations.

Maybe ideas can only be considered adapted if they are traceable back to the original idea with some degree of difficulty. Or yet, it is perhaps only those ideas that are unrecognizable, or which cannot be traced to the original idea, that can be called adaptations.

It may be that adaptations would be better defined according to the degree of effort required to change the idea. Ottoson (1995) suggests that adaptation requires that learners are skilled in translation and negotiation. The participants in the study would suggest that no special skills were required to adapt the program ideas as this was an unconscious and natural occurrence. If Ottoson is correct, perhaps the adaptations made by the study participants were mere modifications. Or maybe these modifications really are adaptations, and the unconscious ability of learners to find a fit is a skill that has been so frequently put to use by learners that it is no longer recognizable as such.

Questions about the nature of adaptations are thought provoking and invite further discussion and debate. If adaptation is fundamental to a discussion of application, a more thorough understanding of the concept is desirable.

Value and Interrelationship

A surprising finding of this study relates to perceptions about the value of the program ideas and the relationship between these perceptions of value and the other potential influences. Given that the nature of the interrelationship between the various influences remains unclear, this finding is particularly helpful in providing insight into the process of application.

It is suggested that perceptions about the value of the program ideas may play a more significant role than expected in influencing application prior to entering the

application context. It may be that value acts as a *filter* in that the various other elements captured by the predisposing factor, the educational factor and the innovation factor, are in fact characteristics that shape learners' perceptions about the value of the ideas (see Figure 2). This would mean that unto themselves, these other characteristics do not influence application directly. Instead, they are influential in shaping learners' perceptions about the value of the program ideas. These perceptions are then carried into the application context, which when combined with the influences of the application context, facilitate or hinder application. This emphasis on value as a significant influence on application differs from the Application Process Framework (Ottoson, 1995) which characterizes value as one of many characteristics of the innovation factor; one of five factors thought to influence application.

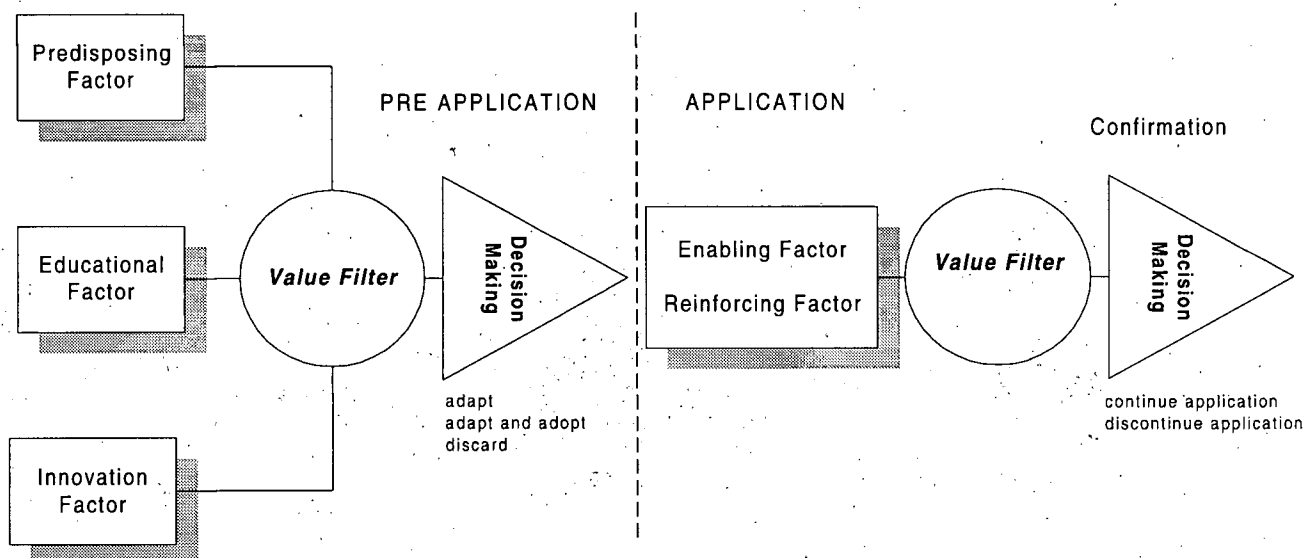
Clearly more work needs to be done to develop a better sense of the role that perceived value of program ideas plays in influencing application. It may be that value is the most important influence, whereby influences associated with the application context become another series of characteristics shaping learners' perceptions about value. It may require that further exploration be initiated to determine the relationship between the various extrinsic and intrinsic characteristics to determine which may be more influential in shaping value and thus facilitating or hindering application.

Decision Making

Decision-making appears to be the common thread that weaves together the various influences on application. It would seem that whether, when, and how ideas are applied occurs within a framework of decision making (see Figure 2). References made

Figure 2

Application-Decision Making Framework



by the participants of this study to the decisions they made indicate that decision making is a process that begins prior to the post-educational experience. Some decisions about whether and how to apply the program ideas were made in the classroom as the participants began to visualize the application of the ideas in their workplace. Others were made after the program or after application attempts had been made. Decisions were made to reflect both context and personal style. Some ideas would be selected, others selected and adapted, and still others discarded. Even those ideas selected and put into practice could face further adaptations or a decision to discard.

This decision making process seems to be consistent with the framework proposed by Rogers (1995) which was discussed earlier in the literature on diffusion. Rogers posits that before adopting a new idea, learners must have some knowledge about the new idea, form an opinion about the new idea (persuasion), adopt or reject the new idea (decision), implement the new idea, and confirm or review their decision, all the while allowing for the discontinuance or reinvention of the idea. This suggests that the decisions learners make about the application of program ideas do not result from instantaneous acts, but are rather the result of a process which occurs over time and which consists of a series of actions and decisions (Rogers, 1995).

If we take some time to apply Rogers (1995) framework in the context of application it is not difficult to see its relevance. It is also not difficult to see how the previous discussion of value plays an important part in the decision making process. When learners attend an educational program they are exposed to new ideas (knowledge). Various factors combine and interact to shape the learners perception of the value of the program ideas (persuasion). Relative to the Application Process

Framework (Ottoson, 1995), these factors include characteristics of the predisposing factor (motivation, prior knowledge, attitudes and beliefs, etc.), the educational factor (methods, instructor, organization, flexibility, etc.) and the innovation factor (complexity, degree of conflict, timing, underlying theory, etc.). Consistent with the first three stages of Rogers framework (1995), this part of the decision making process occurs largely as a mental process and occurs within the classroom or prior to application. During this time learners are constantly assessing and reassessing the value of the program ideas based on their degree of fit with their personal style and the intended application context. Depending on the level of fit achieved, learners may decide to adapt, adapt and adopt, or disregard the program idea (decision).

At this point, learners return to their application contexts. Within the application context, they are faced with a whole new barrage of influences in trying to put the ideas of the program into practice (implementation) . Relative to the Application Process Framework, these influences relate to the enabling factor (conflict, power, opportunity, etc.) and the reinforcing factor (support, reward). Once again, learners make a series of decisions about the value of the program idea, only this time in context. They may continue adoption of the idea, discontinue adoption of the idea, and adopt an idea they had previously rejected or continue their rejection of an idea.

At this point in Rogers (1995) framework, learners enter the final stage of confirmation. In this stage, learners would seek reinforcement for their application and depending on the reinforcement received, may continue application or discontinue application. In a discussion of application, this stage is not separated as issues of support and reinforcement are considered at the same time as other influences in the application

context.

While Ottoson (1995) has acknowledged that decision-making is an important component of application, little work has been done to illustrate how and when decision making occurs. Rogers Innovation-Decision Process framework is consistent with the findings of this study and is useful in providing some guidance to the discussion of the role of decision making in the post-educational experience.

Making Some Sense of it All: Implications

The findings of this study illustrate the difficulty in describing and arriving at a clear understanding of the post-educational experience of adults. The use of conceptual frameworks like application is helpful along the journey toward understanding by providing a departure point upon which comparisons and discussions can be made.

The results of this study and the experiences of the researcher in exploring this phenomenon have implications for both the practice of adult education and future research on the adult post-educational experience. The remainder of this discussion focuses on these implications.

Given that this study demonstrates the essential role decision making plays in whether, when and how application occurs, additional research into the decision making process of adults would be of use. Rogers's (1995) Innovation-Decision Process framework provided some guidance and structure to this discussion but research that would apply this framework in an educational context would provide a greater depth of understanding to the role of decision making in the post educational experience of adults. What seems to be clear is that a decision to apply does not result from one instantaneous act, but is the result of many decisions and actions that occur over time. It would also

seem that much of this process of decision making occurs within the classroom, prior to application. Further research could help to confirm the importance of decision making and provide a clearer sense of how the process begins, evolves and ends.

The suggestion of this study that learners' perceptions about the value of the program ideas are a significant factor in influencing application also has implications for future research on application and Application Process Framework (Ottoson, 1995). By describing value as a filter for all the possible influences on application, a point of departure is made from the Framework, which characterizes value as one of many interrelated influences on application. Additional research focusing on the relationship between value and application would be beneficial by helping to generate a clearer picture of how the various influences on application are related as well as the linkages between decision making and perceptions about value. Further exploration into value could also include some study of the relationship between intrinsic and extrinsic characteristics to determine which are more influential in shaping value, and thus, facilitating or hindering application.

If we accept the findings of this study that ideas change as they are applied, a better understanding of how ideas are adapted is required. In addition to characteristics of the application context, this study illustrates that characteristics of learners themselves are also influential in determining how ideas are adapted. A better understanding of what defines one's personal style and which personality characteristics may be more relevant adaptation is needed. In addition, some clarity as to when the process of adaptation begins, the interrelationship of context and personality, and the extent to which one is a more significant factor over the other in determining how ideas are adapted would help to

solve one of the mysteries of the post educational experience of adults.

Related discussion and debate is also needed to define what is meant by an adaptation and the extent to which adaptations are a function of the degree of change needed of ideas to be adapted or the amount of effort required by learners to change or modify ideas. It may be that to put boundaries on what constitutes an adaptation would be inappropriate as it is the learners themselves who determine why and how adaptations to ideas are made.

If a commonly held perception of adult educators, learners and other stakeholders is that application can be equated with immediate and visible action, perhaps some room exists to do some re-educating. Perceptions like this one can evolve into expectations which may at best be unrealistic. Learners may become disenchanted with the ideas of the program when they fail to see them materialize into some visible result, just as educators may feel they have not been successful in doing their job if there is no apparent change in behaviour or performance. Other stakeholders, like the municipal government that employs the participants of this study and funds the training, may feel a return on investment has not been realized if there is not measurable change in performance. It may be that by re-educating stakeholders that there are other forms of application, the development of false expectations can be minimized. It is also likely that a change in expectations will need to be supported by changes in how educational programs and participants will be evaluated.

One of the challenges in studying a phenomenon from the perspective of those engaged with the phenomenon is the relative understanding of the phenomenon by those involved. This raises the question of to what extent something can be considered a

perception if the thing under discussion is unfamiliar to the preceptor. In this study, the researcher became more active in shaping the data collection because much of the content of the discussion was unfamiliar to the participants. Perhaps educators need to spend some time in their programs discussing application with their learners so that they will have a better notion of what happens when they leave the classroom and return to their jobs. Given some knowledge of the process and how it evolves, learners will be better equipped to describe and provide insight into their post educational experience.

In reflecting on the study as it evolved, changes in the use of the Application Process Framework could be made to ensure a similar study more closely reflects the participants' perceptions of their post-educational experience; the intent of this study. In applying the Framework in both data collection and data analysis, the researcher allowed the framework to shape both the interview questions and the analysis of the responses to these questions. Rather than feeling compelled to probe the areas of the Framework, the researcher might have allowed the participants to tell a story of their post-educational experience. These stories could then have been analyzed to see if any or all the factors of the Framework applied.

As the participants described application as an immediate use of the program ideas on the job, it may have been more useful to speak to the participants sooner than the time frame used in this study. It may also have been helpful to interview the participants at various points in time for the purpose of comparison. For instance, participants could have been interviewed immediately after the program, several weeks after the program and again several months after the program. It is possible that participants may perceive their experience very differently at differing points in time. Obtaining participants'

perceptions about their experience over time could also help to better illustrate the role of decision making in the process of putting ideas into action.

REFERENCES

- Backer, T.E. (1993). Information alchemy: Transforming information through knowledge utilization. Journal of the American Society for Information Science, 44(4), 217-221.
- Berman, P. (1980). Thinking about programmed and adaptive implementation: Matching strategies to situations. In H.M. Ingram & D.E. Mann (Ed's.), Why policies succeed or fail (pp. 205-223). Thousand Oaks, CA: Sage Publications.
- Berman, P. & McLaughlin, M.W. (1976). Implementation of educational innovation. The Educational Forum, March, 345-370.
- Beyer, J.M. & Trice, H.M. (1982). The utilization process: A conceptual; framework and synthesis of empirical findings. Administrative Science Quarterly, 27, 591-622.
- Blakely, C.H., Mayer, J.P., Gottschalk, R.G., Schmitt, N., Davisdon, W.S., Roitman, D.B. & Emshoff, J.G. (1987). The fidelity-adaptation debate: Implications for the implementation of public sector social programs. American Journal of Community Psychology, 15(3), 253-267.
- Boshier, R. & Collins, J.B. (1985). The Houle typology after twenty-two years: A large-scale empirical test. Adult Education Quarterly, 35(3), 113-130.
- Browne, A. & Wildavsky, A. (1983). Implementation as mutual adaptation. In J.L. Pressman & A. Wildavsky, Implementation (pp. 206-231). Los Angeles, CA: University of California Press.
- Caffarella, R.S. (1994). Planning programs for adult learners: A practical guide for educators, trainers, and staff developers. San Francisco, CA: Jossey-Bass Inc.
- Chase, G. (1979). Implementing a human services program: How hard will it be? Public Policy, 27(4), 385-435.
- Cheek, G.D. & Campbell, C. (1994). Help them use what they learn. Adult Learning, 5(4), 27-28.
- Cropley, A.J. (1989). Factors in participation. In C. Titmus (Ed.), Lifelong Education for Adults: An International Handbook (pp. 145-147). Elmsford, NY: Pergman Press Inc.
- Dunn, W.N. (1980). The two-communities metaphor and models of knowledge use. Knowledge: Creation, Diffusion, Utilization, 1(4), 515-536.
- Fox, R.D. (1994). Planning continuing education to foster the transfer of learning. Adult

Learning, 5(4), 24-25.

- Fox, R.D. (1984). Fostering transfer of learning to work environments. In T.J. Sork (Ed.), New Dimensions for Continuing Education: Vol. 22. Designing and Implementing Effective Workshops (pp. 25-38). San Francisco: Jossey-Bass.
- Green, L.W. & Kreuter, M.W. (1991). Health Promotion Planning: An Educational and Environmental Approach. Mountain View, CA: Mayfield Publishing Company.
- Hamel, J. (1993). Case Study Methods. Newbury Park, CA: Sage Publications, Inc.
- Jarvis, P. (1987). Adult Learning in the Social Context. New York, NY: Croom Helm.
- Kiener, M.E. (1994). After educational programs. Adult Learning, 5(4), 28.
Staff Development, 12(1), 64-66.
- Killion, J.P. & Kaylor, B. (1990). Follow-up: The key to training for transfer. Journal of Staff Development, 12(1), 64-66.
- Kirkpatrick, D.L. (1987). Evaluation. In R.L. Craig (Ed.), Training and Development Handbook (3rd Ed.). New York: McGraw-Hill Book Co.
- Knott, J. & Wildavsky, A. (1980). If dissemination is the solution, what is the problem? Knowledge: Creation, Diffusion, Utilization, 1(4), 537-578.
- Krueger, R.A. (1994). Focus Groups: A Practical Guide for Applied Research (2nd ed.) Thousand Oaks, CA: Sage Publications.
- Laker, D.R. (1990). Final word: Yes, the water remains murky, but it is safe to swim. Human Resource Development Quarterly, 1(3), 231-235.
- Larsen, J.K (1981). Knowledge utilization: Current issues. In R.F. Rich (Ed.), The Knowledge Cycle (pp.149-167). Thousand Oaks, CA: Sage Publications.
- Lester, J.P. (1993). The utilization of policy analysis by State agency officials. Knowledge: Creation, Diffusion, Utilization, 14(3), 267-289.
- Lester, J.P. & Wilds, L.J. (1990). The utilization of public policy analysis. Evaluation and Program Planning, 13, 313-319.
- Lockyer, J. (1992). What do we know about adoption of innovation? The Journal of Continuing Education in the Health Professions, 12, 33-38.
- Machlup, F. (1993). Uses, value, and benefits of knowledge. Knowledge: Creation, Diffusion, Utilization, 14(4), 449-465.

- Majone, G. & Wildavsky, A. (1983). Implementation as Evolution. In J.L Pressman & A. Wildavsky, Implementation (pp. 163-180). Los Angeles, CA: University of California Press.
- Marshall, C. & Rossman, G.B. (1995). Designing Qualitative Research. Thousand Oaks, CA: Sage Publications.
- McLaughlin, M. (1976). Implementation as mutual adaptation: Change in classroom organization. In W. Williams & R.F. Elmore (Ed's.), Social Programming Implementation (pp. 167-180). New York: Academic Press, Inc.
- Merriam, S.B. & Caffarella, R.S. (1991). Learning in Adulthood. San Francisco, CA: Jossey-Bass, Inc.
- Merriam, S.B. (1988). Case Study Research in Education: A qualitative approach. San Francisco, CA: Jossey-Bass, Inc.
- Nolan, R.E. (1994). From the classroom to the real world. Adult Learning, 5(4), 26.
- Orum, A.M. & Feagin, J.R. & Sjoberg, G. (1991). The nature of the case study. In Orum, A.M. & Feagin, J.R. & Sjoberg, G. (Ed's) (1991). A Case for the Case Study. Chapel Hill, NC: The University of North Carolina Press.
- Ottoson, J.M. (1997). After the applause: Exploring multiple influences on application following adult education programs. Adult Education Quarterly, 17(1), 46-55.
- Ottoson, J. M. (1995). Reclaiming the Concept of Application: From social to technological process and back again. Adult Education Quarterly, 46(1), 17-30.
- Ottoson, J.M. & Green, L.W. (1987). Reconciling concept and context: Theory of implementation. Advances in Health Education and Promotion, 2, 353-382.
- Parry, S. (1990). Ideas for improving training transfer. Adult Learning, 1(7), 19-23.
- Patton, M.Q. (1978). Utilization-Focused Evaluation. Beverly Hills, CA: Sage Publications.
- Rein, M. (1983). From Policy to Practice. Armonk, NY: M.E. Sharpe, Inc.
- Rogers, E. M. (1995). Diffusion of Innovations (4th ed.). New York, NY: Free Press.
- Selman, G. & Dampier, P. (1991). The Foundations of Adult Education in Canada. Toronto, ON: Thompson Educational Publishing, Inc.
- Schumacher, S. & McMillan, J.H. (1993). Research in Education: A Conceptual

Introduction (3rd ed.). New York, NY: Harper Collins College Publishers.

Sproull, L.S. & Hofmeister, K.R. (1986). Thinking about implementation. Journal of Management, 12 (1), 43-60.

Stake, R. E. (1995). The Art of Case Study Research. Thousand Oaks, CA: Sage Publications.

Statistics Canada. (1990). Human resource training and development survey results, 1987 (Publication No. 81-574E). Ottawa, CA: Edith Rechnitzer.

Swanson, R.A. & Nijhof, W.J. (1994). Measuring transfer of learning. Adult Learning, 5(4), 28-29.

The Concise Oxford English Dictionary of Sociology (1994). Oxford: Oxford University Press.

Verner, C. (1975). Fundamental concepts in adult education. In Knoll, J. (Ed.), Internationales Jahrbuch of Erwachsenenbildung (International Yearbook of Adult Education). Bertelsman University. 178-192.

Weatherly, R. & Lipsky, M. (1977). Street-level bureaucrats and institutional innovation: Implementing special-education reform. Harvard Educational Review, 47, 171-197.

Weiss, C. (Ed.) (1977). Using Social Research in Public Policy Making. Lexington, MA: Lexington Books.

Wenz, A. & Adams, C.D. (1991). Life after training: A look at follow-up. Journal of Staff Development, 12(1), 60-62.

Yin, R.K. (1994). Case Study Research: Design and methods. Thousand Oaks, CA: Sage Publications.

APPENDIX 1



Department of Educational Studies

Mailing address:

2125 Main Mall

Vancouver, B.C. Canada V6T 1Z4

Tel: (604) 822-5374

Fax: (604) 822-4244

May 13, 1996.

Dear (possible participant),

I am enrolled in a Master of Arts program in Adult Education at the University of British Columbia and part of the requirements of the program is to conduct research for a graduate thesis. The purpose of this letter is to introduce you to the project and to provide you with some information that might help you to decide if you would be interested in participating in the project.

The title of my project is "An Exploration of the Barriers and Facilitators to Application Following an Adult Continuing Education Program". The purpose of the study is to explore influences that impact on whether and how the ideas and concepts learned in an educational program are applied on the job.

The study involves interviewing City of Vancouver employees who have participated in a corporate training initiative. Those who volunteer to be in the study would agree to participate in one 1 1/2 hour interview and one 2 hour focus group. You would be sent a written copy of the interview and focus group session for participated in for your review.

The information gathered in this project will be used as the basis of my graduate thesis. In the thesis document that I am required to write as well as in the oral presentation of this document, I would use pseudonyms for both you and your organization. Any information that you indicated was "off the record" would not be used.

APPENDIX 2

Interview Schedule

Application

- How would you describe or characterize your experience with application following _____ program?
- Tell me what you mean by application?

Influences on Application

Predisposing factor- characteristics of the learner

prior knowledge
ability
motivation

values
attitudes
beliefs

Probe

- Tell me about why you decided to attend _____ program.
 - Did you learn anything new by attending the program, or did the program confirm what you already knew about _____?
 - To what extent is this program one you support or believe in?
-

Education factor-characteristics of educational program

methods
instructor
program
organization

goals
flexibility
emphasis
attendance

participation
practice time

Probe

- How might the program itself have facilitated your application?
-

Innovation factor- characteristics of the things to be applied

theory behind
complexity of

percieved advantage/value
timing

Probe

- Tell me about how you think the content you learned may have facilitated your application?
-

Enabling- skills of the learner and characteristics of the application context

synthesis
negotiation
translation
culture

use of power
availability of resources
level of conflict
degree fit

Probe

- Describe to me any skills you have that my have facilitated your application.
 - Tell me about any characteristics of the organization or your department that may have facilitated your application.
-

Reinforcing factor-characteristics of support

support/reinforcement
reward structures

Probe

- Describe to me how issues relating to support from others may have facilitated your application.
-

*In the above questions *facilitated* could be exchanged for *hindered*.