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THE EXPERIENCES OF MID-CAREER PROFESSIONALS IN A NON-TRADITIONAL MASTER'S PROGRAM

BY

CAROLINE STUART 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree in MASTER OF EDUCATION

IN

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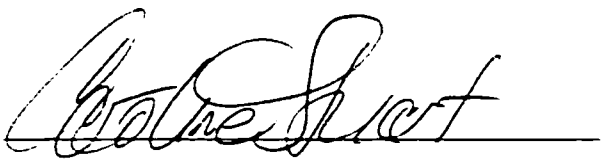

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled THE EXPERIENCES OF MID-CAREER PROFESSIONALS IN A NON-TRADITIONAL MASTER'S PROGRAM submitted by CAROLINE STUART in partial fulfillment of the requirements for the degree of MASTER OF EDUCATION in ADULT AND HIGHER EDUCATION.

Dr. Tara Fenwick

Dr. George Buck

January 16, 2002

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ABSTRACT

The purpose of this thesis is to explore the experiences of a group of mid-career professionals enrolled in a non-traditional Master's program at a Canadian University. The study focused on two key non-traditional components of the program: problem-based learning, and self-assessment techniques. The study explored the experiences of non-traditional teaching techniques, as well as the long term influences on individuals' learning and workplace practice.

The research for this thesis was done in two parts. First, a questionnaire was sent to all the students (graduate and present) of the program since 1996. Following the questionnaire, eight telephone interviews were conducted to obtain further information regarding students' experiences in the program.

Many students reported great satisfaction with their experience of the non-traditional teaching techniques. Generally, the most valuable long term outcomes indicated by the majority of questionnaire and interview respondents were: (1) understanding and managing group process; and (2) increased self-knowledge.

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I raise this glass of celebration with you, my love, and with all of you.

Thank you, Caroline

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CHAPTER ONE
Overview of the Problem

I began my work in my Master's program with an interest in professionals' learning and continuing education. I made this decision as a reaction to being a high school teacher. I had reached a plateau in my career as a classroom teacher, a cycle of preparing for classes, marking, doing report cards, dealing with parents and attempting to cope with increasing administrative duties. I was frustrated that I had so little energy after all my other duties to indulge my love of learning, and to share learning with the people in my classroom. I decided to enroll in a graduate degree in adult education to learn and grow, to change the cycle my work-life had become and to learn how to help others in their continued growth.

I did not look at the program very closely in terms of my career needs. I did not fully explore all my options in providers of graduate education, and I assumed that all programs were pretty much the same. In retrospect, I chose a path of least resistance, staying within my home province to obtain my graduate degree with minimal expense. However, I have found through the course of my studies that there are more innovative alternatives available. Mid-career professionals are demanding graduate programs that meet their desires in terms of time flexibility, practical relevance, rigor, status in the workplace, and personal interest. They search for a program that will offer them the learning they demand and that will improve their professional practice and advancement opportunities.

Higher education providers are incorporating a variety of non-traditional approaches to increase accessibility, attract students willing to pay higher tuition, appear to be catering to the needs of the 'field', reduce delivery costs, and improve program

quality. On-line learning, problem-based learning, field-based "service learning", industry-driven curricula, and self-assessment have become increasingly common in the past decade of higher education programs specifically targeting professionals. There is literature arguing the need for more flexible delivery and alternative pedagogical approaches in higher education, (Pratt, Hillier & Mace, 1999), and research about how institutions can develop and implement non-traditional programs (Boud, 1995 ; Cheren, 1998). There is not as much research on how non-traditional programs impact the lives and long-term learning of students (Savin-Baden, 2000). The research for this thesis focused on the experiences of learners who are mid-career professionals in a non-traditional graduate program. In particular, I chose to focus on a graduate professional program that is characterized by a problem-based learning (PBL) approach closely integrated with systematic self-assessment. This study examined the nature of students' experiences and perceived long-term learning related to the problem-based learning and self-assessment approaches that formed the foundation of their graduate program.

This chapter continues now with an explanation of the program that the study participants were registered in. This study was not about the actual program in which the students are registered, instead it was about the experience of those students encountering the non-traditional teaching approaches used in the program. The program is a Master of Arts in Leadership and Training. I will refer to it throughout the study as the MAL program. The publicly funded institution is in Canada and it has delivered this Masters' program continuously since 1996. For ease of reading I will refer to the University as the Glendale University (a pseudonym).

Overview of the MAL Program

Glendale University designed the MAL program to meet the needs of people employed in full-time work by requiring two five-week summer residencies and the rest of the course work being completed through distance learning. The first summer residency is based upon group work. The University introduces problem-based learning. which involves a group of students working together to come to some solution. The University also teaches students how to assess their progress using a variety of self-assessment techniques including journaling, learning agreements, peer response and dialogue with faculty. Once the five weeks are completed students return to their homes and continue to take courses using distance learning. The next summer students return to the campus for their second summer residency. This second residency teaches research principles so that by the end of the five weeks students have completed a proposal for a Major Project and are ready to begin their research. Again students return to their homes and using their workplaces as a backdrop to their major project they work to complete the requirements for their Master of Arts degree.

This study was focused on the first summer residency. Specifically, I wanted to know the impact of problem-based learning and self-assessment on participants' long-term learning.

Statement of the Purpose

The purpose of this study was to explore the experiences of a group of mid-career professionals enrolled in a non-traditional Master's program at a Canadian University. The research focused on two key non-traditional components of the program: problem-based learning. and self-assessment techniques. The research tried to elicit an

understanding the long-term effectiveness, perceived by learners, of the program's problem-based learning and self-assessment activities in terms of their subsequent growth and practice of leadership in their own workplace. The research identified the range of learners' responses to specific aspects of these learning methods and described the specific short-term and long-term growth and observable outcomes which different learners in different contexts attributed to their experiences within the MAL program.

Statement of the Problem

What is the experience and perceived long-term learning of mid-career professionals participating in a non-traditional Master's program that employed problem-based learning and self-assessment techniques?

Sub Questions

What were students' prior experiences with problem-based learning and self-assessment?

What was the nature of students' experiences with problem-based learning and self-assessment in the MAL program?

What were students' experiences in applying their MAL learning in their professional practices?

What did students' perceive to be the most valuable long-term learning derived from their MAL program?

What evidence in their personal and professional lives demonstrated this learning?

These questions formed the basis of the questionnaire and interviews for this study.

Limitations

Limitations are (1) those things that occurred during the study for which the researcher did not have control, and (2) consequences of the researcher's choices that limit the study's generalizability. Obtaining access to such a project can pose a limitation. I could not have considered a study of this magnitude without the support of a grant from the Glendale University. Choosing to do a mail questionnaire is a limitation in that I had no control over how many participants would choose to respond, and I had to rely on Canada Post to deliver and return the questionnaire. The format of the questionnaire led to some limitations as a few respondents chose to reinterpret some of the questions, making tabulation of results difficult. As an example people chose to respond on the scale of 1 – 10 by adding in qualifiers and half numbers. I chose to do telephone interviews as a way of gaining in-depth expressions of experience. A limitation with telephone interviews is that I was not able to meet with people in person. Telephones can be difficult tools to use when trying to elicit experiential information. I was also limited in my own personal understanding of the MAL program because I did not have personal experience in the overall program, or with the specific approaches of problem-based learning and self-assessment. I approached this research as a student enrolled in a traditional graduate degree program, attempting to understand a very different graduate student experience.

Delimitations

Delimitations are those things I chose to limit for my research. I chose to mail a questionnaire to all 361 current students and graduates of the MAL program, rather than sending it electronically. As part of the questionnaire I asked for participants to consider

being interviewed by telephone and 107 agreed. I chose to limit the telephone interviews to eight, to represent equal numbers of females and males from each of the four years. I chose the telephone interview format because geographic distance prohibited a personal interview and because I have had much experience interviewing people over the telephone.

Significance

The overall significance of the research is to understand the MAL program participants' experiences and perceptions of problem-based learning and self-assessment techniques.

The MAL program has adapted problem-based learning and self-assessment techniques in an innovative way. This research presents findings, from the students' perspective, about the efficacy of problem-based learning and self-assessment. It explores the learning they experienced in the problem-based learning and self-assessment activities as well as its application to their lives and work. This research will contribute to knowledge regarding mid-career professionals' experience of graduate education. The study shows a valuable range of perspectives from immediate experiences to long term learning.

Assumptions

I assume that a learner actively constructs learning. In designing this study, I assumed that learning experiences in a post-secondary program have potential to influence personal development, knowledge, and work behaviour over the long term. My assumptions about graduate education in approaching this study are somewhat shaped by my own experiences in a more traditional graduate program. The learning methods I

experienced at University, in both my undergraduate and graduate education, were course-based, dominated by reading assigned texts, writing papers, being evaluated by an instructor on class participation and assignments. I have not had direct experience with non-traditional learning methods such as problem-based learning and self-assessment techniques other than reading about them in academic literature. I assumed that people who were participating in the Glendale University MAL program would have had a similar experience as I have had at the University of Alberta – an assumption which was challenged in this study. I am a white, middle class professional, female, and my profile is similar to the majority of students graduated from the MAL program. my assumptions about people and their experiences are somewhat shaped by my social position.

In practical terms I assume that students who chose to complete the questionnaire and return it to me had a sincere desire to provide feedback and to create an examined environment. I assumed that students who agreed to a telephone interview wanted to further explore the issues raised in the questionnaire. I also assumed that I had enough in common with the students I interviewed to facilitate conversation and create an atmosphere of trust.

Definition of Terms

Traditional Program

What I am calling a traditional program is course based, often dominated by reading, writing and presentation activities. Individual instructors plan and deliver separate courses. The focus of the learning tends to be on theory and research. Students are evaluated according to their performance on written and oral assignments.

Non-Traditional Program

In this study, the term non-traditional program refers to a program where experiential learning is the primary focus. The program of study is facilitated as an integrated whole by a team of instructors. The focus is on students' personal development as well as skill development for professional practice. Students are evaluated according to competencies.

Problem-Based Learning

Problem-based learning is described by Bligh (1995) as an approach which helps the learner frame experience as a series of problems to be solved, where the process of learning unfolds through the application of knowledge and skills to the solution of "real" problems in the contexts of "real " practice.

Self-Assessment

Self-assessment is a term that refers to the process of individual students evaluating their own skills, attitudes, and knowledge.

The MAL Program

In 1996, Glendale University launched a Master of Arts program on organizational leadership for mid-career professionals. It is centred on four practices which have continued to characterize its uniqueness: (1) a competency-based curriculum focusing on competencies in five areas: leadership, learning, communication, systems thinking, and research; (2) a residential component of two five-week summer residencies; (3) problem-based learning; and (4) an emphasis on self-assessment using various tools, such as the Myers-Briggs personality type indicator, reflective activities including journaling, and electronic learning agreements. The program takes two years to complete

and students should be able to continue to work while involved in the program. Students are required to submit a Major Project, an applied action research project based in a sponsoring organization, at the end of their second year. Since its inception, the MAL program was designed specifically to student's needs. Each year faculty review student evaluations and pre-residency need surveys. Based on careful considerations of student feedback, program changes have been made and often implemented the following year. Accessibility is stressed. Applicants without a Bachelor's degree are accepted into this MAL program through a process of prior learning assessment endorsed by the Glendale University. From one class in 1996, the program has grown quickly with four new groups of 55 students beginning their Master's degree in the summer of 2001.

The Staff within the Program

Aside from the program director and administrative staff, all instructors are adjunct faculty hired on a contract basis to plan and conduct summer residencies and distance learning courses, and to supervise students in their research projects. The MAL program can recruit short-term faculty to fill emerging content needs, and make changes quickly without the constraints of departmental structures and unionized or tenured faculty. The MAL program avoids costly benefit packages, faculty insurance, support of research programs, and other infrastructures that more traditional universities contend with.

Mid- Career Professionals

Mid-career professionals is a term used to represent those who are active in their chosen career path and are mid-way in their career. People are often in the 35 to 50 age group. Higher education for mid-career professionals is based on several assumptions: (a)

professionals want practical education that they can immediately transfer to their workplace practice; (b) professionals need programs which address their individual needs; (c) professionals want to complete degrees without having to quit their present employment; (d) professionals often are motivated to complete graduate degrees to advance their careers and improve their practice.

Overview of the Thesis

This thesis is divided into six chapters. The first chapter has presented an overview of the research question and an introduction to the study. The second chapter is a review of the literature concerning mid-career education, problem-based learning, self-assessment techniques, the use of these techniques in professional education settings. The third chapter is an explanation of the research methods design and the methods used to conduct the research. The fourth chapter presents the data collected from the questionnaire and findings produced from analysis of the data. The fifth chapter presents the data collected from the telephone interviews. The sixth chapter revisits the research questions, summarizes and discusses the findings, and poses conclusions and recommendations for further study.

CHAPTER 2
Review of Literature

My research explored the experience of mid-career professionals participating in a non-traditional graduate program using problem-based learning and self-assessment techniques. This literature review begins by exploring the general trend of mid-career professionals returning to higher education to undertake graduate degrees. This area includes the changes that have occurred such as increased technology, the demand of the corporate sector to have more skilled workers and the role women have had as they have decided to participate in higher education. I then discuss literature describing problem-based learning, and self-assessment techniques in professional education.

1. Mid-Career Professionals Returning to Higher Education

The literature review begins by exploring the general trend of adults returning to higher education in the midst of their careers. Mid-career professionals often decide to enroll in higher education to enhance their work, to obtain the job of their choice (Hesketh, & Knight, 1999). As students, this group apparently can be demanding. Watts (2000) states that "faced with the increasing cost of participation in higher education and the subsequent personal sacrifices that need to be made to sustain their studies, it is hardly surprising that many students see themselves as empowered customers operating in a market culture" (p. 17). The market is increasingly accepting the clients' right to choose and co-create their educational experience as traditional routes of study have become more flexible on the part of higher education (Watts, 2000). Adults are returning to higher education at an increasing rate and institutions are responding to the needs of their consumers. According to the *Survey of Trends in Adult Education and Training in Canada, 1985 – 1995*, institutions are offering programs in partnership with industry,

they are using innovative teaching and learning methods, and they are creating flexibility in their entry requirements. In the last ten years, according to the Canadian Survey of Trends (1997), the number of adults participating in an educational experience has increased and educational institutions have adapted their programs to meet this rising need. More and more higher education providers are incorporating a variety of non-traditional approaches to increase accessibility, attract students willing to pay higher tuition, cater to the needs of the "field", reduce delivery costs, and improve program quality (Fenwick, 2000).

In Canada the trend in educating adults has tended towards employability and the new economy of information and knowledge (STAETC, 1997). Both public and private sector organizations demand skilled leaders who can seize and capitalize on new opportunities by creating working environments that foster organizational learning, initiative and high performance (STAETC, 1997). Furthermore, the demand from business to have employees fully trained using the latest computer equipment and programs as well as being up to date with current trends and ideas has created a close tie between institutions of learning and corporations (STAETC, 1997). The need for workers to participate fully in the new economy has adults taking part in education with the full support of their employer or for their own advancement and personal satisfaction (Pratt, Hillier, & Mace, 1999). Adults who register in higher educational institutions do so for their own personal satisfaction, to gain theoretical perspective, to obtain a better job and to change their current work situation (Pratt, et al, 1999). In the United Kingdom, United States and Canada there has been a marked increase in adults participating in higher education (Hesketh, & Knight, 1999).

The increasing general emphasis on continuing adult education for vocational purpose is reflected in the "noticeable increase in Canada in adult participation in education and training" (STAETC, 1997). In 1983, 19 percent of adults took part in a training activity during the year and by 1993 there were 28 per cent. In 1994 there were over 20 million Canadian adults registered in full or part time adult education and training (STAETC, 1997). The trend in Canada is mirrored throughout the developed nations, the United Kingdom and the United States. In the UK, the figures show an increase of 161 percent between 1993/1994 and 1996/1997 of adults undertaking a Master's level of study (Hesketh, & Knight, 1999). A striking example of the institutions' response to the increase of adult participation in higher education is seen in the United States, where Master's degree titles have increased from 65 in 1945 to over 800 types of programs today. Hesketh and Knight (1999) explain that " new Master's degrees have been formulated in order to respond to advances and developments in the field, as with nursing, library and information studies, business, and journalism and mass communication" (p. 152). In the past nineteen years, in Canada, there has been a marked increase in adults participating in higher education. The next section speaks to the impact that women have had in higher education.

Role of Women

The Survey of Trends points out that the change of the role of women in the work force and society has brought about significant change in higher educational practices. According to Hayes and Flannery (2000), changing social and economic factors have led to tremendous growth in the number of women participating in formal and informal learning activities. Work-related training attracts 29 percent of employed women and 27

percent of employed men (STAETC, 1997). Women's effort to achieve greater financial and occupational autonomy has given rise to specific needs for training and retraining. Women's demands have helped generate new educational approaches that recognize and validate general qualifications arising from work and life experience, in order to promote women's access to education and work (STAETC, 1997). New educational approaches include collaborative learning, distance learning and group work situations that mirror the work (STAETC, 1997). The Survey of Trends (1997) states that increasing numbers of women entering into higher education institutions has also added a new dimension to education within traditional programs, forcing them to be more flexible. Women accounted for 51.9 per cent of the applicants to higher education in 1996 in the United Kingdom (Becher, 1999). In Canada, 14 per cent of working women participate in self-training, without employer support, which is a greater rate than men who participate at nine per cent (STAETC, 1997). The flexibility comes in offering distance learning and evening courses, as examples of less rigid learning environments. Women and men are entering higher learning institutions at an increasing rate. Institutions are meeting the increased interest by providing a variety of options for participating adults.

Choices in Education

Adult education is being challenged in a fundamental way and is moving away from prevailing models of training towards non-traditional models (STAETC, 1997). Professional development is viewed as a person's personal investment (Pratt, Hillier, & Mace, 1999). Mid-career professionals are the consumers and their choices are driving the market. Adults choose a higher education institution based on its prestige, the teaching methods used and its methods of assessment (Pratt, et al, 1999). Adults choose

programs that have "real world focus", and that address their personal happiness (Hesketh, & Knight, 1999, p 160 - 161). There is an increasing understanding that adult learners are demanding that their needs be recognized and provided for in the society at large. As Savin-Baden (2000) points out, there needs " to be not just a different view of learning and professional education but also a different view about relationships between industry and education, between learning and society and between government and universities" (p.4).

In the UK a market model of higher education has been adapted to be responsive to market demands and forces in the wider society. There are links between industry and higher education that have prompted changes in curricula. These changes have been in the development of personal qualities for life and work exemplified through the growth of key skill programs in higher education (Savin-Baden, 2000). According to Savin-Baden, key skills are working with others, problem-solving and improving personal learning and performance (p.15). The development of key skills has become increasingly important as higher education institutions are being encouraged to produce graduates who have market-related abilities and skills. "There has been a demand for flexibility in learning as students come from such different backgrounds. Learning needs to offer students opportunities to learn how to learn, and to develop key skills, independence in inquiry and the ability to contest and debate" (Savin-Baden, 2000, p. 26). Typically, this learning is placed in the context of a greater society, as Bines and Watson (1992) point out:

> This nexus of sponsors, providers and clients is also located in a context of rapid change in both higher education and the professions, requiring

> major innovations in professional education which are simultaneously constrained by traditional assumptions and pressures of resources. (p. 6).

Institutions of higher education face not only a dynamic world but also challenges placed on them by the demands of lifelong learning. Watson (2000) states that the lifelong learning agenda places demands on the institutions' marketing, partnerships and curriculum. Institutions need to engage new markets while at the same time maintain their traditional strengths and reputation within the industry. Higher education institutions have entered into partnerships with industry, which raises questions of boundaries that higher education institutions have traditionally had difficulty dealing with. The heart of the matter, for Watson, lies in the content and delivery of curriculum (p.10). Who controls the curriculum? Will it be built around the interests and needs of industry for value added economy or will it be separate and the issues that arise from exploring who creates and controls knowledge?

Summary of the Higher Education Section

As summary, the past fifteen years has seen an increase in employed adults deciding to return to higher education either with the support of their employer or not. The increased demand for lifelong learning has created a demand on higher education institutions. The institutions have responded to the needs of their registrants. They have increased flexibility to allow for distance learning and less rigid entrance requirements. The increased number of women entering the workforce and entering universities have also challenged institutions to incorporate cooperative learning styles and to rely less on traditional methods of teaching. The corporate world's ability to change and follow trends with ease has challenged institutions of higher learning to do the same so that they

can participate in what appears to be a booming market of lifelong learning. Glendale University featured in this study claims to have done just that, responding to the market and developing a non-traditional program that is competing for the dollars of mid-career professional. The two non-traditional aspects of the MAL program examined in this study were problem-based learning and self-assessment techniques that include the use of learning journals and competencies.

2. Problem-Based Learning

"The workplace of the 21st century requires professionals who not only have an extensive store of knowledge, but who also know how to keep that knowledge up-to-date, apply it to solve problems, and function as part of a team" (Evenson, & Hmelo, 2000, p. 1). The changing view of the workplace compels educators to rethink and reinvent the ways in which professionals are educated. Problem-based learning is one of several pedagogical innovations that has resulted.

This section of the literature review explores the history and technique of problem-based learning within higher education, as well as the advantages and disadvantages of problem-based learning.

Background of Problem-Based Learning

Problem-based learning (PBL) was developed at McMaster University in Canada where Barrows set out to design a medical school curriculum based solely on small group, student centered learning (Jordan, Porath, & Jamison, 2000). Problem-based learning has been associated with medical education since the late 1960's.

> Problem-based learning is an extension of Bruner's (1960) theories that people learn when challenged to discover, to stretch ideas beyond

> memorizing mere facts or heuristics, and to actually apply thinking skills and knowledge to solve everyday problems. In daily situations people manipulate information; they translate concepts into their own works, critically analyze ideas, discuss and debate among colleagues, integrate concepts across disciplines, acquire new insights, explore variations, and finally give the best idea a try. In other words, people actively grow and learn in an environment that encourages interaction and communication with colleagues in a real situation. (Jordon, et al, 2000, p. 1)

Evenson and Hmelo (2000) describe the advantages of a problem-based approach as developing an understanding of one's own knowledge needs, applying knowledge to novel problem situations, collaborating, and lifelong learning. Problem-based learning is not just a different method of teaching, claims Savin-Baden (2000), rather it is a truly different philosophical approach to the notion of teaching and learning. Problem-based learning is predicated on a constructivist perspective where learners construct knowledge based on experience (Jordan, et al, 2000). When learners encounter a new problem they retrieve relevant information, seek more knowledge about the situation, expand their content and conceptual background, and eventually find a solution (p. 2). What students learn through "real world" problem solving is the ability to identify, analyze and build solutions to organizational problems.

Problem-based learning can also be called "solution-oriented learning" (Cheren, 1998, p. 275). Problem-based learning is a process where a group works through a problem together, each contributing ideas and researching solutions. This method allows learners to work on developing their competencies in team work, leadership, problem-

solving and conflict management as well as providing a vehicle for instructors to view the learners' competencies. Ryan (1993) outlines the features of problem-based learning as developing: (1) developing analytical and problem-solving skills, (2) fostering self-directed learning abilities, (3) mirroring the workplace, and (4) motivating learning. Although these features of problem-based learning are shared with " many other forms of learning, it is the way in which they are applied within problem-based learning which provides a certain uniqueness (Ryan, 1993, p. 56). If this method of teaching is so effective, what is the impact on those who participate and the institutions that run these programs? Problem-based learning will make a difference in learners' lives, but often this change is not articulated (Savin-Baden, 2000). This is key to my thesis. What is the learning experience of mid-career professional in non-traditional higher education programs? Savin-Baden argues that consideration of personal experience is "noticeably lacking" in research on problem-based learning, and that "there is little research to date that has explored the impact of problem-based learning upon staff and students' lives or examined the impact of implementing problem-based learning upon the institution" (Savin-Baden, 2000, p.5).

Advantages of Problem-Based Learning

How do students experience problem-based learning? What is the impact of this paradigm of learning on learners' personality? Can learning through a problem-based format translate to the learners' work environment? Advocates of problem-based learning believe that the dynamic structure of problem solutions allows for new information to always have a place within the curriculum. Research on medical education indicates that problem-based learning encourages deep strategies of learning. Norman and Schmidt's

(1992) research on problem-based learning by medical students indicates that they may be more highly motivated, better at problem solving and self-directed learning, better able to learn and recall information, and better able to integrate basic science into the solutions of clinical problems than traditionally educated students. Veron (1995) also compares problem-based learning with lecture-based education and states that " the evidence is clear that medical students evaluate problem-based learning very positively" (p.216). Reynolds (1997) shows that "Problem-based students typically make use of libraries, original sources, and have more confidence in information seeking skills" (p. 267). Reynolds also points out that students' knowledge assessed at the end of problem-based courses does not appear to be significantly better than that of students taking traditional courses (p.267). However, Reynolds (1997) cites Kantrowitz et al (1987) who claim that learning skills, which problem-based learning methods emphasize, are more important than formal disciplinary knowledge: " the explosion of scientific information makes traditional curriculum increasingly irrelevant, because they are based on what is known today, to the exclusion of how to learn what will be known tomorrow" (p.272).

According to Cheren (1998) problem-based learning does challenge reasoning skills, develops creative solution gathering skills, facilitates increased group dynamic skills, and fosters essential communication skills that are needed within workplaces. Savin-Baden (2000) writes that problem-based learning can help students learn with complexity by experiencing that there are no straightforward answers to problem scenarios but that learning and life takes place in context, and it is context that affects the kinds of solutions that are available and possible.

Woods (1985) argues that in problem-based learning courses, the student is in control of the pacing, sequencing and often their own evaluation in the learning situation in problem-based learning. The problem is presented before the knowledge is given. Students must select the knowledge needed to solve the problem, learn the knowledge and then apply it to the problem. Thus, problem-based learning is a powerful tool and enables students to challenge their thinking which is a " primary tenet of transformative learning" (p.19).

Learning in teams and learning collaboratively mirrors the work environment. As a technique of learning problem-based learning anchors new knowledge and skill in the context of a work environment.

Disadvantages with Problem-Based Learning

The difficulty with problem-based learning is that this approach views the world as a set of problems that needs to be solved and that the solutions are limited to the learners' experience of that real world. As Prawat (1993) states, there is a tendency to equate constructivist thinking with practical problem solving views the world as a series of obstacles to be overcome. The learner must strive to overcome the obstacles and achieve some practical solution (p. 5). Prawat (1993) feels that education should cultivate imagination and wonder, and what problem-based learning cultivates is assimilation. "This approach <problem-based learning> also emphasizes the role of assimilation – the use of existing schemata to interpret problematic situations and the reliance on available routines to construct an instrumental response" (p.5). Problems are presented as being isolated without the myriad of potential complexities that impact human beings. In real life situations problems are not isolated they have human beings interacting with them

with all our foibles and complexities. As Michelson (1996) states, "experience is immediate but messy; it comes with all the human frailty still attached – subjectivity, interestedness, bias, materiality" (p. 439). Michelson (1996) argues that we need to understand our experience and then reconfigure it so that it is not interpreted in the usual order of power relations and hierarchies. If our belief systems are not challenged then the messy bits of life continue whether they are framed nicely in a problem-based learning session or not. Fenwick and Parsons (1998) encourage students and practitioners to challenge problem-based learning with the following questions:

- Who develops the question?
- How do pre-shaped problems help student professionals learn how to form experience for themselves?
- To what extent can a problem case authentically represent human experience?
- Where is the mess of human life when the problem's context is necessarily relegated to the shadow of the background?
- A person in the problem situation may act completely differently in a real context – what does this mean for the in-class context? (pp. 5 – 7).

Fenwick and Parsons (1998) conclude that in problem-based learning the learner becomes disembodied from the action and dynamics of the situation and the learning becomes a rational exercise.

> What is missing from problem-based thinking is recognition of a world and diverse selves that are fluid, dynamic and knowable only through particular, provisional knowledge that must be allowed to emerge and shift and ultimately accept mystery.(p. 9)

Summary of the Problem-Based Learning Section

Problem-based learning is a teaching technique that has been used in higher education institutions since the 1970's. It has been shown to increase skills of students in collaborative learning, research abilities and lifelong learning skills. As a teaching technique it has also raised questions regarding its overall usefulness as it limits the discussion to the created problem, and to student's knowledge. Problem-based learning is being increasingly incorporated into professional education and is central in the graduate curriculum that examined in this study. In that context, problem-based learning was used in connection with self-assessment techniques in the hopes of creating a well-rounded MAL program.

3. Self-Assessment in Higher Education

Self-assessment has had a similar genesis to that of problem-based learning in that adult learners and educators desire to make education relevant. In this section I discuss why self-assessment has become an evaluation tool and how this tool relates to problem-based learning. This section is divided into six parts. First is the exploration of changes in higher education that have lead to an increase in self-assessment being used. The second and third sections present an exploration of competencies and transformative critical reflection. In the fourth section I discuss the advantages and in the fifth the disadvantages of self-assessment. Section six is a summary of self-assessment.

Self-Assessment in Higher Education

Boud (1995) contends that " the greatest conceptual shift which has occurred in recent times in higher education has been from a perspective which focused on the teacher and what he or she does, to a perspective in which student learning is central" (p.

24). This relates directly to the changes being seen in the area of higher education and adult learning. Adults now have the choice of which program to attend and to determine, by being consumers, which programs they will support and those they will not support. Mid-career professionals are very much aware of this trend and are increasingly availing themselves of programs that place them and their learning at the centre.

> Self-assessment is about students developing their learning skills. It is not just another assessment technique to be set alongside others. It is about engaging learners with criteria for good practice in any given area and making complex judgements. It is not primarily about individuals giving themselves marks and grades. (Boud, 1995, p. 17)

Professionals are increasingly being asked to evaluate themselves within their employment structure; consequently, self-assessment techniques are becoming commonplace within organizations. Self-assessment supposedly teaches the ability to become a reflective practitioner. Self-assessment tools such as learning journals, personal growth plans, reflective dialogue, peer assessment, and questionnaire instruments for self-assessment are appearing in private and public sector workplaces as well as educational institutions (Fenwick, & Parsons, 2000).

According to Boud (1995), there is currently a high level of acceptance of self-assessment in higher education, whereas it was unusual only ten years ago. There is a context in which self-assessment places itself within the development apparent in higher education. Boud's ideas highlight many of the concepts mentioned in the previous section of educating mid-career professional. So for Boud (1995) the macro factors include:

- a shift to individualism and market forces in education;
- changes towards some democratic elements within organizations;
- a flattening of organizational structures which gives those lower in the hierarchy much greater levels of responsibility and thus greater need for skills to handle the responsibility; and
- a reduction of resources, strategies which require less staff time and effort (p. 20).

Boud (1995) describes a number of micro factors. I include two that speak directly to mid-career professional:

- an increasing number and diversity of students entering higher education. It is no longer possible to assume that students will have a common range of often context-specific skills required to be able to judge their own work; and
- the trend linked with this is that courses are less likely now to be covering well-trodden knowledge in the traditional disciplines. There are now combined degrees, modular structures and increasing options mean the different paths are followed by different students (p. 21).

Society and organizations have shifted in ways that require everyone to be responsible for their work and their learning. This may not be a new idea as much as a more forcefully realized ideal. As Fenwick and Parsons (2000) discuss, a traditional approach to evaluation is rational and sequential, objectives are determined, material is taught, tests are prepared by the teacher and administered to the learner. Fenwick and Parsons (2000) list a number of other evaluation techniques such as reflective journals.

learning agreements, peer evaluation and competency building as alternative strategies. As Boud (1995) indicates, there is now a working assumption that learners bring a great deal of experience to any new situation and teaching must start with what the learner already knows. Critical reflection using competencies as a form of self-assessment is a tool being used by workplaces and is a tool used in the program that was studied for this thesis.

Competency-Based Self-Assessment

In the Glendale University program that is the focus of this study, learners' self-assessment is tied closely to the competencies which form the basis of the MAL program. Competencies were incorporated into the curriculum of the program not only because they are being used extensively in the corporate world but also because they have increased currency within the education system as a method of evaluation. According to Wolf (1995) from the 1970s and continuing until today, the idea of competencies has become prevalent in educational institutions and workplace staff development. The general trend has been for professionals to demonstrate on a regular basis that they are keeping up to date and maintaining a proper level of competence (Becher, 1999).

Competence-based learning describes a specific learning that takes place in relation to a learner's role, task or duty (Peruniak, 1998). Parry (1999) states that competencies are:

> a cluster of related knowledge, attributes and skills that affects a major part of one's job (i.e., one or more key roles or responsibilities); that correlates with performance on the job; that can be measured against well-

accepted standards; and that can be improved via training and development. (p. 60)

Parry's definition takes into account the need for competencies to relate to a job that can be measured and improved upon. It is the most widely held definition in the workplace environment today. Similarly, the MAL program studied in this project defines competencies as, "the demonstrable behaviors which combine skills, knowledge and attitudes for a specific purpose" (Glendale University Publication, 1999, p. 1). As Cheren (1998) points out, a number of key competencies can be addressed using the problem-based learning method. Problem-based learning approaches often aim to develop competencies such as listening and oral communication, team building, creative thinking, goal setting and motivation, and interpersonal competencies such as being supportive, providing help, accepting encouragement and criticism (Cheren, 1998).

Transformative Learning Within Self-Assessment

Teaching self-assessment within the educational environment opens the door to transformative learning and increased leadership skills (Marienau, 1999). There is currently a great deal of interest in transformative learning, leadership skills and self-assessment promoted by the concern that much practice in the area of traditional assessment is not consistent with such goals of education as developing independent learners and critical thinkers (Boud, 1992). When people's values are incorporated into their problem-solving skills there is a reported increase in personal self-acceptance and self-esteem. This is the shift in internal perception, as Mezirow encourages, allowing workers to express awareness of their own meaning schemes, thereby transforming their meaning schemes and perspectives (Mezirow, 1990). Self-assessment is regarded as an

accepted goal of university education because it enables students to become effective and responsible learners who can continue their education without being reliant on teachers or courses. As Boud (1995) argues, "It is important for all learners to develop the ability to be realistic judges of their own performance and to effectively monitor their own learning" (p. 13). To effectively bridge the gap between job performance and learning, self-assessment encourages people to reflect on their work habits and the learning they are accomplishing. Reflection on practice, personal beliefs, and relationships is an ongoing process throughout adulthood and yet so few of these skills are actually taught or encouraged either in workplaces or educational institutions. Reflection is more than writing down in a journal what has gone on during the day, but also involves interpretation and critical analyses to make sense of our lives and roles. It is not an isolated act, but often takes place during a conversation with a colleague or partner (Collay, Dunlap, Enloe, & Gagnon, 1998). Reflection occurs within the context of learning: it is about exploring both the context and the learning to incorporate the new experience. As Brookfield (1995) states,

> Critical reflection is a hopeful activity. Seeing how we think and work through different lenses is the core process of reflective practice. What turns this into critical reflection is a consistent focus on unearthing and scrutinizing two kinds of assumptions: (1) those that mask the ways in which the variable of power affects and often distorts educational interactions; (2) those that seem congenial but that actually work against our best interests. (p. xiii)

Reflection can lead learners to new understandings of their habits. Critical reflection can encourage learners to explore where their habits originate. It also can encourage a level of questioning of the role of power within the creation of habits and worldviews. As Boud, Keogh and Walker (1985) state, reflection is where individuals explore their experiences in order to lead to new understandings and appreciation. Critical reflection might be hopeful but it can also lead to unpleasant realizations of how we work against other people and sabotage ourselves: "reflection can cause anxiety " (Boud, 1992, p. 192). This in turn can lead to dislocation of the understanding of our own person. Group dialogue can help support medicate, and make sense of this dislocation (Boud, 1992).

Advantages of Self-Assessment

Thus, self-assessment yields most benefit when integrated with social learning approaches, such as problem-based learning:

> We understand that most learning takes place within an individual but occurs through a process of social interaction that creates conditions for personal transformation. Such change usually happens when a learner is **building a community** with other learners who are **constructing knowledge** through their own experience and **supporting learners** involved with them in documenting reflection on their experiences and **assessing expectations** agreed on as they are **changing cultures** in their classrooms, institutions, workplaces or organizations through their own actions. (Collay, Dunlap, Enloe, & Gagnon, 1998, p. xiii)

Learners work together to improve individually and corporately the competencies and ability to self-evaluate. Teaching self-assessment assists learners in developing deeper

levels of competencies. Self-assessment training increases the desire of learners to consciously desire feedback from co-learners and reciprocally to offer feedback. Increased self-assessment contributes to a learner's intellectual competencies such as problem-solving skills, decision-making skills, and critical reflection skills, thus heightening their awareness of their values. These skills are required for proficient life long learning: "...it is important to develop self-assessment skills because they are central to effective learning now and for future learning and an essential feature of professional practice or for anyone who undertakes a responsible role in society" (Boud, 1995. p. 15).

Disadvantages of Self-Assessment Techniques

Reynolds and Trehan (2000) outline self-assessment difficulties that should be taken into account in three ways: (1) the social process between instructors and students. (2) the institutional context and potential contradictions from the assessments, and finally (3) power relationships that develop between students (p. 275). Incorporating self-assessment needs to be accurately understood to prevent difficulties arising from power differentiation, institutional requirements and student-teacher relationships. Reynolds and Trehan (2000) found that their students demonstrated all sorts of differences between beliefs and values, gender, and educational backgrounds that affected the dynamics of learning relationships. Some students were competitive, others had a sense of intellectual superiority and did not value other students' opinions. These beliefs and values led to judgements that did not facilitate straightforward assessment. The realities of introducing self-assessment is that there needs to be substantial buy-in from instructors, institutions, and students. So introducing self-assessment needs to be a slow, straightforward process that is taught and positively reinforced each step of the process. According to Bines and

Watson (1992), it is important to have criteria for assessment of projects and a set criteria of how an individuals' contribution will be assessed. Overall, involving students in assessment either as individuals or in groups is time-consuming.

Other difficulties with self-assessment is that training has to be provided at all stages of assessment. For instance, learners have to be taught how to provide constructive peer feedback. Sluijsmans, Moekerke, van Merrienboer and Dochy (2001) state that to eliminate rating errors, peer assessment has to be taught. Peer assessment strategies need to include a clear definition of the criteria used to assess, and this criteria has to be discussed during the course period. A second difficulty is that self-assessment can set up an unequal relationship between the students. Learners can become competitive and an environment of distrust evolves. According to Magin (2001), however, findings are encouraging for teachers involved in or intending to use peer assessment methods. It is possible to conduct peer assessment procedures in which integrity and fairness of peer marking are not compromised by relationships between students. A third difficulty involves issues around bias. Magin (2001) contends that bias is an outcome of a breakdown in a relationship, commitment or trust by students engaged in rating their peers. Again, this bias is not inevitable if there is a commitment to and a full understanding of the educational purpose that students are involved in.

A difficulty with competency-based assessment is that it brings industry and the business world directly into the classroom. As Field (1993) states, "competency based assessment, in its present from, threatens to become the new Fordism of the education system" (p. 48). There is such a proliferation of competencies in academia that they begin to make a university look like the work force. Competencies become a trend, according to

Becher (1999), a trend towards requiring and demonstrating appropriate levels of competence.

A difficulty with critical reflection is that not all reflection leads to learning, and some reflection can lead to false expectations of learning outcomes (Boud, 1992). Reflection can lead to serious questioning and critical thinking, causing learners to challenge assumptions of teachers and the learning context (Boud, 1992). It is imperative to build trust in the process of reflection. Trust can be built by making sure that the whole perspective is incorporated and that there are boundaries on the reflection. " If boundaries of reflection are defined by ideas and concepts in the discipline being studied, this should be explicit and attention given to developing a shared vocabulary and understanding of central concepts" (Boud, & Walker, 1998, p. 200 – 201).

Summary of the Self-Assessment Section

Self-assessment is a teaching technique that has gained currency during the last thirty years in higher education institutions. It increases the relevance of learning and encourages students to make complex judgements using criteria of good practice when evaluating their learning (Boud, 1995). Self-assessment uses techniques such as competency development and reflective journals to increase self-awareness and self-knowledge on which to base evaluation. Students increase their critical reflection skills and become aware of assumptions and habits. The skill of being self-aware and responsible for actions is apparently valued in both higher education and the workplace. The disadvantage is that teaching techniques of good reflective practice is time consuming and may not attract the full commitment of the academic staff, students and the institution.

Summary

This study examines the learning experiences of mid-career professionals graduating from a non-traditional Master's program in Canada. The literature on adults partaking in higher education indicates that increasing numbers enter programs to enhance their careers. Adults have entered into higher education programs in ever increasing numbers and they have demanded flexibility and workplace relevance from the institutions. The need for relevance to the work environment has introduced different methods of teaching and learning. The MAL program being studied uses problem-based learning and self-assessment tools in an attempt to better meet the needs of their adult learners. This literature review has explored problem-based learning and self-assessment techniques, examining the negative and positive aspects of these pedagogical approaches. There needs to be further research on the impacts of this learning and the use of the techniques in the larger marketplace. Savin-Baden (2001) points out that there is little research done on how participants experience these non-traditional learning activities. This study intends to contribute to our understanding not only of learners' experiences in problem-based learning and competency-based self-assessment in a graduate program, but also their perception of the long-term learning that they attribute to the program.

CHAPTER THREE
Method

This chapter describes the methods I used to conduct the study. First I outline the type of study, and selection of participants. The study is divided into two sections reflecting the two key methods: (a) the questionnaire and (b) the telephone interview. In both of these sections I discuss the selection of the participants, the development and design of the instruments, the pilot studies, the procedures of data collection and analysis, and ethical procedures.

Type of Study

The research design is interpretive, using both quantitative and qualitative methods. Interpretive research is the "study of the immediate and local meanings of social actions for the actors involved in them" (Gall, Borg & Gall, 1996, p. 29). This study explores the experience of one group of people, asking them to describe their experiences and their perceptions of the effectiveness of their educational program, through a questionnaire and then follow-up telephone interviews. Questionnaires are descriptive in nature; they allow for all the participants to respond to the same questions (Gall, et al. 1996). Telephone interviews allowed me to probe, extend, and clarify the meanings behind the responses to the questionnaire. The purpose of both questionnaires and interviews were to collect data from participants, in a sample, about their "characteristics, experiences, and opinions in order to generalize the findings to a population that the sample is intended to represent" (Gall, et al, 1996, p. 289).

Selecting Participants

The target population were all participants registered in the MAL program. Glendale University granted access to the registrants, providing a mailing list and

allowing access to the student listserv to promote the study, to alert students of the questionnaire as well as to remind them to complete it, and to send a thank you message. It was hoped that students would respond to the questionnaire because it provided an opportunity for them to reflect on their learning and their work experience, and to contribute information that would be shared with the University to improve the program. Glendale University provided a student contact list of all registrants and graduates from the MAL program and everyone on that list was sent a questionnaire. Of the 361 participants who were sent a questionnaire, 168 responded with a complete questionnaire, giving a response rate of 48.5 percent.

Each questionnaire mail out included a consent form where volunteers could indicate their willingness to participate in a telephone interview. Of the 107 people who agreed to the telephone interview, eight were selected. I will discuss how I picked the eight people in a later section of this chapter. I also included a separate entry form, as an incentive, so that people could put their names into a draw for one of four gift certificates. There were 143 who placed their names in the draw. I placed the entry forms into a draw tub and had my coworkers pull out four names. These people were sent the gift certificates in the mail.

Phase One: The Questionnaire

Using a questionnaire made the most sense for this study since I could not personally access all the participants. All the participants of this study had already completed their first summer residency and so the most practical way to access them was to send them a questionnaire through the mail. I considered sending out the questionnaire electronically, but came to the realization that there was no way to guarantee that the

format in which I sent the questionnaire out would be the same format in which the questionnaire was received. Since not everyone uses the same software, the format can change. It is important to maintain the same format when using a questionnaire as it maintains the rigor of the study and it presents a professional image. In addition, I was concerned that an electronic survey may not have garnered a satisfactory a response rate as a paper-based questionnaire. Finally, it is difficult to keep electronic correspondence completely private. So to honour people's anonymity I realized that mailing the questionnaire made the most sense.

Designing the Questionnaire

A questionnaire collects information that is not directly observable. As a properly designed tool it is able to inquire about the feelings, motivations, attitudes, accomplishments, and experiences of an individual (Gall, Borg, & Gall, 1996). It is an instrument that asks the same questions to all participants in the study. As a low-cost tool it requires relatively little time and money to administer. The two most prominent disadvantages of using a questionnaire are that it elicits relatively superficial information, and that once the instrument has been sent out it can not be recalled (Gall, et al, 1996). Also I found the questionnaire format limiting; a written survey does not provide for different interpretations of terms, and it restricts the way respondents are asked to think about their experience.

The questionnaire was designed with six different sections. It began with an Introduction to who I was and what the study was about. This is also the section where it was made clear to people that their participation was voluntary and that I was interested in their learning experiences within the MAL program.

The next section was the demographic information that I wanted to obtain: the year participants began the MAL program, their gender and age range, how much schooling they had achieved before they began the program, what sector of employment were they employed and what province they had lived in when they began their MAL program. I chose these demographic details to see how people from different years, genders or ages experienced higher education. I also was interested in a comparative analysis of responses according to occupational and educational experiences.

The body of the questionnaire was divided into three sections: questions about problem-based learning, self-assessment using competencies, and self-assessment with the learning agreement. Each section probed respondents' experiences prior to, during, and after the graduate program. A Likert scale of 1 (most negative) to 10 (most positive) was used. I also asked a ranking question and two yes/ no questions. At the end of each section I asked people to respond in open-ended question whether they had something else to add to the sections' questions.

The final section was used to try and obtain some overall rating of the non-traditional pedagogical methods used within the MAL program. These questions were directed at the long-term learning and changes that participants had noticed within themselves. They were asked to use a ranking method to show overall satisfaction within a variety of areas. There was a space here as well for people to write their comments on the ranking or anything else they felt still needed to be said.

Overall, the questionnaire format combined closed questions and open-ended questions, thus making this type of questionnaire both quantitative and qualitative in nature. The closed-ended questions gathered statistical data and participants' ratings

indicating how they experienced the non-traditional learning, while open-ended questions allowed me to obtain more detailed information on the attitudes and perceptions of the respondents. (Please see Appendix A for Questionnaire)

Pilot of the Questionnaire

After drafting the questionnaire, I gave the questionnaire to four of my colleagues in the Master's program at the University of Alberta. These people provided input as to the format, grammar, and asked critical questions that allowed me to further clarify the questionnaire. At this point I sent out three e-mails to ask participants of the MAL program to pilot the questionnaire. All three agreed and so I faxed to them the questionnaire and received back excellent advice that I included and used to improve the tool.

Mail out

I then hired a printer and had the questionnaire formatted and printed on two double-sided pages and had the consent form printed on a green coloured page. I included two envelopes: one stamped addressed envelope to return the questionnaire to the University of Alberta, and one for respondents to send back their telephone consent and draw entry form, if they chose to do so. Because the consent form contained their name and phone number, that information was kept separate from the questionnaire to maintain anonymity. In February 2000 I mailed out the questionnaires. Prior to mail out, I sent a message to all program registrants and graduates using Glendale University's student listserve explaining the purpose of the study and inviting them to participate. Following the mail out a reminder was sent asking those interested to complete and mail

in the questionnaire. A thank you message to all was sent electronically at the study's conclusion.

Validity

In terms of external validity this study of the MAL program can be generalised to that same group. The people who completed the questionnaire were participants of the MAL program. They were commenting on their experience. The questionnaire was straightforward, it was specific in terminology and content to the participants' experiences. There can be generalisability to other higher education institutions that run similar programs for mid-career professionals, because the people who completed this questionnaire are likely similar in age, general educational and occupational experience to those in other Master's programs. This study can be seen as being reliable, in that another researcher could produce much the same results using the same questionnaire (Gall, Borg & Gall, 1996). This is because the participants would still be answering questions that were directly related to their experience. The difficulty with the reliability of questionnaires is semantics. Each question can be subjectively interpreted, especially open-ended questions (Gall et al., 1996).

Construct validity is always a concern when doing a quantitative questionnaire. Being careful of construct validity requires a well-defined research objective, careful writing and pre-test of the questionnaire (Gall et al., 1996). In this questionnaire I worked from a focused research question. I pilot tested the questionnaire with participants and incorporated their feedback before sending out the complete run. An inherent weakness in questionnaires is that the researcher cannot verify her interpretations of what respondents write in open-ended questions. It is purely subjective as to whether

respondents interpret that their lives have changed because of a specific training (Gall et al., 1996). To increase reliability, the questionnaire used a Likert scale and an adequate amount of questions to determine whether graduates recognize a change in their learning as a result of their MAL program. Triangulation with follow-up interviews was intended to increase validity of the study.

Ethics Procedures

This study followed the University of Alberta Ethical Guidelines for Research Involving Human Participants. To protect the identity of respondents, questionnaires were mailed in anonymously, and were kept confidential by the researcher. No electronic messages were linked to specific respondents. Participation was completely voluntary. It was anticipated that no harm could come to individuals through their participation in the questionnaire.

Analysis

The questionnaires were returned to the University and began appearing in my mailbox at the end of February, through June 2000. Of 361 mailed, 168 questionnaires were returned completed, and seven envelopes returned with address unknown. Thus a rather high response rate of 48% was achieved. All the returned completed questionnaires were used in the analysis. I coded all the demographic questions, the open-ended questions and the ranking questions. For the demographic questions I used numbers to represent categories, except when it was obvious. So for example, the year was coded using the year's last digit, female was indicated as F, male as M, age was already grouped so each group was coded with a number. For instance a female beginning in 1996 at age 45 was coded 6, F, 2. The educational level and occupation sector were also numbered

and the province was given the two letter postal code. So if the respondent had a bachelor degree, worked in the business sector and was from British Columbia she was coded 5. 3. BC. The demographic details were fairly straightforward.

The open-ended questions were more complicated. I read through the questionnaires a number of times and saw a pattern developing. Respondents indicated positive or negative feelings or comments on the program. I found the comments appeared to speak to fourteen distinct categories. For instance, if a person made a negative comment about the group dynamics they experienced then I coded their open-ended comment as 4 neg. A data entry specialist entered the coded data into the Statistical Program for the Social Sciences, than a staff person helped produce the statistical data that I used for subsequent analysis. The data were analyzed to test for group difference in all six demographic categories. Group differences were analyzed by means of independent samples t-tests and one-way analysis of variance (ANOVA). T-tests were used for demographic variables with two levels and ANOVAS were employed for demographic variables with three or more categories. Significant ANOVA results were followed up with Scheffe post-hoc tests to identify specific pairwise group differences. Data for each of the questions along with the results of statistical tests are presented in tables in Chapter Four.

Phase Two: Telephone Interviews

One of the weaknesses in a questionnaire is that most of the questions are closed and there is limited room in which respondents can express their specific experiences. It seemed important in deciding to send out a questionnaire that there also be a follow up of interested respondents to allow for further discussion using a telephone interview. " The

telephone is commonly used for interviewing because it is much less expensive that face-to face interviews, especially when the sample is geographically dispersed" (Gall et al., 1996, p. 311). A telephone interview consists of oral questions given by the interviewer and oral responses given by the participant (Gall et al., 1996). I decided to use a semistructured interview method. This type of interview involves asking a series of structured questions and then probing deeper using open-ended questions (Gall et al., 1996).

I based the questions for the telephone interview on the same structure used for the questionnaire. I divided the interview into two sections - one exploring problem-based learning and the other exploring self-assessment techniques used by the MAL program. Within each section I asked for stories and examples of the participants' experience at the first summer residency, and then specific examples illustrative of how they had used the learning within their workplace and their personal life.

Development of the Telephone Interview

The focus of the telephone interviews was to enhance the questionnaires' data. To this end the questionnaires were evaluated and themes were identified which were explored in the telephone interviews. I also reviewed the data obtained from the questionnaires to identify ambiguous questions, discrepancies in responses, and themes that could be expanded upon.

The telephone interview focused on the problem-based learning and self-assessment techniques used in the first summer residency during the MAL program, to explore the research questions: What is the experience and perceived long-term learning of mid-career professionals participating in a non-traditional Master's program that

employed problem-based learning and self-assessment? The telephone interview lasted anywhere from 40 to 100 minutes.

I determined that the telephone interview should explore in a deeper way than the questionnaire was able to, the nature of participants' unique experience in the MAL program, and the evidences of their perceived long-term learning.

Telephone Interview Questions

I began the telephone interview by asking if people had comments on the questionnaire. I then asked each telephone interviewee to describe critical incidents in their MAL experiences explaining what for them had been the most outstanding learning and development from the problem-based learning and self-assessment activities of their graduate program. I then asked individuals to tell me how they were using their new skills in their workplace or personal life. Throughout the interview I asked participants to clarify what they were sharing by asking for stories or examples of their experience. (Please see Interview Guide in Appendix C for actual interview questions).

Pilot Study

I decided for this pilot study to interview a women and a man from the same year of operation, 1996, 1997, 1998, and 1999, of the MAL program up to the time of the interviews. I decided to do this because I felt there would be better comparison between two people within the same year. I e-mailed two questionnaire respondents who had indicated willingness to be interviewed and they agreed to a time for an interview. We completed the telephone interview as agreed. I received helpful feedback from these interviewees. One concern was that interviewees could no longer recall the questionnaire

very clearly, and I realized that people needed to be retold the purpose and nature of the research.

Selection of the Participants

Of the 168 questionnaires 107 respondents indicated willingness to be interviewed. To choose who was going to be called I decided to arbitrarily pick out eight names from my list of people who had responded. I kept a list of names of people who had responded. I did not keep the questionnaire number attached to them so it is not possible to know which questionnaire belonged to whom. After I picked the eight names I checked the interview consent forms to see if the names I had matched those who had agreed to be interviewed. I made the mistake of not putting demographic details on to the consent form when I first received it. So I hoped that I was choosing somewhat equal distribution between gender, the year people attended the program, and their home province. A better procedure would have been to place demographic detail directly on the consent form when I receive it. Eventually through trail and error in my own manual selection process, I was successful in obtaining equal numbers of female and male, five people from each year and distribution around Canada.

Conducting the Telephone Interview

I began the telephone interviews in March 2000. I e-mailed the chosen telephone interviewees to remind them of the study, and to arrange a time which took longer than I expected. Most interviews lasted one hour or more. I was tired after lengthy concentrated listening and so I only did one interview in a day. I used a telephone tape recorder, and I also took notes during the interview. Before I made the call I made sure my equipment worked properly. I practiced going over the questions, I took deep breaths, and tried to

relax. I had a quiet, private place in my home in which to make the phone calls. To be respectful I checked with interviewees to make sure that this was still a convenient time to speak. I reviewed the ethics procedures by asking their permission to tape-record the interview and obtaining their verbal consent to participate in this phase of the research. Next I checked personal information, name, address, e-mail and telephone numbers, their year of beginning the MAL program, the province they lived in, and their occupation at the beginning of the program.

Ethics for the Telephone Interview

In keeping with the University of Alberta's Code of Ethics I had signed consent forms from each interviewee. I also began each telephone interview with a verbal consent allowing for the interview to take place, to be taped and to be transcribed. I restated that the telephone interviews were confidential, that no harm would come to them by participating in the study and that they could withdraw at any time. All participants indicated that they understood the nature and the purpose of the research. I kept the questionnaires, transcripts, tapes and my own notes secure which is also in accordance of the Ethics for the University of Alberta. (Please see Appendix B for Telephone Interview Questions)

Analysis of Data from the Telephone Interview

I hired an experienced transcriber to fully transcribe the interview tapes. I read through the transcripts and listened to the tapes many times and traced themes. I looked specifically for concrete experiences with the problem-based learning and the self-assessment learning during the MAL program and also in the workplace. I looked also for examples of long-term learning. I listened to the tapes, I created charts, and traced themes

from the transcripts. I matched these themes with the statistics and themes already identified from the questionnaire analysis. Respondents were candid in revealing their learning experiences and how they continued to learn because of their participation with problem-based learning and self-assessment activities.

Trustworthiness

The telephone interviews were a follow-up to the questionnaires. The sub-set of the same people who completed the questionnaire were asked to respond to similar questions in the telephone interview. After the pilot study I had two of my classmates review the transcripts to provide feedback on the interview protocol. I completed the eight telephone interviews. Dr. Fenwick and I then discussed the statistical data and noted the response people indicated having experienced with their learning. We reviewed the open-ended questions and categorized responses into themes and sub-themes. My supervisor and I independently listened to the tapes and read the transcripts of the telephone interviews. We discussed the interviewees' responses to the broader categories of problem-based learning and self-assessment techniques. This discussion elicited the broad categories. Then we interpreted these carefully to identify themes embedded in the categories. These themes and then sub-themes are each coded then the portions of transcripts containing the themes are then pulled together for final interpretive analysis. These procedures of peer audit, multiple data source and external review helped to create trustworthiness in qualitative research (Denzin, & Lincoln, 1998).

CHAPTER FOUR
Presentation of Questionnaire Results

The purpose of this chapter is to present the findings, a summary of data and its analysis obtained from both the questionnaire responses and the telephone interviews. The chapter has been divided into four sections. First, I will outline the demographic characteristics of the questionnaire respondents and the interview respondents. Then, in the second section, I will provide the findings of the questionnaire. In the third section I will present the findings of the telephone interviews. Finally, the fourth section will offer a broad discussion of all findings.

Profile of the MAL Program Participants

This section provides a summary profile of the 168 participants who responded to the questionnaire. First, the demographic characteristics reported by the respondents are described including age, gender, year of entry into the MAL program, level of education, occupation at the time of response and geographic location. The second section provides a similar profile of the telephone interviewees.

Profile of Questionnaire Respondents

Information about the personal characteristics of the 168 MAL participants who responded to the questionnaire is provided according to the demographic details asked in the questionnaire. The following demographic information was asked: (a) year the participant began their graduate studies, (b) gender, (c) age of the participant when they began the program, (d) province participant lived in when they began their MAL program.

The frequency and percentage frequency distributions of year, gender, age and province are summarized in Table 4.1. The MAL program has been in existence since

1996 and each year there has been an increase in the number of participants. In fact, from an enrolment of 55 in its inaugural year, the MAL program reportedly has quadrupled, enrolling 220 to begin graduate study in summer 2001 (Doug Hamilton, MAL program Director, 2000). The questionnaire frequency reflects that reality. The majority of respondents in this study had started their program in 1998 and 1999 (30.4% and 29.2%). The questionnaire reflects the reality of the gender breakdown. The average program enrolment is two-thirds women and one-third men (Doug Hamilton, MAL program Director, 2000). The demographic information for the questionnaires indicated that the largest group of participants were women (63.1%) and most participants were aged 40 – 50 (60.7%). These statistics also reflect the general demographics of the MAL program (Doug Hamilton, MAL program Director, 2000). The participants' ages are between 40 and 50 (60.7%). The majority of respondents (78.6%) lived in the western Canadian province where the University is located. This also reflects the overall MAL program since 227 of the 368 questionnaires were sent to British Columbia, the province in which the MAL program is offered.

Table 4.1

Frequency and Percentage Distributions of Personal Characteristics of Respondents

		Frequency	Percent
Year (n = 166)	1996	23	13.7
	1997	43	25.6
	1998	51	30.4
	1999	49	29.2
Gender (n = 168)	Female	106	63.1
	Male	55	32.7
Age (n = 168)	18-28	7	4.2
	29-39	39	23.2
	40-50	102	60.7
	51-61	18	10.7
	62-72	2	1.2
Province (n = 168)	Alberta	10	6.0
	British Columbia	132	78.6
	Manitoba	2	1.2
	New Brunswick	1	0.6
	Newfoundland	1	0.6
	Nova Scotia	1	0.6
	Northwest Territories	3	1.8
	Ontario	11	6.5
	Prince Edward Island	1	0.6
	Quebec	2	1.2
	Saskatchewan	3	1.8
	Yukon Territory	1	0.6

Education and Occupation Profile

The levels of education and occupational sectors where respondents reported being employed before beginning their MAL program are summarized in Table 4.2. The majority of respondents had obtained a Bachelor's degree (53.6%) before they began the MAL program. To meet the needs of the diverse group of people who apply at this University the program has allowed for prior learning assessment to permit people, who have not completed a Bachelor's degree, to begin the program. One person (.5%) had responded to the questionnaire who had not completed a high school diploma and nine people (5.4%) had completed their high school diploma but had not obtained an undergraduate degree. Respondents who had completed high school and some post secondary training (13.7%), those with professional certificates (11.9%), and those with trade certificates were (.6%). Seven respondents (4.2%) had already completed a Master's degree in another area before beginning the MAL program.

The two largest occupational sectors were education (26.8%) and health care (23.2%). The problem-based learning segment relies heavily on peoples' past experience and how participants respond in groups. I wondered if it made a difference which occupational area people came from when they began the program. The problem that occurred with this demographic question was that if individuals could not find a specific category in the choices I provided, they added it. Thus although I tried to present broad employment sectors such as Social/Civic Services individuals added more specific categories to describe their occupation, such as Religion. I combined the categories presented in the questionnaire and the self-selected categories into four general employment sectors: Business, Education, Government and Social Services.

Table 4.2

Frequency and Percentage Distributions of Education and Employment of Respondents

Highest level of education (n = 168)	Frequency	Percent
High School	9	5.4
Post Secondary	23	13.7
Trade Certificate	1	0.6
Professional Certificate	20	11.9
Bachelor's Degree	90	53.6
Master's Degree	7	4.2
Area of employment (n = 168)		
Health Care	39	23.2
Financial Services	1	0.6
Business Services	1	0.6
Social/Civic Services	12	7.1
Human Resources	6	3.6
Self-employment	16	9.5
Education	45	26.8
Retail	1	0.6
Government	18	10.7
Industry	2	1.2
Other	27	16.1

Profile of Telephone Interviewees

The telephone interviewees were chosen from the subgroup of questionnaire respondents who indicated their willingness to volunteer to be interviewed. These people were chosen to represent women and men, an equal number of participants from each year's program cohort (1996, 1997, 1998, 1999), and different geographic locations across Canada. A total of eight people were interviewed between March and May 2000. Findings of the telephone interviews are presented in Chapter 5. Here, the general demographics of these participants are presented briefly for purposes of comparison with the demographic profiles of the questionnaire respondents.

The interviewees were not chosen in terms of their level of education, age, or area of employment. They were chosen because of their gender, province and year they began the MAL program. For the initial MAL program year of 1996 one man from British Columbia and one woman from Alberta were interviewed. The woman worked in the Business sector while the man worked in the Social/Civic occupation sector. For the MAL program year beginning in 1997, the man worked in the Education sector in British Columbia and the woman worked in Human Resources in Ontario. From the MAL program year of 1998 I interviewed one woman from the North West Territories who worked in Health Care Administration and one man from British Columbia who was employed in Education. The two people who began the MAL program in 1999 were a woman from Alberta working in Human Resources and a man from Ontario working in Education.

Summary

Over the four years of the MAL program the number of respondents increased, as did the number of participants in the MAL program. The majority of questionnaire respondents were female: 106 females and 55 males. A total of 102 of all questionnaire respondents were between the ages of 40 to 50 years old. The single largest majority of 132 respondents came from British Columbia. Most respondents indicated the highest level of education they had obtained was a Bachelor's degree (53.6%) and very few indicated a high school diploma to be their highest level of formal education (5.4%). The two largest sectors in which respondents were employed were either Education (26.8%) or Health Care (23.2%).

In brief, the majority of respondents were women, from British Columbia, and between the ages of 40 to 50. The majority held Bachelor's degrees and were employed either in Health Care or Education.

The eight telephone interviewees were distributed amongst provinces, gender and year of their program, representing varying sectors of employment.

Findings of the Questionnaire

Aside from demographic information, the questions asked respondents to indicate their greatest learning, the extent of its long-term influence on their work practice, and their personal satisfaction with various aspects of the problem-based learning and self-assessment components. The purpose of this section is to present the results of analysis of the questionnaire responses exploring participants' experience of the non–traditional aspects of their MAL program in leadership.

The questionnaire was divided into five sections. The first section asked questions regarding demographics, and the fifth section asked summary questions. The second, third, and fourth sections explored the participant's experience of particular aspects of their MAL program: Problem-Based Learning, Competency-Based Assessment, and Self-Assessment.

The respondents answered most questions using a 1 – 10 Likert scale. Most questions elicited responses varying from 1 to 10, showing a relatively wide range of opinions. Each section of the questionnaire was followed by a space allowing for written comments. I include some of these comments at the end of each question to help clarify the responses. I have not included all the comments, only those that relate directly to the question and help clarify respondents' thinking. Each comment has been coded and based on a thematic understanding of its relevance.

The data were analyzed to test for group difference in all six demographic categories. Group differences were tested by means of one-way Analysis of Variance (ANOVA) or independent samples T-tests. Data for each of the questions along with the results of statistical tests are presented in tables at the end of each section.

I am presenting analysis for each question and on each of the six demographic categories. To gain statistical feedback I had to code the demographic categories. I learned that people who complete questionnaires will add categories that suit their particular situations and researchers have to wade through the extra material to find a way to represent the data. So category of year and gender stayed the same as no one picked a new category with which to represent her or himself. Both year and gender represent the program as the registrants have increased with each year and the majority of registrants

are female. In the age category I decided to combine groups as the mid-career professional age group of 40 – 50 was highly represented. I combined the ages into three categories – under the age of 40 (n = 46), age 40 to 50 (n = 102), and over the age of 51 (n = 20). I did this to accurately reflect the age spread and to obtain numbers that could be more accurately compared for statistical purposes.

In the area of education I wanted to know if there was a difference in learning experiences between registrants who did not have a four-year degree and those who had completed a full four-year degree. I combined the respondents who indicated that their highest level of education did not include a completed 4 year Bachelor's degree (n = 65) and the respondents who indicated that their highest level of education included a completed four year degree (n = 102). Again this demographic represents the overall education experience of the registrants in the program.

I combined all the presented employment categories and self selected categories into four general groupings: Business (n = 21), Education (n = 50), Government (n = 38), Social Services (n = 57).

Most respondents lived in British Columbia when they began the MAL program. Given the low numbers of respondents from other provinces I grouped them into regions: British Columbia (n = 132), prairie provinces of Alberta, Saskatchewan, and Manitoba (n = 15), central provinces of Ontario and Quebec (n = 13), and eastern/northern areas of Prince Edward Island, Nova Scotia, New Brunswick, NewFoundLand, Northwest Territories and the Yukon (n = 7).

After each question I placed a selection of written comments that correspond to the questions. The written responses are from the open-ended questions that come at the

end of each section. Respondents often provided more detail on how and why they had answered a question in a specific way or they expressed a strong opinion in the written comments. I decided to include this qualitative data to highlight the range of experience. Some comments have been altered slightly, without distorting their meaning, in order to make them more readable. As well, I have deleted all specific references that would be considered identifiers in the questions and responses.

Problem-Based Learning

The first eight questions in this section of the questionnaire, questions numbered seven through fourteen, explored participants' experience of the non-traditional aspect of problem-based learning. Mean, standard deviation, and significance group differences for each demographic category (year, gender, age, education, employment and province) are listed in tables 4.3 to 4.6, respectively, at the end of this section.

Question Seven

Question 7 asked: Overall, how useful were the problem-based learning activities for your own long-term learning? The overall mean was 7.87 and the range was 1 – 10. There were no significant differences within any demographic categories.

Qualitative comments associated with question seven

Some representative comments that represent the positive comments regarding problem-based learning and long-term learning were as follows:

Expanded opportunity for learning immensely.

In my view problem-based learning puts the walk in the talk.

Real life application results in true learning.

Typical comments from those who were dissatisfied with problem-based learning were as follows:

Too much emphasis placed on problem-based learning activities with irrelevant focus.

More frequent and specific faculty feedback tied into specific group management strategies and roles would further improve my ability to successfully incorporate problem-based learning in my long term learning and teaching.

Question Eight

Question 8 asked: How useful were the actual problems to your long-term learning? The overall mean was 6.71, and the range was 1 to 10. There were no significant differences within any demographic categories.

Qualitative responses associated with question eight

Positive comments about problem-based learning tended to emphasize its connection to participants' long-term learning:

The ability to solidify theoretical concepts through the use of problem-based learning activities is essential to my learning process and is an extension to my everyday work life activities.

The retention of seminar information, principles and problem solving tools is incredible – better than any or all other approaches I have ever experienced.

Helps to connect learning with application.

Examples of negative comments are as follows:

More explanation regarding the purpose of problem-based learning and more follow up after the problem-based activities regarding the learning activities. Emotional experiences need to be dealt with.

I feel that the nature of the problem study should relate to social responsibility as much as or more that to corporate success.

I had a fair amount of experience in problem-based learning activities so I may have had less learning than others in this activity.

Question Nine

Question 9 asked: What long-term personal learning for you was the most important result of your participation in the problem-based learning activities? Please rank order your top three (3) responses from a list of ten responses.

In descending order of endorsement, the choices were:

1. Managing group response - 60.1%
2. System thinking – 50.0%
3. Understanding different perspectives – 38.1%
4. Problem analysis – 32.7%
5. Self knowledge – 32.1%
6. Confidence – 19.6%
7. Leading – 18.5%
8. Communicating Your Ideas – 13.7%
9. Decision Making Skills – 13.1%
10. Creating New Vision – 8.9%

Prior to examining sub group differences in the importance ratings in question 9. the ranking data were reverse coded so that a higher score represented a greater rating of importance. In addition a value of zero was assigned for responses not ranked.

Of the ten response choices, only managing group process varied across education level. $t(165) = -2.02$, $p < .05$. Students with less than a four year degree ($M = 1.00$) reported managing group process as being less important than students with a four year degree or greater ($M = 1.37$). There were no differences in any of the other demographic categories.

Qualitative responses associated with question nine

The comments from participants who were positive about their personal learning through problem-based learning made the following statements:

Problem-based learning provided me with a great deal of insight into group behaviours and in one of the most useful aspects of the program as I apply it in my workplace.

This process helped me to clearly be able to identify my trigger points that was useful because the environment was a safe one in which to explore such things.

The negative comments were mostly about the personal experience of dealing with private time to reflect or the need to have emotional support throughout the process of participating in problem-based learning.

The time factor was an issue in reflecting on process.

The intensity of the program requires a greater level of "debriefing" after the experience.

Question Ten

Question 10 asked: How useful to your long-term learning was the process of working with a group to generate solutions? The overall mean was 8.17 and the range was 1 to 10.

There were no significant differences within any demographic categories.

Qualitative responses associated with question ten

Typical comments that appear to report positive long-term learning through group process were as follows:

The knowledge and expertise of other group members was a powerful part of the learning experience.

Involvement was tremendous. To see how teams can function and feel comfortable with self-evaluation.

Problem-based learning provided me with a great deal of insight into group behaviours and is one of the most useful aspects of the program as I apply it in my workplace.

Participants who apparently were dissatisfied with the process of group work made comments such as the following:

There was a considerable amount of fracture in the various groups due to personality clashes. Some of us were better at resolving these disputes than others. Perhaps some instruction in conflict resolution would be helpful.

Somewhat unrealistic at times, too "feely touchy" for real workplace environment.

The University was unprepared for the effects of the psychological by products of this approach.

Question Eleven

Question 11 asked: How useful to your long-term learning were the faculty observations and feedback during the problem-based learning activities? The overall mean was 7.09 and the range was 1 to 10.

There were no significant differences in any of the demographic categories.

Qualitative responses associated with question eleven

The participants who commented on faculty's role within the learning activity of problem-based learning tended towards negative or critical comments. There was only one positive comment in the questionnaire regarding faculty's observations and feedback and it is a general statement.

The success of PBL is in the group design, critical observation and feedback, and creating the pressure (timeline) to perform.

Examples of negative comments directed at faculty are as follows:

The current term needs to be modified to include sustained faculty involvement and feedback. Sporadic visits, spot checks or audits, can not provide adequate justice to feedback on process issues.

Faculty observations were virtually non-existent or fallacious. The process was boring and lacked clarity from an academic process.

My faculty advisor was not available to monitor my group. They were too busy with other commitments and groups. We progressed quickly and they missed it. I would appreciate their observations.

Question Twelve

Question 12 asked: By the end of the MAL Residency I, how comfortable were you with the problem-based learning process? The overall mean was 8.13 and the range was 1 to 10, except number 4 was not chosen.

There were no significant differences within any demographic categories.

Qualitative responses associated with question twelve

The following comments speak to the general comfort level that people experienced, both positive and negative.

The problem-based learning model meant I learned on a number of levels at the same time- learned about leadership competencies while really enjoying applying them - there is no room for being only theoretical.

Overall the program changed me for the better – I'm not easily changed – the process was painful – but ultimately rewarding.

The five-week residency program is a life altering experience. I can never go back to what/who I was prior to the residency owning to the amount of personal growth.

Involvement was tremendous – to see how teams can function and feeling comfortable with self-evaluation.

Question Thirteen

Question 13 asked: Would you recommend the continued use of problem-based learning in its current form for the MAL program? The overall mean was 8.44 and the range was 1 to 10 except number 2 was not chosen.

There were no significant differences within any demographic categories.

Qualitative responses associated with question thirteen

Comments representing positive statements about continued use of PBL in the program are as follows:

Although I recommend problem-based learning I would also encourage the Glendale University to experiment with new methods, ie. Don't get trapped in tradition. The part of tradition that should be kept is challenging students and faculty.

Very useful. Critical to learn systems thinking and to learn how to effectively work through a problem in a group setting. Organizations are all about working with other people. PBL forced the development of effective group problem-based solving it was very life like!!!

Real life application results in true learning.

Those participants who expressed dissatisfaction with the problem-based learning made these comments:

I felt like the Glendale University was still going through some growing pains while adjusting to PBL – only something that will get better in time.

I would much rather emphasis be place on "opportunities to learn", peer support and inclusive group processes and practices. PBL is too close to the medical model of diagnosis. The program needs a social and cultural approach.

The University should try to have problems that are more relevant, as example a real mix of corporate and public sector perspectives – would help both sectors understand the complexities of the other sector.

Question Fourteen

Question 14 asked participants for additional comments regarding the usefulness of MAL problem-based learning. Most responses fell into two categories – the approach itself of problem-based learning and self- knowledge. Twenty-three (23) respondents made positive comments regarding the model of problem-based learning. They spoke highly of the methods used and the learning they achieved through the implementation of problem-based learning. Seventeen (17) people spoke negatively of their experience of aspects of the problem-based learning model. The next most frequent group of responses was in the category of self-knowledge. Twenty-two (22) people indicated believing they had grown in self-knowledge. Only one response was negative in the group. There were 19 negative comments directed at faculty, usually indicated respondents' perception of a lack of training and compassion. The next highest categories were six people presented new ideas and six people spoke positively of using problem-based learning in their work environment. The telephone interviews followed the same patterns in that the two categories receiving most attention were the approach itself of problem-based learning. and a perception of increasing self-knowledge through the problem-based learning process.

Summary of Problem-Based Learning Section

The respondents were very positive regarding their response to problem-based learning. The lowest score of this section appeared in question eight, which asked how people found the actual problems, and they responded that the problems were useful. The highest score occurred in question 13 in which people responded that they recommended the continued use of problem-based learning at the Glendale University. Overall, the

responses were very positive in the problem-based section. There was only one demographic difference and that occurred in question nine where people who had a four year degree or more education found the managing group process aspect of learning was important to them. People wrote confidently that problem-based learning "expanded them", "changed them (me) for the better". Some spoke of how problem-based learning "helped connect learning with application", and "provided them (me) with a great deal of insight into group behaviour". People offered analysis as well, they found they needed "more relevant problems", there "needs to be more debriefing" and that "the faculty needs to more available". One person commented that he or she had had a fair amount of experience with problem-based learning and did not find the learning very helpful. Yet, another wrote that problem-based learning was a "life altering experience". Overall, the responses were generally expressed in very strong terms, and the majority pointed to the problem-based learning experience as intense and valuable.

Table 4.3

Means and Standard Deviations for Problem-Based Learning Responses by Year of Beginning Program

			Year				
			1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Group differences
Q7		M	7.57	7.72	7.69	8.29	n.s.
		SD	2.46	2.32	1.88	1.51	
Q8		M	6.48	6.67	6.41	7.08	n.s.
		SD	2.64	2.42	2.22	1.96	
Q9	Confidence	M	0.57	0.33	0.31	0.41	n.s.
		SD	0.99	0.81	0.81	0.91	
	Understanding different perspectives	M	0.70	0.70	1.10	0.65	n.s.
		SD	1.06	1.12	1.27	0.99	
	Managing group process	M	1.17	1.30	1.25	1.10	n.s.
		SD	1.15	1.15	1.21	1.25	
	Self-knowledge	M	0.65	0.88	0.78	0.53	n.s.
		SD	1.11	1.26	1.15	1.04	
	Communicating your ideas	M	0.35	0.37	0.20	0.14	n.s.
		SD	0.78	0.95	0.60	0.41	
	Problem analysis	M	0.57	0.70	0.53	0.69	n.s.
		SD	0.99	1.06	0.92	1.06	
	Decision making process	M	0.17	0.12	0.25	0.24	n.s.
		SD	0.49	0.39	0.69	0.63	
	System thinking	M	0.83	0.93	0.84	1.43	n.s.
		SD	1.23	1.12	1.08	1.24	
	Creating new vision	M	0.13	0.16	0.22	0.14	n.s.
		SD	0.46	0.57	0.70	0.50	
	Leading	M	0.26	0.35	0.33	0.47	n.s.
		SD	0.86	0.81	0.74	1.00	
Q10		M	8.43	8.14	7.96	8.27	n.s.
		SD	1.27	1.71	1.93	1.45	
Q11		M	6.74	6.98	6.78	7.57	n.s.
		SD	2.28	2.64	2.12	2.24	
Q12		M	8.35	8.17	7.75	8.37	n.s.
		SD	1.43	1.71	1.93	1.18	
Q13		M	8.67	8.35	7.90	8.94	n.s.
		SD	1.71	2.07	2.24	1.43	

Table 4.4

Means and Standard Deviations for Problem-Based Learning Responses by Gender

			Gender		
			Female (n = 106)	Male (n = 55)	Group differences
Q7		M	7.90	8.00	n.s.
		SD	2.05	1.54	
Q8		M	6.55	7.13	n.s.
		SD	2.31	1.93	
Q9	Confidence	M	0.44	0.24	n.s.
		SD	0.96	0.67	
	Understanding different perspectives	M	0.77	0.95	n.s.
		SD	1.17	1.13	
	Managing group process	M	1.21	1.36	n.s.
		SD	1.14	1.30	
	Self-knowledge	M	0.78	0.51	n.s.
		SD	1.16	1.00	
	Communicating your ideas	M	0.26	0.24	n.s.
		SD	0.72	0.67	
	Problem analysis	M	0.60	0.62	n.s.
		SD	1.04	0.93	
	Decision making process	M	0.14	0.27	n.s.
		SD	0.47	0.65	
	System thinking	M	0.94	1.15	n.s.
		SD	1.13	1.22	
	Creating new vision	M	0.11	0.24	n.s.
		SD	0.46	0.72	
	Leading	M	0.42	0.31	n.s.
		SD	0.88	0.84	
Q10		M	8.25	8.11	n.s.
		SD	1.67	1.45	
Q11		M	7.25	6.93	n.s.
		SD	2.26	2.43	
Q12		M	8.06	8.27	n.s.
		SD	1.79	1.27	
Q13		M	8.48	8.60	n.s.
		SD	1.98	1.70	

Table 4.5

Means and Standard Deviations for Problem-Based Learning Responses by Age at Beginning Program

			Age			
			18 - 39 (n = 46)	40 - 50 (n = 102)	51 or older (n = 20)	Group differences
Q7		M	8.09	7.79	7.75	n.s.
		SD	2.13	1.80	2.59	
Q8		M	6.76	6.67	6.80	n.s.
		SD	2.41	2.14	2.63	
Q9	Confidence	M	0.35	0.37	0.45	n.s.
		SD	0.82	0.83	1.10	
	Understanding different perspectives	M	0.59	0.91	0.85	n.s.
		SD	0.98	1.16	1.35	
	Managing group process	M	1.43	1.23	0.75	n.s.
		SD	1.29	1.18	0.85	
	Self-knowledge	M	0.52	0.81	0.65	n.s.
		SD	1.05	1.19	1.04	
	Communicating your ideas	M	0.20	0.27	0.20	n.s.
		SD	0.65	0.73	0.52	
	Problem analysis	M	0.59	0.62	0.70	n.s.
		SD	0.98	0.98	1.22	
	Decision making process	M	0.15	0.24	0.15	n.s.
		SD	0.42	0.65	0.49	
	System thinking	M	1.41	0.86	1.05	n.s.
		SD	1.24	1.12	1.19	
	Creating new vision	M	0.20	0.19	0.00	n.s.
		SD	0.58	0.63	0.00	
	Leading	M	0.33	0.36	0.45	n.s.
		SD	0.73	0.90	0.89	
Q10		M	8.59	7.99	8.15	n.s.
		SD	1.68	1.53	2.03	
Q11		M	7.48	6.86	7.35	n.s.
		SD	2.47	2.19	2.64	
Q12		M	8.49	7.96	8.15	n.s.
		SD	1.32	1.60	2.13	
Q13		M	8.85	8.21	8.68	n.s.
		SD	1.49	2.05	2.16	

Table 4.6

Means and Standard Deviations for Problem-Based Learning Responses by Education

			Education		
			Less than 4 years (n = 65)	4 year degree or more (n = 102)	Group differences
Q7		M	7.86	7.87	n.s.
		SD	1.87	2.09	
Q8		M	7.05	6.53	n.s.
		SD	2.20	2.27	
Q9	Confidence	M	0.37	0.38	n.s.
		SD	0.82	0.89	
	Understanding different perspectives	M	0.88	0.76	n.s.
		SD	1.14	1.14	
	Managing group process	M	1.00	1.37	*
		SD	1.12	1.23	
	Self-knowledge	M	0.68	0.72	n.s.
		SD	1.09	1.16	
	Communicating your ideas	M	0.25	0.25	n.s.
		SD	0.69	0.70	
	Problem analysis	M	0.60	0.64	n.s.
		SD	0.93	1.05	
	Decision making process	M	0.26	0.17	n.s.
		SD	0.69	0.49	
	System thinking	M	1.17	0.96	n.s.
		SD	1.31	1.09	
	Creating new vision	M	0.18	0.16	n.s.
		SD	0.66	0.52	
	Leading	M	0.42	0.33	n.s.
		SD	0.98	0.76	
Q10		M	8.14	8.19	n.s.
		SD	1.72	1.61	
Q11		M	6.98	7.14	n.s.
		SD	2.36	2.32	
Q12		M	8.00	8.20	n.s.
		SD	1.74	1.53	
Q13		M	8.54	8.37	n.s.
		SD	2.02	1.90	

*$p < .05$.

Table 4.7

Means and Standard Deviations for Problem-Based Learning Responses by Employment

			Employment				
			Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	Group differences
Q7		M	7.48	7.86	7.89	8.11	n.s.
		SD	2.32	1.82	2.20	1.69	
Q8		M	5.62	6.72	6.84	7.11	n.s.
		SD	2.96	2.11	2.35	1.88	
Q9	Confidence	M	0.24	0.40	0.37	0.42	n.s.
		SD	0.77	0.83	0.79	0.98	
	Understanding different perspectives	M	0.95	0.68	0.82	0.91	n.s.
		SD	1.32	1.08	1.11	1.17	
	Managing group process	M	1.52	1.38	0.95	1.19	n.s.
		SD	1.17	1.21	1.11	1.23	
	Self-knowledge	M	0.71	0.76	0.68	0.72	n.s.
		SD	1.15	1.20	1.16	1.10	
	Communicating your ideas	M	0.43	0.28	0.24	0.16	n.s.
		SD	0.98	0.73	0.68	0.53	
	Problem analysis	M	0.48	0.70	0.58	0.54	n.s.
		SD	0.87	1.04	1.00	0.95	
	Decision making process	M	0.05	0.28	0.29	0.14	n.s.
		SD	0.22	0.64	0.73	0.48	
	System thinking	M	0.86	0.94	1.16	1.11	n.s.
		SD	1.11	1.17	1.26	1.18	
	Creating new vision	M	0.14	0.12	0.29	0.14	n.s.
		SD	0.48	0.52	0.73	0.55	
	Leading	M	0.33	0.22	0.47	0.44	n.s.
		SD	0.80	0.71	1.01	0.89	
Q10		M	7.81	8.40	8.16	8.25	n.s.
		SD	1.81	1.39	1.73	1.56	
Q11		M	6.43	6.76	7.26	7.63	n.s.
		SD	2.77	2.51	2.40	1.72	
Q12		M	8.00	8.10	7.92	8.32	n.s.
		SD	2.02	1.57	1.62	1.50	
Q13		M	8.50	8.27	8.34	8.63	n.s.
		SD	1.73	2.03	2.06	1.91	

Table 4.8

Means and Standard Deviations for Problem-Based Learning Responses by Province

			Province				
			BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Group differences
Q7		M	7.80	8.73	8.08	7.86	n.s.
		SD	1.89	0.96	3.01	1.57	
Q8		M	6.64	7.73	6.62	6.71	n.s.
		SD	2.15	2.31	3.10	1.80	
Q9	Confidence	M	0.40	0.13	0.23	0.71	n.s.
		SD	0.89	0.35	0.83	1.11	
	Understanding different perspectives	M	0.85	0.93	0.62	0.43	n.s.
		SD	1.16	1.16	1.19	0.79	
	Managing group process	M	1.22	1.00	1.54	1.43	n.s.
		SD	1.17	1.25	1.39	1.13	
	Self-knowledge	M	0.70	0.40	1.08	1.00	n.s.
		SD	1.13	0.91	1.32	1.41	
	Communicating your ideas	M	0.27	0.20	0.08	0.29	n.s.
		SD	0.73	0.56	0.28	0.76	
	Problem analysis	M	0.62	0.60	0.38	0.71	n.s.
		SD	1.02	0.91	0.87	0.95	
	Decision making process	M	0.24	0.00	0.15	0.00	n.s.
		SD	0.62	0.00	0.55	0.00	
	System thinking	M	0.97	1.67	0.85	1.43	n.s.
		SD	1.15	1.29	1.07	1.51	
	Creating new vision	M	0.18	0.13	0.15	0.00	n.s.
		SD	0.62	0.52	0.38	0.00	
	Leading	M	0.36	0.67	0.31	0.00	n.s.
		SD	0.84	1.23	0.63	0.00	
Q10		M	8.11	8.80	8.38	8.43	n.s.
		SD	1.56	1.15	2.10	1.62	
Q11		M	6.96	8.33	7.46	6.86	n.s.
		SD	2.25	1.88	3.02	2.27	
Q12		M	8.09	8.40	8.08	8.29	n.s.
		SD	1.61	0.63	2.56	0.76	
Q13		M	8.32	8.93	8.92	8.86	n.s.
		SD	2.00	1.53	2.11	1.21	

Self-Assessment Using the Program's Competencies

Questions 15 to 23 explored participants' experience in using self-assessment tools throughout the first summer residency of their program. The Glendale University designed its MAL program in leadership to be one in which participants took responsibility in defining their skill level and determining their necessary learning. Mean, standard deviation, and significant group differences for each demographic category (year, gender, age, education, employment and province) are listed in tables 4.9 to 4.15, respectively, at the end of this section.

Question Fifteen

Question 15 asked: Do MAL competencies capture what you consider the most important leadership competencies? The overall mean was 7.61and the range was 1 to 10 except number 2 was not chosen.

There were no significant differences within any demographic categories.

Qualitative responses associated with question fifteen

Typical comments that represent positive statements regarding the MAL program competencies are as follows:

The competencies are a guideline of what are perceived to be attributes to good leadership.

Understanding the concept of "learning" has helped me with accepting change and communicating this to others. I have learned to identify the expertise in others so that shared leadership is not threatening.

Sample negative comments are as follows:

For me the biggest downfall of the Program was the lack of practical leadership in competencies, practical exercises + in the program. As for "Training" it was practically non-existent.

Many students tried and felt that they were required to meet all competencies. They struggled and often failed to achieve. I chose a set of competencies applicable to my personal areas of weakness – it worked better. I grew with problems.

Question Sixteen

Question 16 asked: Was it easy to assess yourself using the MAL competencies? The overall mean was 6.55, and the range was 1 to 10 except number 2 was not chosen.

There were no significant differences within any demographic categories.

Qualitative responses associated with question sixteen

Typical comments made by participants who considered the MAL program's competencies useful in developing leadership characteristics are as follows:

The self-evaluation has helped me to accept both my strengths and weaknesses equally and has increased my confidence in seeking feedback on a more regular basis.

As someone who does not reflect a great deal, the reflection on clearly defined competencies was very useful for me. I constantly reiterated the objectives of the program.

Competency based learning is a new approach, students must be at a "readiness" stage of change in order to gain from competency assessment.

Sample comments reflecting dissatisfaction with the Programs' competencies are as follows:

Even though it is near the end of the program I can honestly say I am not totally comfortable with assessment by competency. It is not something most of us are familiar with, it may take another time through a singular experience to feel totally at ease.

The depth of learning is reflective of individual engagement. The program design does not, in my opinion, require enough from learner.

It is important to decide initially what a competency is, than how it behaves (or manifests itself) than how measurement applies. It is too easy to adapt a term such as competency, give it a life force of its own and in effect isolate it from who we are – and all of who we are.

Question Seventeen

Question 17 asked: Was your own self-assessment consistent with the faculty assessment of your competencies? The overall mean was 7.78, and the range was 3 to 10.

There were no significant differences within any demographic categories.

Qualitative responses associated with question seventeen

The following are two comments directed at competencies and faculty which are:

No (competency evaluation) targets set at outset of the program.

For me the biggest downfall of the MAL program was the lack of practical leadership in competencies, and practical exercises in the program. As for "training" it was practically non-existent.

Question Eighteen

Question 18 asked: Was self-assessment important in improving your overall leadership competencies? The overall mean was 7.90, the range was 1 to 10, and this represents the highest single mean in the competency group of questions.

There were no significant differences within any demographic categories.

Qualitative responses associated with question eighteen

Comments that represent positive outcomes from competencies are as follows:

The competencies provide learning direction while providing the flexibility required for individual learning needs.

The process is excellent for developing awareness and isolating areas for growth.

The competencies are a guideline of what are perceived to be attributed to good leadership.

Comments that represent dissatisfaction with the Program's competencies are as follows:

It takes a while to understand exactly how the competencies are assessed. Peer assessment is the hardest to grasp.

Year 2 competencies were difficult to access due to the independent nature of the residency.

It would be helpful to develop standards or performance indications of levels of competencies.

Question Nineteen

Question 19 asked: Was self-assessment important in improving your research competencies? Responses ranged from 1 to 10. The overall mean was 6.23, which represents the lowest overall mean for the group of competency questions.

The main effect of program year was significant (F (3,157) = 2.73, $p < .05$). Scheffe Post-hoc tests indicated that students who began the program in 1998 (M =5.65) reported marginally less satisfaction (p = .051) than those beginning the program in 1999 (M = 6.91).

Qualitative responses associated with question nineteen

Comments that represent a positive outlook on assessment are as follows:

The published list of competencies meant that all course work had to be aligned with the competencies. This ensured consistency, relevancy, and cross disciplinary ties between subjects through the common competencies. Really promoted the integration of course modules.

I found that I linked the Program's competencies with those in my organization. I'm not sure which research competencies were covered in summer residence. My self-assess has been informal and not recorded, but I am much more aware of my actions and activities.

Negative comments were as follows:

Research, as a competency was a joke. Invented to be a T.A. for the research course...It was completely lacking. I am now in a PhD program and it was very difficult to show competency in research and sure as hell did not come from the Program.

Competency structure still remains a subjective process if everyone doesn't agree on the process or misinterprets it. I would like to see an additive to it that can be more practical.

The competencies themselves are good, solid and make sense. The challenge was to find ways to assess them thoroughly.

Question Twenty

Question 20 asked: Was self-assessment important in improving your communication competencies? The overall mean was 7.41, and responses ranged from 1 to 10 excluding number 2.

There were no significant differences within any demographic categories.

Qualitative responses associated with question twenty

Positive comments regarding communication competencies and self-assessment are as follows:

I must confess that I am still synthesizing my experiences and learning from the Program and hope to be doing so for sometime. There is a lot to ???

Self-assessment coupled with peer and 360 degree assessments was the key to triangulating the Program's competencies.

The University environment is a safe environment. Everyone is there with the same focus. Therefore a student can practice because in the real world people are motivated differently. The University is a place to make mistakes that are forgiven.

Negative comments were as follows:

There was no faculty advisement in the first year and it was sketchy in the second. Competencies were not ever clarified. There were no baseline indicators of faculty

competence – wide variation in ability and credentials a lot of polarisation. There was much posturing and the process was in disarray.

The competencies were not clearly laid out for students and created a great deal of confusion, especially as different faculty members interpreted how to achieve the competencies by what time frame.

Question Twenty One

Question 21 asked: Have you made use of the MAL competencies at work? The overall mean was 7.87, and the range was 1 to 10 except number 2 was not chosen.

There was a significant difference between the category of year. The effect of program year was significant (F (3, 159) = 3.34, $p < .05$). Scheffe Post hoc tests indicated that students beginning the program in 1996 (M=8.87) reported greater use of competencies at work than students beginning in 1998 (M=7.60).

Qualitative responses associated with question twenty one

Comments that represent a positive view of using the MAL program's competencies at work are as follows:

I am chair of my company and do not work full time. If I was fully active my answers would be much higher on the scale.

Competency based-learning was immediately transferable to my role in workplace – consciously and unconsciously.

The Program's competencies assessment allowed me to truly acknowledge my skill set and recognize my skills were applicable in more than one sector.

A dissatisfied comment is as follows:

#21, and #22 are not applicable to me at the moment because I am not in a paid position at the moment. Because faculty only saw us "in site" sporadically, they had a difficult time assessing some of my competencies based on those observations.

Question Twenty Two

Question 22 asked: Have you continued to self-assess your MAL competencies in your workplace? The overall mean was 6.68 and the range was 1 to 10.

There is a significant difference within the year category. The effect of program year was significant ($F(3, 159) = 3.83$, $p < .05$). Scheffe Post-hoc tests indicated that students beginning in 1996 ($M=7.65$) reported greater continued self-assessment than students beginning in 1997 ($M=5.91$).

Qualitative responses associated with question twenty two

Typical comments that represent positive statements are as follows:

I have moved organisational performance appraisal system towards a competitive base.

I need to spend more time making the Program's competencies a bigger part of my workplace, so they become more intentional.

I was fortunate to have been part of a group, a group that reinforced the Programs' competencies in the workplace with instant, honest feedback.

Some negative comments are as follows:

I haven't done 360 degree feedback yet to reflect on this question.

I have created a consulting practice so I am assessing different competencies (marketing, etc) and experimenting with many new things. The market response is my assessment now.

It is difficult to remember all the competencies per se. The value is in defining one's own learning goals rather than the categories themselves.

Question Twenty Three

Question 23 offered a place where respondents could write details in relation to the questions regarding competencies in their Master's program. The written responses mostly fall into the two categories about the model of self-assessment and how self assessment using competencies impacted respondents. People wrote 17 positive comments on how the model of self-assessment worked for them. There were 20 negative comments in relation to competencies and self-assessment. Respondents wrote 16 positive comments on their personal growth and learning using competencies as self-assessment. There were four people who wrote negative comments.

Summary of Self-Assessment Using Competencies

This section of the questionnaire was not nearly as high or low in averages as the problem-based learning section. The most positive learning occurred in the leadership competencies and in using competencies at work. Research competencies and self-assessment in the workplace were the lowest scores indicated. Different years indicated that they held differences from each other, particularly 1996. Those who began the program in 1996 held strong opinions and this may be because they have had more time to reflect on their learning and incorporate it. People wrote that competencies" helped them (me) accept both strengths and weaknesses". They felt the "process was excellent for developing awareness and isolating areas of growth". In terms of their long term learning they found that competencies could be "immediately transferable to their (my) role in the workplace". As criticism people "struggled with meeting all the

competencies", and they needed clearer "performance indicators". In general there was indication of not being "totally comfortable with competencies. There is awareness that learning how to assess by using competencies was an important skill however, it was difficult to grasp the intricacies. People appeared to flounder with competencies and became frustrated with the process.

Table 4.9

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Year of Beginning Program

		Year				
		1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Group differences
Q15	M	7.09	7.79	7.24	8.06	n.s.
	SD	2.13	1.46	1.52	1.33	
Q16	M	6.57	6.43	6.33	6.84	n.s.
	SD	2.13	1.95	1.90	1.90	
Q17	M	7.96	7.79	7.88	7.57	n.s.
	SD	1.19	1.44	1.42	1.46	
Q18	M	7.83	8.26	7.31	8.24	n.s.
	SD	2.41	1.90	2.16	1.85	
Q19	M	6.04	6.33	5.65	6.91	1998 < 1999
	SD	2.64	2.29	2.11	1.94	
Q20	M	7.35	7.48	7.06	7.74	n.s.
	SD	2.17	1.97	1.84	1.71	
Q21	M	8.87	8.12	7.46	7.60	1996 > 1998
	SD	1.32	1.89	2.22	1.88	
Q22	M	7.65	5.91	6.55	7.13	1996 > 1997
	SD	2.08	2.54	2.34	1.87	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Table 4.10

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Gender

		Gender		
		Female (n = 106)	Male (n = 55)	Group differences
Q15	M	7.70	7.62	n.s.
	SD	1.49	1.53	
Q16	M	6.67	6.49	n.s.
	SD	1.88	1.89	
Q17	M	7.76	7.82	n.s.
	SD	1.42	1.33	
Q18	M	8.08	7.76	n.s.
	SD	2.01	2.03	
Q19	M	6.28	6.25	n.s.
	SD	2.22	2.20	
Q20	M	7.57	7.27	n.s.
	SD	1.79	1.93	
Q21	M	7.84	8.02	n.s.
	SD	1.94	2.03	
Q22	M	6.69	6.65	n.s.
	SD	2.33	2.26	

Table 4.11

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Age at Beginning Program

		Age			Group differences
		18 - 39 (n = 46)	40 - 50 (n = 102)	51 or older (n = 20)	
Q15	M	7.63	7.60	7.60	n.s.
	SD	1.68	1.54	1.60	
Q16	M	6.27	6.61	6.90	n.s.
	SD	2.07	1.96	1.33	
Q17	M	7.89	7.69	8.00	n.s.
	SD	1.20	1.48	1.41	
Q18	M	7.89	7.80	8.45	n.s.
	SD	2.44	1.93	1.67	
Q19	M	5.95	6.35	6.20	n.s.
	SD	2.28	2.20	2.24	
Q20	M	7.60	7.28	7.65	n.s.
	SD	1.94	1.83	2.01	
Q21	M	7.50	8.03	7.90	n.s.
	SD	2.18	1.83	2.15	
Q22	M	6.04	6.92	6.95	n.s.
	SD	2.42	2.22	2.16	

Table 4.12

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Education

		Education		Group differences
		Less than 4 years (n = 65)	4 year degree or more (n = 102)	
Q15	M	7.74	7.52	n.s.
	SD	1.54	1.60	
Q16	M	6.39	6.63	n.s.
	SD	1.95	1.92	
Q17	M	7.78	7.76	n.s.
	SD	1.33	1.44	
Q18	M	7.91	7.88	n.s.
	SD	1.94	2.14	
Q19	M	6.61	5.97	n.s.
	SD	1.99	2.32	
Q20	M	7.54	7.33	n.s.
	SD	1.87	1.89	
Q21	M	7.89	7.83	n.s.
	SD	1.76	2.10	
Q22	M	6.56	6.75	n.s.
	SD	2.37	2.26	

Table 4.13

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Employment

		Employment				Group differences
		Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	
Q15	M	7.10	7.98	7.45	7.63	n.s.
	SD	1.97	1.03	1.95	1.47	
Q16	M	6.10	6.65	6.03	6.96	n.s.
	SD	2.34	1.77	2.20	1.62	
Q17	M	7.86	7.72	7.87	7.74	n.s.
	SD	1.46	1.29	1.40	1.49	
Q18	M	7.86	7.94	7.50	8.25	n.s.
	SD	2.15	2.03	2.47	1.47	
Q19	M	5.58	6.04	6.57	6.43	n.s.
	SD	2.57	2.05	2.53	1.94	
Q20	M	7.26	7.40	7.18	7.70	n.s.
	SD	1.48	1.83	2.25	1.64	
Q21	M	7.19	7.88	8.35	7.84	n.s.
	SD	2.52	1.67	1.67	2.13	
Q22	M	6.05	6.44	7.14	6.82	n.s.
	SD	2.82	2.21	2.16	2.21	

Table 4.14

Means and Standard Deviations for Self-Assessment Using Competencies Responses by Province

		Province				
		BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Group differences
Q15	M	7.56	8.33	7.46	7.71	n.s.
	SD	1.64	1.29	1.33	0.49	
Q16	M	6.55	6.80	6.46	6.29	n.s.
	SD	1.92	1.78	2.33	2.06	
Q17	M	7.72	8.00	8.00	8.14	n.s.
	SD	1.42	1.07	1.68	1.21	
Q18	M	7.85	8.13	8.69	8.00	n.s.
	SD	2.04	1.96	1.75	1.53	
Q19	M	6.19	7.00	5.75	6.71	n.s.
	SD	2.27	1.71	2.26	1.50	
Q20	M	7.37	7.79	7.67	7.71	n.s.
	SD	1.85	1.63	2.15	1.50	
Q21	M	7.83	8.53	7.31	8.57	n.s.
	SD	1.94	1.36	2.87	1.13	
Q22	M	6.67	7.07	6.62	6.29	n.s.
	SD	2.32	1.22	2.63	3.15	

Self-Assessment and the Learning Agreement in the MAL Program

The next nine questions explored participants' experience using the self-assessment techniques of journal writing and learning agreements, which play a significant role in this graduate program. Mean, standard deviation, and significance group differences for each demographic category (year, gender, age, education, employment and province) are listed in tables 4.15 to 4.20, respectively, at the end of this section.

Question Twenty Four and Twenty Five

Question 24 and 25 ask yes and no questions.

Question 24 asked: Had you ever done systematic self-assessment prior to the MAL program? There were 89 respondents who answered No while 78 answered Yes. There were no significant differences within any demographic categories. Question 25 asked: Had you ever kept a learning journal prior to beginning the MAL program? There were 113 respondents who answered No while 51 answered Yes. There were no significant differences within any demographic categories.

Qualitative responses associated with questions twenty four and twenty five

Two comments that were made by respondents that represent experience with journal keeping are as follows:

I was well experienced at keeping personal journals which helped.

The learning journal was a pleasant surprise, continues to be a useful tool for me in learning in my life.

Question Twenty Six

Question 26 asked: What was your attitude towards writing in a personal learning journal before the MAL program? The overall mean was 5.85, and the range was 1 to 10.

There were no significant differences within any demographic categories.

Qualitative responses associated with question twenty six

Interestingly, there were no positive comments when people discussed their attitude towards writing in a personal learning journal before their graduate experience.

The learning journal and self-assessment was an overall negative experience for me however I do see the intention of this tool.

As an ENFP (Myers Briggs) I cannot stick to my commitment of writing in a learning log – diaries hold no value for me – experiences have more value, than recording them.

Question Twenty Seven

Question 27 asked: How much did you use the learning agreement throughout the MAL program? The overall mean was 5.97, the range was 1 to 10.

There were no significant differences within any demographic categories.

Qualitative responses associated with question twenty seven

Comments that represent respondents' use of the learning agreement while in the graduate program are as follows:

Learning agreement forced me to examine what I was doing. It was added work but I could see the benefit. "But!" It was not consistently applied or understood by the faculty (or so it seemed).

The structure was important for me, I wouldn't have done it otherwise.

Assessment through the learning agreement forced me to see goals then to achieve them.

There were a number of negative comments as well:

Did not take the time to do it. Frequent I.S. problems were a nuisance.

I thought the learning agreement was minimal in value. It attempted to impose one useful tool which some find valuable as the standard for everyone. And then it was almost completely ignored by my advisor.

Frankly, the learning agreement part of the program was applied inconsistently among the faculty. It started strong and then just faded out.

Question Twenty Eight

Question 28 asked: To what extent did you feel you could be completely honest in the self-assessment you posted in your learning agreement? The overall mean was 8.48. the range was 2 to 10.

There were no significant differences within any demographic categories.

Qualitative response associated with question twenty eight

Positive comments were as follows:

I really appreciated the discipline of this process, it really encouraged me to go beyond the surface in a systematic and accountable manner, reinforced learning and commitment to change and to learn.

I found it very validating acknowledgement of my talents, honouring my wisdom and voice. Made me think about my strengths by being less self-critical.

The negative comments are as follows:

It is difficult to find time to do this well with thoughtful reflection.

Learning agreements do not respect different learning styles of individual learners – also became redundant, a time sink and not terribly helpful to me.

With the learning agreement comes the expectation that the student make themselves vulnerable to faculty and I have difficulty with that expectation. As an individual I have difficulty with that expectation. As an individual, I confess my "inner life" to few people; I feel that a bond of trust with faculty is necessary for the learning agreement to have much value.

Question Twenty Nine

Question 29 asked: Did you feel that your learning agreement comments were treated with respect by faculty? The overall mean was 8.56. This represents the single highest mean in the self-assessment section and the highest overall mean within the entire questionnaire. The range was 1 to 10 except no one chose number 3.

There were no significant differences within any demographic categories.

Qualitative responses associated with question twenty nine

Positive comments were as follows:

The learning agreement was of most value during my second residency. My faculty advisor read it regularly and responded with helpful comments.

I was fortunate enough to have a faculty advisor that gave me a great deal of leeway in the sense that this was my learning journey and assessment.

It would have been more helpful if faculty consistently provided comments in a timely manner – I had two faculty who were excellent and four who were at best inconsistent (sporadic, minimal)

Negative comments were as follows:

I didn't use the learning agreement very much. There wasn't a commitment from faculty in the first year.

The journal was very infrequently monitored by faculty the process of self-directed learning. I believe that I made it through the first year and had only one or two comments from faculty.

I am not impressed with my advisor absolutely NO communication still no communication or guidance to date.

Question Thirty

Question 30 asked: To what extent were faculty comments in the learning agreement helpful to your long-term learning? The overall mean was 7.11, the range was 1 to 10.

There was a significant main effect of year, $F(3, 161) = 5.23$, $p < .01$. Scheffe post-hoc tests indicated differences between students beginning the program in 1996 ($M = 6.39$) and 1999 ($M = 8.06$) as well as between students beginning the program in 1998 ($M = 6.53$) versus 1999 ($M = 8.06$).

Qualitative reponses associated with question thirty

Comments that represent positive long-term learning outcomes are as follows:

As an educator I appreciate the principles of a learning agreement – I use a similar "tool" frequently with my students.

I am constantly in positions of leadership to initiate educational change. By reading over my notes learning assessments and thesis, I continue to be focused on my strengths and the necessary process to take.

I have heard (but not seen) research that indicated formal education and job experience are the two least successful predictors of job performance (the most frequently used screening tools) I suspect learning agreements are much closer to effective tools and tools of the future.

Comments that represent negative long-term learning outcomes are as follows:

As the first group in the Program, we had the paper based version difficulty in accessing it etc. I believe the learning agreement should be a module, rather than a peripheral additional project and or task to be managed.

I have heard (but not seen) research that indicated formal education and job experience are the two least successful predictors of job performance (the most frequently used screening tools) I suspect learning agreements are much closer to effective tools and tools of the future.

The learning agreement was useful for my own tracking, but found I would have appreciated more feedback from my advisor during distance learning. If it is intended solely for self-assessment than it should have been stated so up front. It turned out to be somewhat of a waste of time.

Question Thirty One

Question 31 asked: Would you consider the learning agreement as important aspect of your learning in the MAL program? The overall mean was 6.57, the range was 1 to 10.

There was a significant main effect of year, $F(3, 160) = 5.43$, $p < .01$. Scheffe post-hoc tests indicated differences between students beginning the program in 1998 ($M = 5.38$) and those beginning the program in either 1996 ($M = 7.30$) or 1999 ($M = 7.40$).

Qualitative responses associated with question thirty one

Positive comments that state that learning agreements were important to respondents learning are as follows:

Learning agreement was enhanced when shared with trusted peers.

Encourages reflection, which I often do not make enough time for.

Learning agreement forced me to examine what I was doing. It did add work but I could see the benefit.

Some of the negative comments were as follows:

In the second year, I didn't use the learning agreement except for the summer session. Great idea but didn't work out in practice.

I did not find the learning agreement that useful in year 1 although I know others found it very useful (I'm not the journal writing type!).

Learning agreement would have been helpful to have some pre-reading introduction to the concept of the learning agreement.

Question Thirty Two

Question 32 asked: Do you continue to maintain a learning journal of some kind? The overall mean was 4.97, this represents the lowest mean in the self-assessment section and the lowest overall mean for the entire questionnaire. The range was 1 to 10.

There were no significant differences within any demographic categories.

Qualitative responses associated with question thirty two

Comments from those that are somewhat positive about their journal during and after their Program are as follows:

I found the learning agreement useful and effective journal during residency but found the process a little artificial. As over the years I have learned to reflect and act without externalizing it.

Although the learning journal was very useful (more reflection than learning) and although I intended to continue it, I find I am too busy.

Comments from those that are negative regarding their journal during and after their Program are as follows:

I did not find the learning journal as helpful in residency 2. I received adequate time to reflect and receive feedback in other forums. I have not kept a journal since residency 2 except in the course of my research.

It does not respect different learning styles of individual learners – also became redundant, a time sink and not terribly helpful for me. Not a process I would continue to use.

Question Thirty Three

Question 33 allowed people to write comments regarding their experience with self-assessment and journaling. There were 23 people who wrote positive comments regarding the use of a journal for self-assessment and 30 people who wrote negative comments about journaling. There were 22 people who criticized the faculty of the program, two others wrote positive comments regarding faculty in this section. People also spoke of their own general learning through self-assessment: sixteen (16) people spoke positively and twelve (12) people spoke negatively.

Summary of Self-Assessment and the Learning Agreement Section

This section contained the highest and lowest scores from the questionnaire. The highest score was for the question that asked if people were respected by the faculty advisors. The lowest score occurred when people indicated that they did not continue to keep a learning journal. There were statistical differences between years in questions 30 and 31. People beginning their program in 1996 and in 1998 found their advisors comments more useful than those beginning the program in 1997 and in 1999. Those beginning the program in 1998 found the learning agreement more useful than those beginning the program in either 1996 or 1999.

People "appreciated the discipline of the process", and they found it "encourages reflection". Others stated that the "learning agreement forced them (me) to examine what they were (I was) doing". On the other hand people "did not take the time to do it", and found that there was "minimal value" in the process. Some found that "faculty comments were vague and minimal". Some stated that self-assessment using a learning agreement was "time consuming" and " too difficult", while others said it was "worthwhile" and " a tool of the future". Overall respondents expressed a positive attitude towards doing the work in their learning journal and in assessing their own learning.

Table 4.15

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Year of Beginning Program

		Year				
		1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Group Differences
Q26	M	5.91	5.63	6.25	5.69	n.s.
	SD	2.76	2.87	2.36	2.44	
Q27	M	6.55	5.83	5.35	6.48	n.s.
	SD	2.09	2.30	2.08	1.84	
Q28	M	8.22	8.39	8.33	8.83	n.s.
	SD	1.57	1.76	1.37	1.24	
Q29	M	8.64	8.33	8.43	8.83	n.s.
	SD	2.04	1.87	1.76	1.46	
Q30	M	6.39	7.00	6.53	8.06	1996 < 1999
	SD	2.86	2.41	2.06	1.55	1998 < 1999
Q31	M	7.30	6.62	5.38	7.40	1996 > 1998
	SD	3.15	2.88	2.65	2.20	1998 < 1999
Q32	M	4.43	5.02	4.84	5.33	n.s.
	SD	3.30	3.26	2.39	2.38	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Table 4.16

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Gender

		Gender		
		Female (n = 106)	Male (n = 55)	Group differences
Q26	M	6.14	5.41	n.s.
	SD	2.49	2.63	
Q27	M	6.11	5.84	n.s.
	SD	2.13	1.96	
Q28	M	8.43	8.60	n.s.
	SD	1.59	1.29	
Q29	M	8.59	8.45	n.s.
	SD	1.63	2.02	
Q30	M	7.20	7.13	n.s.
	SD	2.17	2.21	
Q31	M	6.78	6.43	n.s.
	SD	2.70	2.74	
Q32	M	5.28	4.55	n.s.
	SD	2.64	2.90	

Table 4.17

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Age at Beginning Program

		Age			
		18 - 39 (n = 46)	40 - 50 (n = 102)	51 or older (n = 20)	Group differences
Q26	M	6.41	5.54	6.11	n.s.
	SD	2.43	2.52	3.00	
Q27	M	5.84	5.90	6.60	n.s.
	SD	1.95	2.20	1.88	
Q28	M	8.52	8.43	8.65	n.s.
	SD	1.66	1.42	1.27	
Q29	M	8.80	8.38	8.95	n.s.
	SD	1.62	1.88	1.05	
Q30	M	7.09	7.01	7.65	n.s.
	SD	2.34	2.21	2.23	
Q31	M	6.85	6.33	7.13	n.s.
	SD	2.90	2.77	2.29	
Q32	M	4.70	5.14	4.75	n.s.
	SD	2.97	2.68	2.67	

Table 4.18

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Education

		Education		Group differences
		Less than 4 years (n = 65)	4 year degree or more (n = 102)	
Q26	M	5.56	6.01	n.s.
	SD	2.41	2.66	
Q27	M	5.98	5.93	n.s.
	SD	1.95	2.20	
Q28	M	8.55	8.42	n.s.
	SD	1.36	1.55	
Q29	M	8.66	8.48	n.s.
	SD	1.37	1.94	
Q30	M	7.40	6.89	n.s.
	SD	2.04	2.34	
Q31	M	6.81	6.38	n.s.
	SD	2.49	2.91	
Q32	M	4.75	5.06	n.s.
	SD	2.59	2.83	

Table 4.19

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Employment

		Employment				
		Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	Group Differences
Q26	M	6.20	6.10	6.11	5.24	n.s.
	SD	2.55	2.58	2.60	2.52	
Q27	M	6.00	5.68	5.71	6.39	n.s.
	SD	2.36	2.19	2.09	1.93	
Q28	M	8.38	8.66	8.38	8.43	n.s.
	SD	1.91	1.12	1.36	1.65	
Q29	M	8.75	8.72	8.21	8.57	n.s.
	SD	1.80	1.47	2.20	1.59	
Q30	M	6.90	6.74	7.18	7.46	n.s.
	SD	2.66	2.52	2.33	1.68	
Q31	M	5.86	6.56	6.37	7.10	n.s.
	SD	3.20	2.89	2.83	2.30	
Q32	M	4.95	4.64	5.24	5.13	n.s.
	SD	2.85	3.12	2.66	2.51	

Table 4.20

Means and Standard Deviations for Self-Assessment and the Learning Agreement Responses by Province

		Province				
		BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Group Differences
Q26	M	5.87	6.13	5.46	5.43	n.s.
	SD	2.54	2.56	3.07	2.76	
Q27	M	5.88	6.80	6.25	5.43	n.s.
	SD	2.16	1.61	2.14	1.72	
Q28	M	8.50	8.47	8.83	7.57	n.s.
	SD	1.40	1.36	1.53	2.57	
Q29	M	8.52	8.80	9.33	7.57	n.s.
	SD	1.60	2.34	1.30	2.88	
Q30	M	7.01	8.13	7.08	7.14	n.s.
	SD	2.11	2.20	3.38	2.12	
Q31	M	6.33	7.73	8.15	6.43	n.s.
	SD	2.76	2.49	2.44	2.07	
Q32	M	4.95	5.33	4.54	5.43	n.s.
	SD	2.74	3.09	2.63	3.26	

Patterns of Long-Term Learning

The next three questions that appeared in the questionnaire elicited information that represented overall changes perceived by respondents in their long term learning. related to their experiences in the program. Mean, standard deviation, and significance group differences for each demographic category (year, gender, age, education, employment and province) are listed in tables 4.21 to 4.38, respectively, at the end of each question.

Question Thirty Four

Question 34 asked: What areas of the MAL program did you find contributed most to your long-term learning? Please rank order your top three (3) responses.

In descending order of endorsement the choices are:

1. Problem-Based Learning in Residency 1 -54.8%
2. Major Project - 54.2%
3. Dialogue with Peers - 35.7%
4. Presentations by Faculty, Learners, and Guest Speakers in Residency 1,11 - 34.5%
5. Distance Learning Courses - 32.7%
6. Ongoing Self-Assessment – 21.4%
7. Faculty Response to your work – 18.5%
8. Observing Peers in Action – 17.9%
9. Computer Learning Opportunities – 9.5%
10. Learning Agreement – 6.5%

Prior to examining sub group differences in the importance ratings in question 9. the ranking data were reverse coded so that a higher score represented a greater rating of importance. In addition a value of zero was assigned for responses not ranked.

There were significant differences in the response to item 4 (Presentation by Faculty, Learner's and Guest Speakers in Residency 1,11) between women and men. $t(159) = -2.30$, $p < .05$. Women (M=.63) were less influenced by Presentations than men (M=1.09).

For item two (Major Project), the effect of program year was significant ($F(3, 162) = 19.99$, $p < .001$). Scheffe Post-hoc tests indicated that students beginning their program in 1999 (M=.20) reported that the Major Project made a less important contribution to their long-term learning than those who began their program between 1996 – 1998 (M=1.30, 1.84, 1.39, respectively).

It must be noted here that those beginning the program in 1999 had not yet attended the second summer residency where they began work on their major project. So these significant differences represent the fact that participants of the 1999 cohort had not yet even begun the significant learning often associated with a major project.

Qualitative responses associated with question thirty four

The use of problem-based learning was a powerful experience.

Problem-based learning with the experiential learning aspect of pre-designed groups were very valuable. The learning agreement/journal is a very valuable tool, but the importance of it, examples of how to use it, and initial follow up to encourages the use or new patterns of behaviour is needed.

Re: #34 – it was very difficult to rank the top 3 choices, as many aspects were very important to my learning – they impact each other – self-assessment & faculty feedback were essential in the mix. PBL – Fantastic Approach Loved It!!

Being an INFJ and a very strong visual learner I benefited most by the presentations and distance learning opportunities. Philosophically the PBL model did not fit well with my own views & values about learning. I found the whole underpinning of PBL too medically oriented. ie: focusing intensely on the "problem" and diagnosis, which has negative connotations for me.

Table 4.21

Means and Standard Deviations for Long-term Learning by Year of Beginning Program

			Year				
			1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Group differences
Q34							
	Ongoing self-assessment	M	0.22	0.37	0.49	0.63	n.s.
		SD	0.67	0.85	1.03	1.11	
	Learning agreement	M	0.13	0.14	0.06	0.12	n.s.
		SD	0.46	0.56	0.31	0.44	
	Presentations	M	1.00	0.91	0.67	0.67	n.s.
		SD	1.31	1.19	1.13	1.11	
	Major project	M	1.30	1.84	1.39	0.20	1996 > 1999
		SD	1.22	1.23	1.20	0.54	1997 > 1999
							1998 > 1999
	Computer learning opportunities	M	0.17	0.14	0.06	0.18	n.s.
		SD	0.58	0.41	0.24	0.57	
	Problem-based learning	M	1.30	0.98	1.27	1.45	n.s.
		SD	1.18	1.22	1.31	1.42	
	Faculty responses to your work	M	0.17	0.42	0.35	0.22	n.s.
		SD	0.49	0.82	0.77	0.69	
	Dialogue with peers	M	1.04	0.65	0.57	0.69	n.s.
		SD	1.22	0.95	0.98	1.00	
	Distance learning courses	M	0.30	0.35	0.61	0.82	n.s.
		SD	0.63	0.72	0.92	1.05	
	Observing peers in action	M	0.22	0.26	0.20	0.37	n.s.
		SD	0.67	0.73	0.49	0.67	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Table 4.22

Means and Standard Deviations for Long-term Learning by Gender

			Gender		
			Female (n = 106)	Male (n = 55)	Group differences
Q34					
	Ongoing self-assessment	M	0.44	0.45	n.s.
		SD	0.92	1.03	
	Learning agreement	M	0.13	0.07	n.s.
		SD	0.50	0.33	
	Presentations	M	0.63	1.09	F < M
		SD	1.10	1.25	
	Major project	M	1.20	1.00	n.s.
		SD	1.26	1.15	
	Computer learning opportunities	M	0.14	0.09	n.s.
		SD	0.47	0.35	
	Problem-based learning	M	1.25	1.35	n.s.
		SD	1.33	1.25	
	Faculty responses to your work	M	0.29	0.29	n.s.
		SD	0.68	0.76	
	Dialogue with peers	M	0.62	0.85	n.s.
		SD	0.97	1.11	
	Distance learning courses	M	0.62	0.44	n.s.
		SD	0.93	0.86	
	Observing peers in action	M	0.23	0.33	n.s.
		SD	0.62	0.67	

Table 4.23

Means and Standard Deviations for Long-term Learning by Age at Beginning Program

			Age			
			18 - 39 (n = 46)	40 - 50 (n = 102)	51 or older (n = 20)	Group Differences
Q34						
	Ongoing self-assessment	M	0.26	0.55	0.45	n.s.
		SD	0.71	1.07	0.89	
	Learning agreement	M	0.13	0.09	0.15	n.s.
		SD	0.40	0.45	0.49	
	Presentations	M	0.74	0.86	0.50	n.s.
		SD	1.14	1.20	1.05	
	Major project	M	1.00	1.16	1.55	n.s.
		SD	1.21	1.22	1.36	
	Computer learning opportunities	M	0.11	0.13	0.20	n.s.
		SD	0.38	0.46	0.52	
	Problem-based learning	M	1.48	1.22	0.95	n.s.
		SD	1.35	1.29	1.23	
	Faculty responses to your work	M	0.26	0.31	0.35	n.s.
		SD	0.65	0.76	0.75	
	Dialogue with peers	M	0.91	0.60	0.60	n.s.
		SD	1.19	0.93	0.99	
	Distance learning courses	M	0.35	0.65	0.60	n.s.
		SD	0.67	0.94	1.05	
	Observing peers in action	M	0.24	0.27	0.25	n.s.
		SD	0.64	0.63	0.64	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Table 4.24

Means and Standard Deviations for Long-term Learning by Education

			Education		
			Less than 4 years (n = 65)	4 year degree or more (n = 102)	Group differences
Q34					
	Ongoing self-assessment	M	0.38	0.49	n.s.
		SD	0.90	1.00	
	Learning agreement	M	0.08	0.13	n.s.
		SD	0.32	0.50	
	Presentations	M	0.74	0.81	n.s.
		SD	1.16	1.18	
	Major project	M	0.98	1.25	n.s.
		SD	1.23	1.22	
	Computer learning opportunities	M	0.12	0.14	n.s.
		SD	0.41	0.47	
	Problem-based learning	M	1.45	1.15	n.s.
		SD	1.29	1.30	
	Faculty responses to your work	M	0.38	0.25	n.s.
		SD	0.88	0.61	
	Dialogue with peers	M	0.66	0.71	n.s.
		SD	1.00	1.03	
	Distance learning courses	M	0.65	0.51	n.s.
		SD	0.94	0.86	
	Observing peers in action	M	0.22	0.29	n.s.
		SD	0.52	0.70	

Table 4.25

Means and Standard Deviations for Long-term Learning by Employment

			Employment				
			Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	Group differences
Q34							
	Ongoing self-assessment	M	0.52	0.42	0.34	0.56	n.s.
		SD	0.93	0.91	0.94	1.07	
	Learning agreement	M	0.00	0.12	0.08	0.16	n.s.
		SD	0.00	0.52	0.36	0.49	
	Presentations	M	0.86	0.72	0.89	0.77	n.s.
		SD	1.24	1.18	1.13	1.20	
	Major project	M	1.52	1.16	1.16	1.07	n.s.
		SD	1.44	1.22	1.17	1.22	
	Computer learning opportunities	M	0.14	0.12	0.08	0.18	n.s.
		SD	0.48	0.44	0.36	0.50	
	Problem-based learning	M	1.33	1.32	1.45	1.09	n.s.
		SD	1.11	1.32	1.37	1.31	
	Faculty responses to your work	M	0.10	0.30	0.47	0.26	n.s.
		SD	0.44	0.65	0.95	0.70	
	Dialogue with peers	M	0.67	0.78	0.50	0.72	n.s.
		SD	1.11	1.02	0.89	1.06	
	Distance learning courses	M	0.52	0.36	0.47	0.75	n.s.
		SD	0.93	0.80	0.76	0.97	
	Observing peers in action	M	0.33	0.20	0.34	0.16	n.s.
		SD	0.66	0.49	0.78	0.45	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Table 4.26

Means and Standard Deviations for Long-term Learning by Province

			Province				
			BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Group differences
Q34							
	Ongoing self-assessment	M	0.48	0.60	0.38	0.00	n.s.
		SD	0.98	1.12	0.96	0.00	
	Learning agreement	M	0.11	0.13	0.15	0.00	n.s.
		SD	0.45	0.35	0.55	0.00	
	Presentations	M	0.83	0.53	0.62	0.86	n.s.
		SD	1.21	0.99	1.04	1.21	
	Major project	M	1.17	0.67	1.15	2.14	n.s.
		SD	1.22	1.11	1.34	1.21	
	Computer learning opportunities	M	0.14	0.20	0.08	0.00	n.s.
		SD	0.47	0.41	0.28	0.00	
	Problem-based learning	M	1.19	1.53	1.77	1.14	n.s.
		SD	1.30	1.36	1.24	1.21	
	Faculty responses to your work	M	0.27	0.47	0.23	0.86	n.s.
		SD	0.64	0.99	0.83	1.21	
	Dialogue with peers	M	0.60	1.07	1.00	0.71	n.s.
		SD	0.97	1.28	1.08	0.95	
	Distance learning courses	M	0.61	0.47	0.38	0.14	n.s.
		SD	0.93	0.92	0.65	0.38	
	Observing peers in action	M	0.27	0.20	0.08	0.14	n.s.
		SD	0.64	0.41	0.28	0.38	

Note. Pairwise group differences were evaluated using the Scheffe post-hoc test.

Question Thirty Five

Question 35 asked: What long-term changes within yourself have you observed are directly related to the self-assessment portion of your MAL program? Please circle all the responses that apply to you.

In descending order of endorsement the choices are:

1. Self-knowledge - 82.7%
2. Values related to leadership - 71.4%
3. Work relationships - 64.3%
4. Patterns of work behaviour - 59.5%
5. Patterns of personal behaviour - 57.7%
6. Personal relationships - 50.6%
7. Attitudes towards your work - 44.0%

There were no significant differences within any demographic categories.

Qualitative comments associated with question thirty five

Leadership competencies can be easy enough to describe, and quite another thing to apply. PBL creates an environment where demonstration of skills is essential. The opportunities to learn from others & to apply the competencies personally is a rich and rewarding experience. The learning I experienced was depthful, passionate & memorable. I refer in particular to the final & most complex PBL frequency (it was also in the same filed was where I work).

It has definitely been worth all the personal & professional sacrifice over the past 2 years –

One of the best experiences that I took away and apply DAILY in my work & personal life is the ability to see different preferences & approaches to problems, in conversation etc. My "preference" for "process" was validated through the problem-based learning experiences; previously I had been criticized for it. I know am able to maximize my contribution to my organization without feeling guilty for not being "all things to all people".

Table 4.27

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Year

Q35		Year 1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Total	Group frequency differences
Patterns of personal behaviour	Y	11 (47.8)	28 (61.5)	30 (58.8)	28 (57.1)	97 (58.4)	n.s.
	N	12 (52.2)	15 (34.9)	21 (41.2)	21 (42.9)	69 (41.6)	
Patterns of work behaviour	Y	15 (65.2)	29 (67.4)	29 (56.9)	27 (55.1)	100 (60.2)	n.s.
	N	8 (34.8)	14 (32.6)	22 (43.1)	22 (44.9)	66 (39.8)	
Values related to leadership	Y	17 (73.9)	33 (76.7)	36 (70.6)	33 (67.3)	119 (71.7)	n.s.
	N	6 (26.1)	10 (23.3)	15 (29.4)	16 (32.7)	47 (28.3)	
Self-knowledge	Y	20 (87.0)	34 (79.1)	42 (82.4)	41 (83.7)	137 (82.5)	n.s.
	N	3 (13.0)	9 (20.9)	9 (17.6)	8 (16.3)	29 (17.5)	
Personal relationships	Y	11 (47.8)	23 (53.5)	26 (51.0)	24 (49.0)	84 (50.6)	n.s.
	N	12 (52.2)	20 (46.5)	25 (49.0)	25 (51.0)	82 (49.4)	
Work relationships	Y	18 (78.3)	30 (69.8)	31 (60.8)	29 (59.2)	108 (65.1)	n.s.
	N	5 (21.7)	13 (30.2)	20 (39.2)	20 (40.8)	58 (34.9)	
Attitudes toward your work	Y	11 (47.8)	21 (48.8)	18 (35.3)	23 (46.9)	73 (44.0)	n.s.
	N	12 (52.2)	22 (51.2)	33 (64.7)	26 (53.1)	93 (56.0)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Table 4.28

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Gender

Q35		Gender: Female (n = 106)	Gender: Male (n = 55)	Total	Group frequency differences
Patterns of personal behaviour	Y	57 (53.8)	35 (63.6)	92 (57.1)	n.s.
	N	49 (46.2)	20 (36.4)	69 (42.9%)	
Patterns of work behaviour	Y	61 (57.5)	36 (65.5)	97 (60.2)	n.s.
	N	45 (42.5)	19 (34.5)	64 (39.8)	
Values related to leadership	Y	73 (68.9)	43 (78.2)	116 (72.0)	n.s.
	N	33 (31.1)	12 (21.8)	45 (28.0)	
Self-knowledge	Y	90 (84.9)	43 (78.2)	133 (82.6)	n.s.
	N	16 (15.1)	12 (21.8)	28 (17.4)	
Personal relationships	Y	49 (46.2)	32 (58.2)	81 (50.3)	n.s.
	N	57 (53.8)	23 (41.8)	80 (49.7)	
Work relationships	Y	67 (63.2)	38 (69.1)	105 (65.2)	n.s.
	N	39 (36.8)	17 (30.9)	56 (34.8)	
Attitudes toward your work	Y	46 (43.4)	25 (45.5)	71 (44.1)	n.s.
	N	60 (56.6)	30 (54.5)	90 (55.9)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 1 degree of freedom.

Table 4.29

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Age

Q35		Age 18 - 39 (n = 46)	Age 40 - 50 (n = 102)	Age 51 or older (n = 20)	Total	Group frequency differences
Patterns of personal behaviour	Y	29 (63.0)	59 (57.8)	9 (45.0)	97 (57.7)	n.s.
	N	17 (37.0)	43 (42.2)	11 (55.0)	71 (42.3)	
Patterns of work behaviour	Y	31 (67.4)	58 (56.9)	11 (55.0)	100 (59.5)	n.s.
	N	15 (32.6)	44 (43.1)	9 (45.0)	68 (40.5)	
Values related to leadership	Y	33 (71.7)	73 (71.6)	14 (70.0)	120 (71.4)	n.s.
	N	13 (28.3)	29 (28.4)	6 (30.0)	48 (28.6)	
Self-knowledge	Y	37 (80.4)	84 (82.4)	18 (90.0)	139 (82.7)	n.s.
	N	9 (19.6)	18 (17.6)	2 (10.0)	29 (17.3)	
Personal relationships	Y	27 (58.7)	51 (50.0)	7 (35.0)	85 (50.6)	n.s.
	N	19 (41.3)	51 (50.0)	13 (65.0)	83 (49.4)	
Work relationships	Y	30 (65.2)	68 (66.7)	10 (50.0)	108 (64.3)	n.s.
	N	16 (34.8)	34 (33.3)	10 (50.0)	60 (35.7)	
Attitudes toward your work	Y	21 (45.7)	42 (41.2)	11 (55.0)	74 (44.0)	n.s.
	N	25 (54.3)	60 (58.8)	9 (45.0)	94 (56.0)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 2 degrees of freedom.

Table 4.30

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Education

Q35		Education: Less than 4 years (n = 65)	Education: 4 year degree or more (n = 102)	Total	Group frequency differences
Patterns of personal behaviour	Y	37 (56.9)	59 (57.8)	96 (57.5)	n.s.
	N	28 (43.1)	43 (42.2)	71 (42.5)	
Patterns of work behaviour	Y	38 (58.5)	61 (59.8)	99 (59.3)	n.s.
	N	27 (41.5)	41 (40.2)	68 (40.7)	
Values related to leadership	Y	43 (66.2)	76 (74.5)	119 (71.3)	n.s.
	N	22 (33.8)	26 (25.5)	48 (28.7)	
Self-knowledge	Y	52 (80.0)	86 (84.3)	138 (82.6)	n.s.
	N	13 (20.0)	16 (15.7)	29 (17.4)	
Personal relationships	Y	33 (50.8)	51 (50.0)	84 (50.3)	n.s.
	N	32 (49.2)	51 (50.0)	83 (49.7)	
Work relationships	Y	40 (61.5)	67 (65.7)	107 (64.1)	n.s.
	N	25 (38.5)	35 (34.3)	60 (35.9)	
Attitudes toward your work	Y	28 (43.1)	45 (44.1)	73 (43.7)	n.s.
	N	37 (56.9)	57 (55.9)	94 (56.3)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 1 degree of freedom.

Table 4.31

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Employment

Q35		Employment: Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	Total	Group frequency differences
Patterns of personal behaviour	Y	12 (57.1)	31 (62.0)	24 (63.2)	29 (50.9)	96 (57.8)	n.s.
	N	9 (42.9)	19 (38.0)	14 (36.8)	28 (49.1)	70 (42.2)	
Patterns of work behaviour	Y	9 (42.9)	34 (68.0)	23 (60.5)	33 (57.9)	99 (59.6)	n.s.
	N	12 (57.1)	16 (32.0)	15 (39.5)	24 (42.1)	67 (40.4)	
Values related to leadership	Y	13 (61.9)	35 (70.0)	27 (71.1)	44 (77.2)	119 (71.7)	n.s.
	N	8 (38.1)	15 (30.0)	11 (28.9)	13 (22.8)	47 (28.3)	
Self-knowledge	Y	17 (81.0)	42 (84.0)	31 (81.6)	48 (84.2)	138 (83.1)	n.s.
	N	4 (19.0)	8 (16.0)	7 (18.4)	9 (15.8)	28 (16.9)	
Personal relationships	Y	10 (47.6)	25 (50.0)	22 (57.9)	28 (49.1)	85 (51.2)	n.s.
	N	11 (52.4)	25 (50.0)	16 (42.1)	29 (50.9)	81 (48.8)	
Work relationships	Y	9 (42.9)	30 (60.0)	27 (71.1)	41 (71.9)	107 (64.5)	n.s.
	N	12 (57.1)	20 (40.0)	11 (28.9)	16 (28.1)	59 (35.5)	
Attitudes toward your work	Y	9 (42.9)	25 (50.0)	19 (50.0)	20 (35.1)	73 (44.0)	n.s.
	N	12 (57.1)	25 (50.0)	19 (50.0)	37 (64.9)	93 (56.0)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Table 4.32

Frequency and Percentage of Long-term Changes Related to Self-Assessment by Province

Q35		Province: BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Total	Group frequency differences
Patterns of personal behaviour	Y	75 (56.8)	10 (66.7)	8 (61.5)	4 (57.1)	97 (58.1)	n.s.
	N	57 (43.2)	5 (33.3)	5 (38.5)	3 (42.9)	70 (41.9)	
Patterns of work behaviour	Y	76 (57.6)	12 (80.0)	7 (53.8)	5 (71.4)	100 (59.9)	n.s.
	N	56 (42.4)	3 (20.0)	6 (46.2)	2 (28.6)	67 (40.1)	
Values related to leadership	Y	95 (72.0)	12 (80.0)	9 (69.2)	4 (57.1)	120 (71.9)	n.s.
	N	37 (28.0)	3 (20.0)	4 (30.8)	3 (42.9)	47 (28.1)	
Self-knowledge	Y	110 (83.3)	12 (80.0)	11 (84.6)	6 (85.7)	139 (83.2)	n.s.
	N	22 (16.7)	3 (20.0)	2 (15.4)	1 (14.3)	28 (16.8)	
Personal relationships	Y	61 (46.2)	11 (73.3)	9 (69.2)	4 (57.1)	85 (50.9)	n.s.
	N	71 (53.8)	4 (26.7)	4 (30.8)	3 (42.9)	82 (49.1)	
Work relationships	Y	84 (63.6)	12 (80.0)	7 (53.8)	5 (71.4)	108 (64.7)	n.s.
	N	48 (36.4)	3 (20.0)	6 (46.2)	2 (28.6)	59 (35.3)	
Attitudes toward your work	Y	54 (40.9)	10 (66.7)	7 (53.8)	3 (42.9)	74 (44.3)	n.s.
	N	78 (59.1)	5 (33.3)	6 (46.2)	4 (57.1)	93 (55.7)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Question Thirty Six

Question 36 asked: What long-term changes within yourself have you observed that directly related to the problem-based learning portion of your MAL program? Please circle all the responses that apply to you.

In descending order of endorsement the choices are:

1. Self-knowledge - 64.3%
2. Work relationships - 63.7%
3. Patterns of work behaviour - 60.1%
4. Values related to leadership - 53.6%
5. Patterns of personal behaviour - 39.9%
6. Personal relationships - 33.3%
7. Attitudes towards your work - 31.5%

Rates of endorsement varied by year of beginning the program for both work relationships, $\chi^2(3) = 9.17$, $p < .05$, and attitudes toward work, $\chi^2(3) = 8.45$, $p < .05$. Adjusted standardized residuals were examined to identify the years in which endorsement rates differed. For work relationships, fewer students from 1998 than expected endorsed this item (47.1%). For attitudes to work, more students from 1999 than expected endorsed this item (44.9%).

Rates of endorsement varied by level of education for increased self-knowledge, $\chi^2(1) = 4.42$, $p < .05$. Examination of adjusted standardized residuals indicated that a greater number of students with less than a four-year degree endorsed this item (73.8%) than students with a four-year degree or greater (57.8%).

Rates of endorsement for work relationships also varied by age, $\chi^2(2) = 6.67$, $p < .05$. Examination of adjusted standardized residuals indicated that a greater number of older students (51 years and above) endorsed this item (85.0%) than students who were in the middle (40-50 years) age grouping (56.9%).

Qualitative responses associated with question thirty six

The MAL program was an exceptional program, which required that I stretch my mind, opinions & work behaviours. As a health care professional for> 30 years I had become "funnel visioned". The interaction with adult professionals from several different venues (i.e. education, business, non-profit, self-employment) & with a wide age span taught me new processes & new thought directives & new methods of "seeing" the world.

I find I approach organizational issues with a more "global" mindset, asking "new" types of questions to help understand complex or nebulous situations; e.g. looking at systems theory; force field analysis; asking more probing questions to get to the root cause of a situation.

I believe that the self-assessment & problem-based learning approaches were effective for me to the extent that they supported my preferred way of learning. As a visual learner who gains tremendously from interactions with fellow learners & faculty, much of my learning came from the participation with others for receiving insights, feedback, & challenges to divergent points of view.

Summary of Questions Relating to Long-Term Learning

Problem-based learning, the major project and peers are the three top items that contributed most to the MAL participant's long-term learning. The item that ranked

fourth on this list was presentations by faculty, learners, and guest speakers and this item provided the only gender difference in the questionnaire. Women were less influenced by the presentations than men were. There was also a difference between years and the value the major project presented. All years who had at least begun the major project or completed it found that it was a substantial contributor to their long-term learning. The cohort beginning their program in 1999 had not yet begun their major project and as such did not state its significance. Overall this question provided the information that problem-based learning and the major project were powerful experiences.

The long-term changes through participating in self-assessment occurred in the areas of self-knowledge, values related to leadership and work relationships according to question 35. People expressed that they were able to see "different perspective" and that their work lives were enhanced.

The long-term changes indicated by experiencing problem-based learning were self-knowledge, work relationships and patterns of work behaviour. Those who had less than a four-year degree endorsed self-knowledge to a greater extent than those who had a four-year degree or more. The demographics of age and year also presented statistical differences in terms of work relationships and attitudes towards work. Older students (51+) endorsed increased long-term learning in their work relationships than those students in the middle age group (40 – 50). Those people beginning the MAL program in 1998 did not endorse work relationships as having changed due to problem-based learning. Those beginning their program in 1999 endorsed their change in their attitude towards work through problem-based learning. Overall, " this program has been a wonderful learning experience".

Table 4.33

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Year

Q36		Year 1996 (n = 23)	1997 (n = 43)	1998 (n = 51)	1999 (n = 49)	Total	Group frequency differences
Patterns of personal behaviour	Y	8 (34.8)	17 (39.5)	24 (47.1)	17 (34.7)	66 (39.8)	n.s.
	N	15 (65.2)	26 (60.5)	27 (52.9)	32 (65.3)	100 (60.2)	
Patterns of work behaviour	Y	16 (69.6)	27 (62.8)	31 (60.8)	26 (53.1)	100 (60.2)	n.s.
	N	7 (30.4)	16 (37.2)	20 (39.2)	23 (46.9)	66 (39.8)	
Values related to leadership	Y	12 (52.2)	22 (51.2)	27 (52.9)	28 (57.1)	89 (53.6)	n.s.
	N	11 (47.8)	21 (48.8)	24 (47.1)	21 (42.9)	77 (46.4)	
Self-knowledge	Y	17 (73.9)	26 (60.5)	33 (64.7)	30 (61.2)	106 (63.9)	n.s.
	N	6 (26.1)	17 (39.5)	18 (35.3)	19 (38.8)	60 (36.1)	
Personal relationships	Y	7 (30.4)	13 (30.2)	20 (39.2)	15 (30.6)	55 (33.1)	n.s.
	N	16 (69.6)	30 (69.8)	31 (60.8)	34 (69.4)	111 (66.9)	
Work relationships	Y	16 (69.6)	30 (69.8)	24 (47.1)	36 (73.5)	106 (63.9)	1998
	N	7 (30.4)	13 (30.2)	27 (52.9)	13 (26.5)	60 (36.1)	
Attitudes toward your work	Y	9 (39.1)	9 (20.9)	12 (23.5)	22 (44.9)	52 (31.3)	1999
	N	14 (60.9)	34 (79.1)	39 (76.5)	27 (55.1)	114 (68.7)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Table 4.34

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Gender

Q36		Gender: Female (n = 106)	Gender: Male (n = 55)	Total	Group frequency differences
Patterns of personal behaviour	Y	42 (39.6)	22 (40.0)	64 (39.8)	n.s.
	N	64 (60.4)	33 (60.0)	97 (60.2)	
Patterns of work behaviour	Y	67 (63.2)	31 (56.4)	98 (60.9)	n.s.
	N	39 (36.8)	24 (43.6)	63 (39.1)	
Values related to leadership	Y	55 (51.9)	32 (58.2)	87 (54.0)	n.s.
	N	51 (48.1)	23 (41.8)	74 (46.0)	
Self-knowledge	Y	71 (67.0)	32 (58.2)	103 (64.0)	n.s.
	N	35 (33.0)	23 (41.8)	58 (36.0)	
Personal relationships	Y	36 (34.0)	19 (34.5)	55 (34.2)	n.s.
	N	70 (66.0)	36 (65.5)	106 (65.8)	
Work relationships	Y	66 (62.3)	38 (69.1)	104 (64.6)	n.s.
	N	40 (37.7)	17 (30.9)	57 (35.4)	
Attitudes toward your work	Y	36 (34.0)	17 (30.9)	53 (32.9)	n.s.
	N	70 (66.0)	38 (69.1)	108 (67.1)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 1 degree of freedom.

Table 4.35

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Age

Q36		Age 18 - 39 (n = 46)	Age 40 - 50 (n = 102)	Age 51 or older (n = 20)	Total	Group frequency differences
Patterns of personal behaviour	Y	21 (45.7)	42 (41.2)	4 (20.0)	67 (39.9)	n.s.
	N	25 (54.3)	60 (58.8)	16 (80.0)	101 (60.1)	
Patterns of work behaviour	Y	30 (65.2)	59 (57.8)	12 (60.0)	101 (60.1)	n.s.
	N	16 (34.8)	43 (42.2)	8 (40.0)	67 (39.9)	
Values related to leadership	Y	28 (60.9)	53 (52.0)	9 (45.0)	90 (53.6)	n.s.
	N	18 (39.1)	49 (48.0)	11 (55.0)	78 (46.4)	
Self-knowledge	Y	28 (60.9)	67 (65.7)	13 (65.0)	108 (64.3)	n.s.
	N	18 (39.1)	35 (34.3)	7 (35.0)	60 (35.7)	
Personal relationships	Y	19 (41.3)	31 (30.4)	6 (30.0)	56 (33.3)	n.s.
	N	27 (58.7)	71 (69.6)	14 (70.0)	112 (66.7)	
Work relationships	Y	32 (69.6)	58 (56.9)	17 (85.0)	107 (63.7)	>51+
	N	14 (30.4)	44 (43.1)	3 (15.0)	61 (36.3)	
Attitudes toward your work	Y	18 (39.1)	26 (25.5)	9 (45.0)	53 (31.5)	n.s.
	N	28 (60.9)	76 (74.5)	11 (55.0)	115 (68.5)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 2 degrees of freedom.

Table 4.36

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Education

Q36		Education: Less than 4 years (n = 65)	Education: 4 year degree or more (n = 102)	Total	Group frequency differences
Patterns of personal behaviour	Y	27 (41.5)	40 (39.2)	67 (40.1)	n.s.
	N	38 (58.5)	62 (60.8)	100 (59.9)	
Patterns of work behaviour	Y	41 (63.1)	59 (57.8)	100 (59.9)	n.s.
	N	24 (36.9)	43 (42.2)	67 (40.1)	
Values related to leadership	Y	38 (58.5)	52 (51.0)	90 (53.9)	n.s.
	N	27 (41.5)	50 (49.0)	77 (46.1)	
Self-knowledge	Y	48 (73.8)	59 (57.8)	107 (64.1)	><4 yrs
	N	17 (26.2)	43 (42.2)	60 (35.9)	
Personal relationships	Y	22 (33.8)	34 (33.3)	56 (33.5)	n.s.
	N	43 (66.2)	68 (66.7)	111 (66.5)	
Work relationships	Y	38 (58.5)	68 (66.7)	106 (63.5)	n.s.
	N	27 (41.5)	34 (33.3)	61 (36.5)	
Attitudes toward your work	Y	23 (35.4)	30 (29.4)	53 (31.7)	n.s.
	N	42 (64.6)	72 (70.6)	114 (68.3)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 1 degree of freedom.

Table 4.37

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Employment

Q36		Employment: Business (n = 21)	Education (n = 50)	Government (n = 38)	Social Services (n = 57)	Total	Group frequency differences
Patterns of personal behaviour	Y	7 (33.3)	19 (38.0)	20 (52.6)	21 (36.8)	67 (40.4)	n.s.
	N	14 (66.7)	31 (62.0)	18 (47.4)	36 (63.2)	99 (59.7)	
Patterns of work behaviour	Y	12 (57.1)	31 (62.0)	20 (52.6)	38 (66.7)	101 (60.8)	n.s.
	N	9 (42.9)	19 (38.0)	18 (47.4)	19 (33.3)	65 (39.2)	
Values related to leadership	Y	11 (52.4)	29 (58.0)	18 (47.4)	31 (54.4)	89 (53.6)	n.s.
	N	10 (47.6)	21 (42.0)	20 (52.6)	26 (45.6)	77 (46.4)	
Self-knowledge	Y	13 (61.9)	33 (66.0)	28 (73.7)	34 (59.6)	108 (65.1)	n.s.
	N	8 (38.1)	17 (34.0)	10 (26.3)	23 (40.4)	58 (34.9)	
Personal relationships	Y	7 (33.3)	18 (36.0)	12 (31.6)	19 (33.3)	56 (33.7)	n.s.
	N	14 (66.7)	32 (64.0)	26 (68.4)	38 (66.7)	110 (66.3)	
Work relationships	Y	12 (57.1)	30 (60.0)	25 (65.8)	39 (68.4)	106 (63.9)	n.s.
	N	9 (42.9)	20 (40.0)	13 (34.2)	18 (31.6)	60 (36.1)	
Attitudes toward your work	Y	6 (28.6)	12 (24.0)	11 (28.9)	23 (40.4)	52 (31.3)	n.s.
	N	15 (71.4)	38 (76.0)	27 (71.1)	34 (59.6)	114 (68.7)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Table 4.38

Frequency and Percentage of Long-term Changes Related to Problem-Based Learning by Province

Q36		Province: BC (n = 132)	AB+SK+MB (n = 15)	ON+PQ (n = 13)	Rest (n = 7)	Total	Group frequency differences
Patterns of personal behaviour	Y	52 (39.4)	5 (33.3)	7 (53.8)	3 (42.9)	67 (40.1)	n.s.
	N	80 (60.6)	10 (66.7)	6 (46.2)	4 (57.1)	100 (59.9)	
Patterns of work behaviour	Y	80 (60.6)	10 (66.7)	6 (46.2)	5 (71.4)	101 (60.5)	n.s.
	N	52 (39.4)	5 (33.3)	7 (53.8)	2 (28.6)	66 (39.5)	
Values related to leadership	Y	70 (53.0)	10 (66.7)	8 (61.5)	2 (28.6)	90 (53.9)	n.s.
	N	62 (47.0)	5 (33.3)	5 (38.5)	5 (71.4)	77 (46.1)	
Self-knowledge	Y	80 (60.6)	12 (80.0)	10 (76.9)	6 (85.7)	108 (64.7)	n.s.
	N	52 (39.4)	3 (20.0)	3 (23.1)	1 (14.3)	59 (35.3)	
Personal relationships	Y	41 (31.1)	5 (33.3)	7 (53.8)	3 (42.9)	56 (33.5)	n.s.
	N	91 (68.9)	10 (66.7)	6 (46.2)	4 (57.1)	111 (66.5)	
Work relationships	Y	82 (62.1)	12 (80.0)	7 (53.8)	6 (85.7)	107 (64.1)	n.s.
	N	50 (37.9)	3 (20.0)	6 (46.2)	1 (14.3)	60 (35.9)	
Attitudes toward your work	Y	37 (28.0)	8 (53.3)	6 (46.2)	2 (28.6)	53 (31.7)	n.s.
	N	95 (72.0)	7 (46.7)	7 (53.8)	5 (71.4)	114 (68.3)	

Note. Values in parentheses represent the percentage of respondents endorsing the response within each group. Group differences were evaluated using the chi-square test with 3 degrees of freedom.

Question Thirty Seven

Question 37 asked for any additional comments. Many respondents wrote about their self-learning, and twenty-nine (29) people had positive comments to make overall in their personal learning. People again spoke of the methods used to facilitate learning they experienced during the program, eight people spoke positively of the model and eight people spoke negatively. People also made use of this section to make general comments regarding the program, seventeen (17) people made positive comments.

Qualitative responses associated with question thirty seven

For the qualitative section of question 37 I have divided the comments into two categories: self-knowledge, and the methods used to facilitate learning.

Self knowledge

The MAL program made a real difference in my understanding of how to solve problems and understanding more about organizational development. I finally was able to understand that "approval" isn't necessary to be effective in leadership. I am no longer subordinate and am more demanding of effective leadership from others.

The MAL program for me has not been like any other academic exposure (Engineering & Economics). Most other experiences were isolated from actual life experiences. the issues lessons and learning in the MAL program invade how one enjoys life. Aside from the may hours one applies to the conducting of the courses (reading, writing, discussions, assignments, reports), The MAL program fives one a new set of lenses to view life and therefore interact with life. The MAL program exposure gets embodied in one and facilitates positive change either in an evolutionary or radical or

both fashion. I would like to think other courses could effect one in a similar fashion. Perhaps aspects of an MBA could.

One of the best experiences that I took away and apply daily in my work & personal life is the ability to see different preferences & approaches to problems, in conversations etc.

Problem-based learning was not a marvelous experience; it was okay & did provide valuable learning opportunities for me. At times, working with a group did become tedious. Mainly, because I prefer to work on my own. I can be a team player when necessary, but there were times when the group meetings seemed to be these long boring bureaucratic events where we went around in circles. People trying to make points or talking just to talk. Overall an excellent way to learn about group process & interpersonal skills.

Facilitating Learning

These comments refer to the specific techniques of problem-based learning and self-assessment techniques.

Through I valued the faculty & peer feedback throughout the program. I did not find it particularly useful to put it into my Learning Agreement. I rarely referred to this agreement after the first residency. It was not a useful tool other than serving as a place to store information.

At the half-way point of the MAL program I would have to say that all the components of the MAL program fit together like an intricate tapestry which allows for competency development and assessment.

Problem-based learning must have mature learners (eg graduate Level) to be most effective. It also needs careful planning. There must be discussion on the process on how to handle process issues within a group (eg. Conflict, interpersonal skills) before commencing with PBL.

The PBL process was useful but seemed confusing to learners & faculty alike. Assessment is valuable & essential.

Like most college/university programs that I've experienced, the power and potential for learning was directly liked to the leadership, expertise and passion of faculty members. For me, at times, this was a weak link.

Discussion of Findings

The questionnaire was answered by 48%. Each question had a wide range of responses this shows that people were not just in agreement or unhappy with the program they were both and showed that in their responses

There are two demographic areas that did not present significant outcomes – employment and province. People came from different employment sectors and provinces but that did not seem to have any bearing on how they experienced the MAL program. This may indicate that the long-term learning from the program is transferable by the participants to their places of employment. So that those teaching or working in a hospital could relate their learning directly to their diverse work situations. People who live in different regions in Canada also find that the program speaks to them and so there are no differences in terms of geographic location.

Analysis by gender yielded only one significant outcome. Women and men differed on how they related to the presentations given during the summer residencies.

Women were less impressed by the presentations than men. This maybe an indication of preferred learning methods. What is interesting is that there are not more gender differences. Men and women found that problem-based learning and self-assessment techniques were of value.

Analysis by age range also yielded only one significant difference. Those who were 51 years old or older reported greater long-term learning through their work relationships than those who were 40 to 50 years in age or younger. People beginning this Master's program at whatever age found it valuable.

In terms of education, those with less than a four-year post secondary degree placed less importance on learning how to manage group process, and they reported greater degree of increased self-knowledge than those with a four-year degree or more. Overall, people entering the program with their individual level of education found the experience impacting their long-term learning.

Year of program cohort was the only demographic category that produced several statistically significant outcomes. Participants who began the MAL program in 1996 reported greater use of competencies at work than those who began in 1998. The 1996 cohort of participants reported greater continued self-assessment than the 1997 group. Those in 1998 reported marginally less satisfaction with their research competencies than those in 1999. Those in 1998 considered the learning agreement to be of less importance than those in years 1996, and 1999. Those in 1998 did not give a high endorsement to long term changes directly related to problem-based learning in their work relationships. Those in 1999 found the faculty comments more useful to their long term learning than those in either 1996 or 1998. Those in 1999 did not find the major project something that

added to their long term learning in comparison with the other three years. Those in 1999 did not give a high endorsement to long term changes directly related to problem-based learning in their attitudes towards work. As a summary, the most significant differences were evident between different student cohorts, divided by year of beginning the program. This suggests that people's evaluations of the core concepts of the program are influenced by their progress through the program and their time since completion. It is possible that it makes a difference that each cohort experienced a different faculty team, who developed a unique curriculum (within the general program guidelines). As well, that each cohort developed a unique community identity. In chapter five I heard people speak of how the program was reviewed and changed each year. Nevertheless, given the focus on the program's application of skills to employment situation and long-term learning we would expect that people post-program would demonstrate different reflections of their learning.

It was interesting to me that there were so few statistically significant differences. I had assumed that there would be differences. For future study it would be important to distinguish cohorts since there was difference in that demographic. The fact that each year is different from the previous makes it difficult to compare but important to study how a particular year impacts people.

A curious pattern that presented itself in the written comments was that people sometimes wrote specific negative comments and yet chose a high number rating, indicating a positive response, about the same item. Perhaps, people feel that they can offer a criticism in the written section yet overall they are satisfied so they mark an above average score on the scale. As an example, respondents indicated that they were pleased

with the faculty and yet there were a number of negative written comments regarding faculty.

The written comments provided an expansion of the questions. The comments sometimes spoke directly to a person's own feelings and at other times they provided constructive feedback.

As conclusion it is my reading of the statistics and written comments that people in the MAL program were highly satisfied with their learning through problem-based and self-assessment tools. They appeared to understand their personalities and behaviours in a new way as a result of their learning experiences in the MAL program. They have experienced an increased knowledge of how groups function. They have been challenged to complete competencies and maintain learning journals. These tools have caused people frustration but there is recognition of the learning value. Long-term learning has increased specifically in self-knowledge, group management and this learning has transferred to the work environment.

CHAPTER FIVE
Telephone Interviews

This chapter reports findings from the telephone interviews, which were intended to solicit further stories, reflections, and insights into the experiences of problem-based learning and self-assessment techniques. The eight interviewees seemed very pleased to participate: they spoke with enthusiasm and expressed both praise and disappointments about their MAL program learning experience. The chapter is divided into five sections. The first presents some background information on each interviewee so that the reader becomes familiar with the students whose comments they will be reading. The second section explores participant's experiences reported in problem-based learning and the third section explores participant's experiences of self-assessment. The fourth section examines comments specifically directed at the Master's degree's administration and the decisions made that impact student lives. The final section is a summary of the feedback from the telephone interviews.

Background Information

As per the ethics agreement, pseudonyms have been used and all identifying information has been changed to maintain the students' confidentiality. Interviewees' comments have been summarized and reported, and some of the quotes were altered slightly, without distorting their meaning, in order to make them more readable.

I conducted the telephone interviews in the Spring of 2000. The interviewees were very open and straightforward in their evaluation of the program. I found them all to be articulate as they gave me stories and examples of their learning. Those who had completed the MAL program two years or more before the interview had had a longer time to reflect and process their learning. Those who had finished the program in 1996

appeared reasoned in their praise and criticism. Those from the 1999 cohort had only just completed the first summer residency, and appeared to be overwhelmed with the research work that lay before them. They were very much still in the program and may not have had sufficient time yet to really process the experience. Those who began the program in 1997 and 1998 were in various stages of processing their learning related to their Master's degree. I enjoyed the difference the years had produced and I think it is an important part of the evaluation of the program. I was amazed by the transformations in personality and career that many participants reported this program had wrought in their lives.

Karen began the MAL program in 1996. She appeared very exuberant because, she said, she had changed her whole life as a result of her learning through this program. Karen had worked in the computer industry and the idea of incorporating values into ones' choice of work captivated her. So when she completed her Master's program she found work that honored her values. She continues to explore the ideas of servant leadership and describes her thinking as going from linear to open-ended.

Thomas began the MAL program in 1996. He expressed enthusiasm about his learning during the MAL program because, he said, he had struggled throughout his life with schooling and never pictured himself a scholar. He felt that the Master's program had allowed him to explore his love of learning, challenged his creativity, and rewarded his efforts. He said he still incorporates the habits of reflection and writing that he found freeing in the MAL program. He uses his learning in his public service workplace and has found that he is a spokesperson for workplace training programs.

Judy began the MAL program in 1997, so by the time I spoke with her she had completed her Master's degree. She described how she had had time to reflect on her skills and she realized she had more skills than she had given herself credit for. As a result, she chose to move out of her administrative position in the private sector and onto a completely different career path. She gained confidence and a true sense of herself throughout the MAL program. Since graduation she has opened her own consulting company and brings her learning to her different work situations.

Andy also began the program in 1997 and he had completed the work associated with the MAL program. Andy found that the program stretched him at times but he was already very familiar with the techniques of problem-based learning. Overall, he felt that the MAL program did not teach him anything new. Most of the techniques used and concepts taught in the MAL program were already familiar to Andy as he used them in his teaching. Andy did not express much enthusiasm about the problem-based learning aspect of the program. He did find value in the relationships he built with his peers and the support and encouragement he received from the faculty.

The two interviewed participants who began the MAL program in 1998 were Liz and Joseph. Liz was in the middle of trying to complete her major project and was busy in her life. Her conversation centered on her workplace and changes she had seen in herself as an administrator. She reported gaining confidence during the first summer residency. She seemed very pleased with her ability to reflect on her actions without being critical of herself. She felt her learning had transferred to her personal life as well.

Joseph was in a similar situation as he was also working on his final project. He was secure in the learning he had gained during the first summer residency. He found the

program both positive and negative. He was guarded in his praise of the program. He knew that he had been stretched by doing self-assessment through his learning journal. however, he said he had found it did not fit his learning style. He felt that the MAL program forced him into an experience that was difficult for him.

Gordon began the MAL program in 1999 and so he was completing the distance learning courses and he was getting ready for the second summer residency. He had been impressed with the first summer residency and he was looking forward to the second residency. He said he had been able to incorporate some of his learning into his teaching work, but the concepts were still fresh and he had limited time to fully incorporate his learning into his practice.

Shannon also had begun the MAL program in 1999 and she was very busy completing her distance learning courses. She was impressed with the first year residency and she found that her administrative work in a long-term care centre workplace had encouraged her to explore her new learning. She had discovered new skills and had improved on old ones. She also said she was looking forward to her next summer residency.

The next two sections follow the general outline of the telephone interview questions. I asked people to tell me stories about their experiences in the first summer residency in terms of problem-based learning. To present those stories I have chosen quotes to present to the reader. I have categorized the quotes into themes and presented like statements together. I did the same with the section on self-assessment techniques and how people had responded to those experiences. The last section presents some concluding remarks.

Problem-Based Learning

This section on problem-based learning is divided into two major areas: (1) the experience of problem-based learning method and (2) long-term learning on a personal level and within the work environment. Within each theme are other categories to help elicit an understanding of people's experiences.

Themes became clear as I reviewed the interview tapes, and transcripts. As I listened and read I drew up charts of the common threads and themes that began to emerge. Everyone articulated how they incorporated their graduate program learning into their self-awareness, as well as into their workplaces. One of the reasons why most seemed to find that their learning could be incorporated into their personal and professional lives was that the group work was so powerful. Problem-based learning was organized so that people were educated about their own skills and areas that needed improvement. Then together with a diverse group of people they worked their way through problems. In this process they experienced their strengths and worked on their weaknesses and observed others doing the same. Because the theory and practice were so intertwined most described their learning as powerful.

The first question of the telephone interview was," What, for you, has been the most outstanding learning and development from problem-based learning?" All eight interviewees tended to respond by describing how they had experienced the workings of problem-based learning. Then they would go on to explain the learning that they gleaned on a personal level. As well they described their long-term learning personally and within their workplace.

The Experience of the Problem-Based Learning Group Method

Most interviewees had not experienced problem-based learning before beginning the MAL program. Many of their comments were directed at this method of teaching and the learning they accomplished.

Learning through team development

One of the goals of problem-based learning as a teaching tool is to develop group work skills. Thomas spoke very highly of the group aspect of the problem-based learning model. His most outstanding learning happened when conflict occurred and the group had to manage the conflict to accomplish their task. " The group dynamics sense of it all [was my most significant learning] ... how the groups sort of come together and flounder for a little bit and even get into some kind of conflict, I suppose and then gradually work through everything, hopefully and end up being quite productive." Gordon mentioned how being in a group brought out all sorts of behaviour both constructive and destructive. Problem-based learning helped people learn to identify behaviours and learn how to deal with how the group functions. " We were understanding ourselves better and understanding how other people process information and deal with information better, by having to deal with the people in our work groups". Cynthia commented that the MAL program's first summer residency was her first experience of problem-based learning as a concept. "What I found most fascinating was the whole team development process-oriented aspect of problem-based learning". Karen stated " but the purpose of the course was for us to learn in a problem-based format, learn to interact with other team members and experience the synergy". Andy came to the nub of the experience for him by outlining that the problem-based learning was more about the process of the group than

the actual problem. "So the thinking and developing, and to try and say now can I get the problem, get us to the end, or help the team get to the end, was the fact that I wasn't even thinking about the problem, I was thinking about where people were coming from".

Team development is the process of bringing individuals together to collectively work together towards a common end. Five of the participants described team development as being an important element of learning. They learned from the conflict, from the dynamics that caused friction and insight, and from the success within the group environment.

Learning from intra-team diversity

Several participants' raised the subject of how the people were placed into groups. Andy experienced disappointment in his groups because he had an expectation of his peers: " A great majority of the students who were admitted in 1997, did not have outstanding problem solving abilities." Andy had expected that the MAL program participants would have had extensive management experience and a post secondary degree and yet some of them did not. Andy found this reality difficult: "Which is part of problem solving but in fact it detracted considerably from the learning experience in the first residency." The Glendale University chooses which people are going to be in which problem-based learning group. They carefully " arranged us so we had representation of different types of learning". Gordon described it this way: " We had provided the administration with background information on ourselves, by filling out questionnaires on our learning styles". He realized that the groups "they had arranged us so we had representation of different types of learning". He recognized the issues involved in creating groups that would mirror the work environment and he found he had to learn

how to express himself: " I mean you're always working with people who don't necessarily get along or see things exactly the same way".

Shannon commented that the diversity of groups was an important part of her learning. She saw different skills being demonstrated and learned from watching. Other interviewees commented that this aspect of the program created difficulties and that the Glendale University administration was too controlling in their approach to the creation of the groups. Thomas gave an example of the experience of working in a group where people reacted to his occupation in a negative way while they were in the first problem-solving group. He found the experience to be "scary " and even though by the end of the residency the group relationships were healthy. Thomas told his story this way: "this woman immediately attacked me. And just sort of had a little bit of a rant and rave at me. that you're not the boss." Thomas was stunned by the reaction and since no one responded to her he sat down. He told than of how, towards the end of the residency, the two of them were able to speak about what had happened. "...I said well in week one you pretty well hated me and wanted me shot and she said well, I was kind of afraid of what was going on and I was really terrified." Thomas and his peers were able to listen to each other's experience of the same situation and come to a deeper acceptance of each other. Judy discussed how some groups worked perfectly together and that this created an opportunity to really explore her own working skills. "I mean we were just such an effective team, we had no conflict - we just worked beautifully."

Working with people in groups is how the MAL program structures its program. Interviewees experienced deep learning within their groups. Some of the learning did not

meet their expectations, some experiences were terrifying and still others were very highly rewarding.

Learning by observing peers

Participants were encouraged to use their skills and experience from their work environments within the problem-based learning session. Interviewees commented on the significant impact that interchange had on their learning while they watched people demonstrate skills. Liz referred to her significant learning this way: "One of the members' jobs was to do conflict resolution for large groups of people. So there was some outstanding learning for me in watching him mediate what could have been a conflict that may have gone down the wrong path." Karen described one of her professors who demonstrated to her what mentoring was all about by being a mentor: "One of my professors...mentored me without probably even knowing that. And so through that experience it changed me and I'm able to pass that on".

Gordon spoke about how "on a weekly basis there were several (times) in which difficulties arose within the group situation". He said that on a weekly basis the people within groups needed to "understand where other people were coming from and trying to be fair and honest...and that was I guess one of the more eye opening things".

Joseph spoke about someone in his group throwing a temper tantrum much like a four-year-old and how the group did not ever resolve that situation. "She was so miffed that she didn't get a chance to actually play centre stage in her particular role. It was quite amazing!"

Participants observed their peers and faculty closely and leaned from what they saw. They were struck watching people demonstrate skills and then tried these skills on

for themselves. They were dumbstruck when people demonstrated behaviour that was not appropriate. Valuable learning occurred in each case and participants recognized that fact.

Exploring different group roles

Problem-based groups are organized so that each person must take on a role. The roles that were most often spoken about were observer, leader, and recorder. Exploring roles are part of participating in a group was a learning that four people discussed. They often explained that they had one role that they were most comfortable in and that they had to challenge themselves to participate in different roles. Shannon stated that her major learning was the personal development of her role within groups. "...a personal development perspective as to what roles you're most comfortable in and to what roles you can improve in". Liz spoke of trying on different roles as being important to her learning since most people in the program are in leadership roles and tend to lead teams within the workplace: " It meant that if I watched somebody be particularly effective at something one day, when it was my turn to be the facilitator, I could try to use some of these skills". Cynthia said, "I think what I liked about it was the actual normalization of looking at the roles, like having the observer and receiving feedback on the roles...it increased process and we all had equal ownership". Gordon learned about his strength of being an observer in a group. " Actually that was one of my strengths that came out early in that I have good observer skills and when necessary to give feedback to someone on what has happened".

Interviewees found it valuable to experience the different leadership activities within their groups. They watched people take on different roles and they learned from

observing their peers. They took on different roles, practiced their skills and improved in areas where they needed to develop skills.

Experiencing synergy

Synergy is a word that describes a cooperative interaction within a group that enhances the combined effort. Three people spoke of the feeling of "synergy": the whole group coming together without individual agendas and working towards a common goal. Most participants had worked in team environments before but often this was the first time that everyone worked together in a concrete way towards the same goal. Three people spoke of the experience of synergy, Karen exclaimed that:" Experiencing true synergy between team members after a certain amount of time" was her statement of most significant learning. For her synergy was " leveraging the strengths of the individual to achieve the common goal." Gordon spoke of synergy as a combination of course material and working closely with people: " A level of bonding was taking place, especially when you have to work that closely with someone in a short period of time, it was beneficial to the learning process". Thomas spoke of this idea of synergy as being a magic experience. " The people, they just came together and helped me (with a project)...So it was just a magic experience for me".

Working with a group towards the same goal and accomplishing the task in a spirit of camaraderie was a valuable learning experience for three of the interviewees. A shared experience, a bond that is created, a group coming together without individual agenda and completing a common project is the experience of synergy that participants articulated.

Skills and Self Knowledge Increased through Problem-Based Learning

Interviewees said they articulated their increased self-knowledge and learning skills through participating in the problem-based learning.

Putting theory into practice

Putting theory into practice for participants appeared to be an important learning for five of the interviewees. They claimed that they were able to incorporate their learning into practice because the dynamic of problem-based learning was so intense. They described being able to use their readings and theoretical discussions immediately into the next days problem-solving group. As Gordon stated: "You take the theory and in a very short time you're applying it to the problem the group has been given." He continued, " We were given the information and right away we were applying it to the information in our groups. I could even see how it would apply to a real life situation." Liz stated, "I learn best when I can apply something. I read about systems thinking and we applied it in the problem-based learning group, that integrated it for me". Judy expressed that she read about the importance of courage in leadership and then in her problem-solving group she had to have the courage to state her convictions. For Judy it was the activity of problem-based learning that "really sinks some of these lessons in, in a way that nothing else does". Shannon spoke of the dynamic of putting theory into practice this way, " I think that it took things off the textbook page and really put it into action, so that people had a true experience of it". Karen stated that the combination of being given a challenging problem and specific coaching on the variety of ways to solve a problem were enlightening. "We were also coached through different examples of how

problem solving can go awry if you advance individual agendas, and it's extremely enlightening".

Five interviewees stressed the importance of applying new ideas right away. They found they would read about a problem-solving method or a theory and then the next day be able to put forward their ideas. They came to new understandings about leadership. having the courage of their convictions and learning how to apply theory to a real life situation.

Learning style

Learning styles is a phrase used to describe the ways in which people learn. The web-site. 7-12educators.about.com (2001) describes learning styles as: " This approach to learning emphasizes the fact that individuals perceive and process information in very different ways." Each person has a style that is most comfortable such as learning by doing "concrete perceivers" or learning by reading an "analysis and thinking" perceiver. Interviewees often stated that they found the process of working with the group context really mirrored their learning styles. Gordon liked to see how information could be applied to a situation " it [that] had a greater effect on my learning. For me, that's much better reading something and maybe writing about it". Gordon stated that his personal learning style was significantly impacted. " I know my learning style is one in which I learn best if I *do.* and problem-based learning allows me to do that much better." Others also described the impact of learning through experiencing the techniques of identifying problems. managing time and working through group dynamic issues. Andy stated that " being able to formulate and structure the problem solving method. That would probably be the number one learning for me. The *thinking* process, rather than the doing process."

Learning styles are as varied as the people learning. Some learn by reading material and discussing it. Others learn best by experiencing the learning, practicing or doing the work. Others learn by thinking about what they have seen, heard or experienced. Problem-based learning provided an opportunity for participants to work from what they believed to be their preferred learning style.

Developing self-knowledge

Three people referred to Myers-Briggs personality testing as being very helpful to their learning during summer residency 1. The web-site, aptcentral.org describes Myers-Briggs Type Indicator this way: "MBIT is a self-report personality inventory designed to give people information about their Jungian psychological type preferences." The personality testing was enlightening to individuals and they used the information to help make their group work flow.

Shannon described how the team discussed their personalities and discovered that they all had a tendency to not finish projects: "Our group had very low finishers so we knew that that was going to be a weak point for us". Shannon's group had to "Put structures in place to make sure that we weren't there until three o'clock in the morning. every night". Thomas said he now encourages people in his organization to take a Myers Briggs like personality test. Gordon speaks about incorporating the personality tests into how he relates to people since it gives him control in his life. " I'm behaving this way because of my natural way to behave, but that person is different ... I've got to make sure I don't push the wrong buttons".

Using a tool such as the Myers Briggs personality gave participants an understanding of themselves and others in their groups. Groups knew if they were going

to have difficulty finishing a task, individuals learned to control their own impulses and still others have used Myers Briggs like tests in their work environment.

Exploring Creativity

Three participants referred to the importance of freedom and encouragement to be creative in their academic work. " I think [the program] was quite a significant challenge to me...it made me explore my creativity and my human interaction skills, and my ability to play different roles in the different situations," stated, Joseph, when asked for his most significant learning. For Andy, significant learning was discovering his voice when he tried writing in personal and imaginative forms for the first time. Thomas also discovered his creativity through self-reflective writing assignments in the program: " I had an absolute delight ... the epiphany of when I realized I could write in the first person".

Being encouraged to be creative is a treat in the academic world and the participants of this Master's program took full advantage of the opportunity.

Experiencing transformation

The experience of being placed in problem solving groups for four days to create a solution was described by five of the telephone interviewees as a powerful and transformative experience.

Thomas said three times in his interview that the program was powerful for him. "I was totally sold on the program. It was magic." Judy's primary learning was, she explained, developing courage to state her convictions, which she integrated with the importance of personal leadership.

> I think the number one lesson for me, was the importance of individual leadership in creating and improving change. In other words, if you don't

> have the courage to state your convictions and to hold what you believe in. in a way that other people can hear that, then you really aren't doing your job in terms of leadership.

Judy felt she had become stronger by following her convictions. Gordon felt " The program was exciting and it has brought me in contact with people outside the teaching profession." Shannon could not imagine "going back to her old ways of thinking and being", especially since she has an "expanded view on how things can be" through problem-based learning. Karen said she would do it all again. " My learning was such a wonderful experience for me". For Joseph the first residency [based on problem-based learning] was intense and even frightening: " I think it [PBL] terrified me .... The whole idea of having a kind of brief period of time to work with people that I don't really know very well."

Judy stated, "The action of one person can really be tremendously influential. And if you don't realize that, if you don't realize that you have that power, then you are much less effective in your own leadership or in leading others." While Judy was learning in the MAL program, she decided that her work environment played to her strengths and she was making assumptions about the work environment that she was helping to create. "I was part of the group who created corporate culture". Judy came to understand that she was participating in value-laden activities within her work environment and that these activities did not reflect her values. Judy evaluated her job in the personnel department: " Actually, I came back [from summer residency 1] knowing that I had been in denial about [the values underlying workplace practices] a lot of things." Judy felt she was able

to leave her job in a constructive way: "But I knew I was planning to leave, which gave me a lot more effectiveness in what I was doing."

This Master's program was perceived by most participants as being powerful transforming their lives. Learning was experienced in an intense way and on a concrete level. Participants evaluated their lives and places of employment and decided to make changes. The program was so intense that it was frightening to some participants.

Life-Long Learning within Problem-Based Learning

The interviewees expressed increased awareness of their life-long learning skills because of their participation in the problem-based learning activities.

Enhancing life long learning skills

Thomas found that he was more aware of the need within his organization for life long learning. He encouraged his staff to take whatever courses they would like to. " If the concept with the PBL and life long learning has done anything, I guess maybe it has sharpened my sense of life long learning." Thomas's sharpened sense of long-term learning has cross the boarder from personal to organizational. He now creates a place for learning to happen within his workplace.

Looking at the big picture

Many interviewees explained that, since completing the MAL program, they now felt that they looked at the "big picture" when working on issues in their workplaces and lives. Gordon discussed how he has learned to look at the big picture in his work environment when managing his staff. He acknowledged that each person had his or her own life issues that impacted how they carried out their responsibilities.

> By looking at the bigger picture and trying to get them to see that, I guess that's where I'm using my learning styles too and also understanding how the people react and what's important to them, and my strengths and some of the ways I look at things, I do look at things more holistically and I've got to try and get that across to people, that in certain situations there maybe a better way to cope.

Thomas stated that he now encourages his manager to let staff go on training courses because he feels it will broaden their horizons, " I tell him that I know that our people will come back with some kind tools that will help us here, even if it is just experience". Liz spoke of how she now " looks at the big picture" when dealing with situations: " I think the program has helped me become more politically aware and I think it's that systems thing when you look outside of the immediate environment to the external factors". Judy explained that she was always fascinated by how people behave: "But somehow I never had a comprehensive and global picture as I got after I came out of the program."

Andy spoke of learning to format and structure organizational problems as being his most significant learning. For Shannon the "big picture" learning was "incredibly valuable". She found the: "New framework to look at how things are changing and evolving in the workplace. And so having that ability to reconcile current reality with preferred reality and future reality". Six of the interviewees discussed how they learned to see the "big picture". The ability to see beyond the immediate and to value other perspectives has meant that participants encourage more workplace learning, and are

excited about their own long-term learning. There is a new perspective, a grander horizon, a structure to problems and solutions.

Transferring learning to the workplace

Most participants recounted how they felt the program had helped change the way of looking at their work environment. Leadership is the crux of the MAL program and participants were positive about how they were able to increase their leadership skills. As an example, Judy spoke about how she discovered her leadership skills within her group. She had directed her group to follow systems thinking reasoning that had taken them to a finished product. "I just kept going with it and that was what we used, we started to put together the presentation". Her peers told her in her evaluation that she was "incredible, you should have seen your face when you started talking about system solutions." Leadership is a myriad of skills and Judy experienced first hand the skill of presenting material so that others, she felt, could follow her thinking and be convinced by her reasoning.

Andy was the only person who had experienced working with problem-based learning and so he had not changed his approach at work. Shannon said that transferring improved roles into " the workplace and incorporating some of those has been really helpful because then people are a little bit more conscious of how their behavior impacts other people." Karen spoke extensively of how she uses problem-based learning within her educational institution: " I go into the classroom and I say I am here to facilitate your learning and to facilitate your success and I will do whatever I can toward that end." Gordon declared,

> Definitely we were not without conflict and friction within our groups. But it's a real thing, I know in my workplace I'm constantly dealing with friction and conflict and people who don't see eye to eye.... And it's learning how to take the approach or be able to analyze the situation to come up with possible solutions, is what helps get over those difficult times and move on with things.

Liz spoke about being able now to confront conflict. "...one of the things that being in that group taught me was not to be afraid of conflict – like most people I would rather avoid conflict if I can, and I've certainly gained skills in intervening in conflict situations earlier before they get out of hand". Judy now a consultant in organizational change said she found that she can empathize with her clients as they change and experience the dislocation of change: " So now when I go out and I'm consulting, I realize that I know the state of mind those people are in, and I understand why they are the way they are. And it really helped me in terms of change management and helping clients...." Thomas's work environment was very hierarchical so within the structure of the organization he said he had not introduced problem-based learning. However, he claimed: "If the concept with problem-based learning and life-long learning has done anything, I guess maybe it's sharpened that sense [of life long learning]." He brought his openness to new ideas into his workplace: "and so I urge my people to just take anything".

As the five weeks progressed some students found themselves reflecting and evaluating their work lives. Interviewees felt that they had a stronger sense of themselves. developed skills and felt competent to return with ideas to their work environments.

Summary of Problem-based Learning Section

Participants in these interviews were unreserved in their praise of their learning through problem-based learning as it was conducted in the MAL program. They took theoretical concepts and applied them to real situations. They learned how groups functioned and explored different roles for themselves. They experienced synergy and were amazed at the power a group of people can have as they work together towards a common goal. They challenged their own leadership skills by examining their personality and learning styles. They observed their peers and faculty demonstrate positive leadership behaviours and negative leadership behaviours. They were encouraged the think creatively and to look at the "big picture." Their life-long learning skills were fostered and they took their learning to their places of employment. One participant used problem-based learning in his workplace and knew its value, so for him the program was not enlightening. For the other seven interviewees, problem-based learning was powerful. It emboldened one participant to have the courage to state her convictions. While for another participant the intensity of problem-based learning was intimidating. Problem-based learning can lead to significant change in people's lives. For two participants their learning led them out of the jobs they had and into ones that reflected their values and new found self-awareness.

Self-Assessment Techniques

The MAL program evaluates the learners using various methods of self-assessment: learning journals, learning agreements, psychological self-testing instruments for learning styles, personality, leadership style and others, and reflective dialogue with peers and faculty. The interviews attempted to gain further insight into the learning

experience of participants in using these tools and learning from the assessment techniques. The telephone interview followed the same outline of questioning as the problem-based learning questions beginning with. "What for you would be the most outstanding learning and development in the areas of self-assessment and self-reflection?" That question was followed up with asking for examples, and stories to further clarify their comments. The decision was made to discuss with people not only the actual techniques used by the University but also participants' understanding of self-reflection. Participants divided their responses again into either their own self-learning or the tools of assessment that the program asked them to use.

This section on self-assessment learning is divided into two major areas: (1) the experience of self-assessment learning method and (2) long-term learning on a personal level and within the work environment. Within each theme are other categories to help elicit an understanding of people's experiences.

Learning Through Self-Assessment

Doing assessment of oneself is a difficult practice to master. Interviewees told stories of their difficulty and their success at developing self-assessment skills as described in the following sections.

Reflecting on the learning process

Judy found that the learning journal and time to reflect was a major aspect of her learning during the MAL program. She experienced "subtle nuances" that the " process of reflecting on things" brought out. She found: "It was just amazing some of the depths that came out that I had no idea was there." There was an element of discomfort though: "it's a very narcissistic occupation or activity when you're doing self- assessment. but

there was a tremendous amount of learning." Judy was emphatic that if she had not done the journal writing: "I would have missed at least 40% of the learning that was available to me in that program". Reflection takes time and energy and it can be very rewarding.

For Shannon the journal helped clarify the learning process because the journal was a place where learners could process what had happened to them. " And also I think it was very valuable for when some of our team work got a little bit intense we could do self-reflection as to what happened there and what could have been done differently." An important statement about how reflection could be put into action during the summer residency was that people could challenge themselves privately to change behaviour that they had decided needed changing. Judy spoke very specifically of this: "In self-assessment you really come face to face with what you have to change about yourself". For Judy it was "easier to make [changes] when you decide yourself". She expressed that Glendale University was "a safe place to learn and you can make the decision to change without anybody knowing you're doing it"

The MAL program was structured so that there was time each day to pause and reflect. Learning is an internal process and participants valued the tools that helped them sort through their experiences.

Learning to pause and reflect

A structure that was incorporated into the day to day format of the summer residency was a time to reflect. People had the freedom to determine what they wanted to do during this time: they could reflect, play tennis, exercise or work in their journal. Shannon spoke of how much she "loved" the learning journal and the structured time given to self-reflection during the first year program. " I think we called it body and soul

time [a time] to actually step back and reflect." Shannon also mentioned the need to create time every day to reflect as one of her long-term learning. "... at the end of the residency only five weeks later saying that made such a difference to my quality of life. How can I bring that back into my everyday life? And that's something that I've tried to do...." Judy described it this way: "I certainly knew after I came back from that first summer residency, and even the second one, that I couldn't keep rushing through my life". She explained that she began to realize,

> That those moments where you're staring at a pool of water or where you're thinking back on what happened and problems with the session today, where you're spending maybe ten minutes thinking about what you're going to put into your learning agreement...is very productive time. And in fact it can be much more productive than anything else you do that day.

Liz said, " I think in general I have learned to stop after...significant encounters and say to myself, how did I do there? What did I do well? What could I have done better? And I think doing self-assessment more often has made me more comfortable with sharing my assessment with other people." Joseph was one participant who felt that there was not enough time provided during the residency to adequately reflect.

An important element of self-reflection is to learn how to take time to pause and reflect on learning. Three interviewees found that being given time within the five-week residency to just reflect was very meaningful for them. Taking time to pause was something they wanted to incorporate into their lives even after the program ended.

Self-Assessment Within the Group Environment

Working in groups, as we saw in the problem-based learning section, elicited much insight for participants. When people were evaluating themselves they gained insight by reflect, listen to their peers' comments, and asking for faculty feedback.

Peer and faculty assessment

One of the tenets of self-assessment is for students to solicit feedback from their peers as well as be able to provide constructive feedback when requested. Some learners in this study understood its value but found it difficult mostly because they did not feel comfortable with assessing themselves in a positive light nor in providing peers with critical constructive feedback. Shannon described it this way: " So receiving that feedback from your peers and reflecting on that, I thought that was also very valuable." She qualified her statement saying "I think the only thing that I would change is having a bit more on developing the skills for giving feedback to other people." Shannon recognizes that: "People aren't always comfortable or know how or have the skills to give good, constructive, balanced feedback."

Gordon described the need to do self-reflection and to demonstrate change so that others can observe new skills: "If you're going to assess yourself, you want people to believe your assessment. Also you want to make sure that you demonstrated the behavior that is being assessed in a way that others would see it." Gordon stated that he enjoyed receiving feedback. However, he expressed his difficulty with providing his own assessment this way:" When it comes to evaluate yourself, I guess you're looking at the positive and it's basically patting yourself on the back I've never been good at that".

Joseph also felt that peer feedback was often guarded and was not really as helpful as it could have been. He had very much wanted to receive feedback from his peers and he recognized that as an integral aspect of the program:" I found that I wanted to hear what other people were saying about my personal performance." He said he was eager to hear their feedback but when he received it he " found the comments from my peers on the course much less useful". Liz described her insight into reflection through her peers and the focus the program had on peers providing assessment for each other. "Oh...the most outstanding in self-assessment...I think it was probably again the self-assessment that I did with peers either formally or informally". She found that at the end of an activity the group would debrief and discuss what areas needed improvement. She indicated that "...it made it more concrete for me, so I could say when I was facilitating today or when I was presenting my ideas, I thought I could have been more forceful".

The skills needed to adequately give and receive constructive feedback require teaching and practice. Interviewees found it difficult to praise themselves. They at times complained that their peers were nice instead of being constructive. Three interviewees discussed how they were able to prompt changed behaviour within themselves because they felt safe at Glendale University.

Role of faculty

The faculty apparently played an important role in challenging the program participants in their self-assessment. Joseph spoke of how a faculty member helped him understand his learning through reflection: "...the relationship with my advisor during both of the residences which was actually helpful in getting my own thoughts reflected back to me so that I was able to arrive at conclusions". Gordon acknowledged the

faculty's ability to observe and provide feedback as an eye opening experience: "He was just excellent and I was amazed by the information that he caught and put down. I mean it was like having a little tape played back and in fact even better because he remembered things that I didn't remember or didn't notice that I had done".

A role of the faculty within the MAL program is to support the work of self-assessment. Interviewees reported that the faculty often pointed out growth and changes they were experiencing before they were aware of these changes. They also reported that they felt their learning was being supported. The support of peers and learning how to demonstrate learning was an important element in gaining self-awareness.

Learning by Doing Self-Assessment

Participants described significant learning experiences in gaining skills associated with being self-reflective. They found comfort levels and also struggled in learning new skills. They expressed their individuality towards the learning and how they transferred their skills to the workplace.

Struggling to learn how to reflect

Interviewees spoke of their difficulty in understanding how to do self-reflection as a struggle. Andy felt that the skills of how to debrief and reflect were not taught. Liz said it took her three weeks " to be decent at self- assessment and sort of the last two weeks feeling really comfortable with it". Karen stated, " I learned how to reflect and it took me until the second year, almost to the end of the program because I am a structured linear thinker. I would say to myself, Ok, now we have to reflect and I would give myself ten minutes. And now I understand".

Three interviewees recognized the struggle they had in learning how to be self-reflective. It took time, sometimes almost the whole program, to come to a clear understanding of what was involved.

Developing comfort with self-assessment

Gordon also speaks of his own innate skills when reflecting on his learning. " It's part of my learning behavior style, I'm just a naturally reflective person. And actually that was one of my strengths that came out early in that I have good observer skills and when necessary to give feedback to someone on what has happened in a situation".

Joseph described how he felt that the program was a healthy environment for people who were extroverts but naturally quiet and introverts had difficulty. He found that he needed more private time.

> I felt we were being kind of all put into the same box. We were asked to do this personal learning journal and I didn't like it very much to be absolutely honest. I learn things from a combination of all sorts of things. I like to have a lot of time to reflect which means spending time on my own, which was difficult in the University context.

Joseph stated emphatically that " ... people who are naturally contemplative, like I am, it [the summer residency] was in fact an extraordinarily trying experience".

Participants found if they were naturally reflective, they felt they had success with giving and receiving feedback. Other participants described difficulty they had being reflective: it did not come naturally to them.

Reflecting is different for each individual

Interviewees reported self-reflection to be an intensely private process. Karen recognized that in her career in the computer industry, she was always accomplishing tasks but she never looked back on an experience and learned from that. " What is reflection? Taking time not to be continually processing information. The learning aspect of my job was not something that I really had considered before." Judy spoke of how she learned to put events into sequential order so that she could make sense of things: "...If you don't try to put some kind of structure to your thoughts, you probably aren't ever going to really, truly understand what it is that you're reflecting on". The other thing that Judy learned is that self-reflection is an ongoing process, "it never stops". Gordon stated that reflection should happen all the time because: " You don't want to lose the good parts in coping with your life. You want to take advantage of that, because anything that can make your life easier". Thomas stated that the periods of reflection during the residency "sharpened " long-term learning and made his learning "more concrete".

Interviewees found that being able to reflect on the learning past and present was an important struggle for them. They found it difficult and rewarding. The four interviewees discovered that learning was always occurring and that by reflecting they could make sense of their lives.

Transferring reflection to work

Interviewees all reported different ways in which they transferred their reflection to the work environment. Gordon made mental notes to himself to change what he was doing in his classroom. Liz reflected situations verbally back to people at work that helped her sort out what was going on. Andy focused his thoughts, and worked through a

number of scenarios before presenting his conclusions to his colleagues. Shannon tried to connect the links in her learning by paying attention to her past learning and her present environment. Karen asked her students to reflect on their learning through journal writing, and said she did the same. Joseph does what he calls " reflection with action." He used the method of asking questions continually to stimulate thought, reflection and solutions. Judy very specifically gave herself time everyday to reflect on what she was reading and doing. She used the Excel program to help her organize her thoughts and learning. Thomas used a tape recorder and a notebook to record his reflection and learning. Two people of the interviewees no longer kept a written journal of any sort in their lives. The other six interviewees in some form or another did continue to maintain a written journal.

Summary of Self-Assessment Section

The learning they accomplished through gaining the skills associated with self-assessment appeared to astound interviewees. Part of their astonishment was that the work was difficult and frustrating. The work stretched them, encouraged them to evaluate and change their behaviour. They appreciated their peers and at the same time struggled with other people's personalities and their own expectations. The faculty observed participants' behaviours, commented on them and helped create a learning environment where self-assessment and reflection seemed natural. Overall, interviewees reported that self-assessment activities helped them to change, becoming more reflective and valuing time set aside for reflection.

Summary

Problem-based learning appeared to enhance participants' learning, according to those interviewed in this study. They commented on how they could read theory and come to their peers the next day with a piece of theory that the group would put into practice. Interviewees commented that for the first time they understood how they functioned within a group. They came to realize their personality strengths and the role it naturally took them to. They also discovered that everyone else in the group had skills that they brought to the process. They worked with these insights and challenged themselves to take on different roles and come to deep appreciation of other peoples' strengths. They struggled with the group dynamics. Sometimes the groups functioned like clockwork and a sense of synergy was created. At other times groups conflicted and people behaved in immature ways. These experiences were shocking and frustrating according to interviewees. Participants felt that the faculty could have helped more during the times when emotions and behaviours ran amok. People discussed that they wanted more of the faculty's time and they at times felt that faculty needed more training to deal with contentious issues. More supportive learning came when peers demonstrated skills that then others could practice when it came their turn.

The self-assessment tools of journal writing, providing feedback and learning agreements were an integral aspect of problem-based learning. As people worked in their groups they needed to evaluate their learning and demonstrate the new skills they were developing. People said they developed a keener self-awareness and that they learned to evaluate all their learning. They felt their experiences were validated in their learning agreements. They also felt stretched by faculty's comments and peers evaluation of their

behaviours. They wanted constructive comments, they wanted to be seen demonstrating changed behaviours and they challenged themselves by self-evaluating. However, they were also disappointed that at times the comments they received were too nice, and they found it difficult to honestly look at themselves and write it down. Self-assessment is a skill that people had some difficulty taking to their places of employment. They found that their internal dialogue was strengthened but they did not continue with learning journals.

Overwhelmingly, interviewees spoke of their learning through the problem-based learning experienced at Glendale University. Their comments reflected their positive experience." It changed my life", said Thomas. " It was just magic, I guess that's the only word I can use." Joseph learned to reflect on the problem-based situation and he uses this skill in his work environment. Gordon was "energized by this learning", saying that the world is a larger place for him now. Judy felt that if she had not gone through the self-assessment process and learned how to put theory into practice, she would not have been able to leave her job and begin her own consulting company continuing to do this work. Shannon said that problem-based learning was an " excellent tool to learn". She found that the theory was balanced with experience – from books to action, from theory to practice - and that now she could not go back to her old way of thinking. Karen has incorporated a new goal in her life, which is to mentor servant leadership in her work and home life. To Karen this means " by listening by observing, by allowing people to be who they are and present themselves and relate that is my kind of leadership". Liz learned conflict resolution and uses those skills with the process of reflection and she shares that with others.

In terms of long-term learning I was struck by people saying to me that during the first five-week residency they had come to know themselves as adults. No one said those exact words but that was the sense I was given. The people I interviewed had not appeared to understand their strengths and weaknesses in the way they understood them during and after the program. They felt challenged in their habits, attitudes and their values. Two women I spoke with changed their careers because of the learning they accomplished. The changes that occurred in their lives was transformative. People also gained control over their learning, which I found fascinating. They seemed to realize – for the first time, for some - that everything they did was learning. They were now also self-evaluating the situations that occurred in their lives. Problem-based learning was powerful, self-assessment gave tools to reflect on the events that occurred and people's lives were changed.

CHAPTER SIX
Final Reflections

This chapter provides summary of findings, researcher's reflections and questions for further study. To begin with I will revisit the statement of the problem and then discuss how the students spoke of their experience in both the questionnaire and the telephone interview.

Statement of Problem

What is the experience of mid-career professionals in higher education participating in a non-traditional program that employed problem-based learning and self-assessment techniques?

The mid-career professionals, who completed the questionnaire and those that also consented to a telephone interview, were very pleased with their participation in the non-traditional learning aspects of their MAL program. Their experience was positive. They found that they learned about themselves as adults and people within a group. They learned about how groups function and how they function within a group. Generally, the most valuable long term outcomes indicated by the majority of questionnaire and interview respondents were: (a) understanding and managing group process, and (b) increased self-knowledge.

What I have found myself saying to people who have asked about this study is that the participants indicated that they came to understand themselves as adults for the first time in their lives. How I summarize this is that respondents indicated that the work they did to prepare for and work through the problem-based learning was most significant. Many described how they came to understand their strengths and weaknesses through completing the Myers Briggs personality test and then through understanding

that everyone else in their problem-based learning group also had strengths and weaknesses. This might seem self-evident but respondents indicated that the safe environment and the practical learning helped bring home to them in a significant way that their skills were different from others. They found this learning helped in their work environments, and in their lives. They spoke about their increased self-awareness within their work environment: how they tried new skills and were able to reflect and evaluate performance, theirs and co-workers, and how they had skills now that were improving their long term learning abilities. They spoke about the first summer residency as being an important, in some cases life-altering, experience.

Those who perceived that their lives had been changed by their educational experience said they had become ambassadors for the program. They commented to me that their colleagues at work were registering in the program because of what they saw as positive outcomes in the participants.

Participants' Demographics

The response rate to the questionnaire was high: 361 questionnaires were sent out and 168 were returned. The questionnaire demographics mirrored the MAL program's overall demographic patterns. The majority of questionnaire respondents were female, from British Columbia, and between the ages of 40 to 50. The majority held Bachelor's degrees and were employed either in Health Care or Education.

The questionnaire was evaluated in terms of demographics and there were a few significant statistical differences. The two demographic areas, of employment and province, did not present significant outcomes. Age and gender both had only one significant outcome. Men found the presentation from faculty, peers and guest speakers

to be more useful than women. Those who were 51 years old or older expressed greater long-term learning through their work relationships than those who were 40 to 50 years in age. Education had two significant outcomes. Those with less than a four year post-secondary degree expressed less importance on learning how to manage group process and greater endorsement of their increased self-knowledge than those with a four year degree or greater. Year of program entry was the only demographic category that had a number of statistically significant outcomes. Those who began the program in 1996 reported greater use of competencies at work and expressed greater continued self-assessment than 1998 and 1997. Those in 1998 reported marginally less satisfaction with their research competencies, learning agreements, and did not give high endorsement to long term changes directly related to work than the other years. Those in 1999 found the faculty comments useful to their long-term learning. They did not indicate that the major project added to their long term learning, nor did they give a high endorsement to long-term changes directly related to problem-based learning in their attitudes towards work. This suggests that people's evaluations of the core concepts of the program are influenced by their progress through the program and the time since completion. As well, it is possible to that each cohort had slightly different experiences with team and difference in curriculum following general program guidelines. The program is relatively new so the faculty were diligent in incorporating feedback from each past cohort groups in the hopes of improving the MAL program.

The telephone interviewees were chosen from 107 questionnaire respondents who agreed to be interviewed. The eight telephone interviewees were distributed amongst province, gender and year of their program with varying levels of education and sectors

of employment. I spoke to an equal number of women and men who lived in the Yukon. Alberta, Ontario and British Columbia. I picked two people from each year and I think that by the work they had that they had Bachelor's degrees. Four interviewees worked in education, both secondary and post-secondary and two worked in health care administration, one in the military and one person was a consultant. These people were keen to speak about their learning and presented excellent material with which to expand the data from the questionnaire.

Problem-Based Learning

In general the questionnaire indicated that students were overall very pleased with their learning through problem-based learning. They indicated that they had personal learning that they found it useful for their long-term learning, and that they used the technique in their workplace. They also made a strong statement for Glendale University to maintain problem-based learning as part of the MAL program. The questionnaires demonstrated that respondents found the problem-base learning an amazing learning experience in their lives, both positively and negatively. The majority of respondents believed their most significant learning through problem-based learning was managing group process. They felt they understood their own responses to group dynamics and they gained the skill of recognizing others responses making them excellent group leaders. In their written responses respondents mostly described high levels of self-learning, and a sense of becoming transformed and enlightened.

The telephone interviews elicited the comment that problem-based learning had opened participants' eyes to their very distinct personalities. They felt that for the first time they truly understood who they were and they were amazed at the patterns of

communication and interaction they demonstrated. There was an implied realization that problem-based learning had brought them to this place as no other learning had ever done in their educational experiences. For the students who participated in the telephone interview their most significant learning through problem-based techniques were: (1) enhanced creativity. (2) improved human interaction skills, (3) personal development. (4) increased comfort with their individual learning styles, and (5) the importance of personal courage and leadership. Their work in small groups became the conduit for personal and professional learning. The conflicts and successes were equally admired and exalted. The interviewees felt safe in their learning environment because they could practice new habits without criticism. The issues on which the problems were based were provided by external organizations and therefore the problems had relevancy. Learners were able to access the organizations' personnel and data so that all avenues of learning, research and creativity were available. The problem-based learning component of the program is considered by most of the telephone interviewees to be the most remarkable part of their experience within the program. They found group work intense and an incredibly challenging.

Self-Assessment

In general the questionnaire indicated that students were pleased overall with their learning through self-assessment activities. They indicated a perception that these had improved their leadership, communication and research competencies. They appreciated faculty feedback and their own increased ability to self-assess. However, they struggled with exactly how the competencies were going to be evaluated: some felt the evaluation relied too heavily on faculty. Others felt that the competencies were explained well and

were fair evaluation tools by not being overly reliant on faculty. Competency-building had become a life-long skill for most respondents. Respondents commented on the role of the faculty. They felt the faculty respected them, and they could be honest in their learning agreement. Most respondents had not done systematic self-assessment prior to the beginning of the program. They had a more negative attitude than positive towards writing in a journal before they began their program and felt moderately happier with the process as they continued their program. Some acknowledged that the journal writing and learning agreements were important aspects of their long-term learning; however, most responded that they no longer continued to maintain a learning journal.

The telephone interviewees were more split on their negative and positive responses to self-assessment. Some experienced great personal learning while others felt they were being forced to do an activity that did not enhanced their learning. Most acknowledged value in keeping a journal, and value in finding time each day to reflect on learning. However, as a group only two maintained a journal and most struggled with time. The most significant learning for students through self-assessment techniques were: (1) learning how to reflect, (2) learning how to think concretely about ones learning, and (3) discovering strengths in being able to do self-assessment. The role of faculty and peers was spoken about during the telephone interviews. People were impressed with the comments they received from faculty. They found the faculty observed their learning and improved skills and would provide that feedback. A number of the interviewees wanted the same sort of feedback from peers but they often found it to be constrained instead of constructive. Having the skills to be self-evaluating and to be able to evaluate others was one that people were still working on.

Recommendations for Further Study

Recommendations

I realized once I was into the study that I needed to ask whether respondents had changed careers as a result of participating in the program. I did not know that significant life and career changes were being made by participants. This information did not come from the questionnaires but was revealed in the telephone interviews.

It became obvious as the study neared completion that it would be very interesting to know why people had chosen this particular program. This was a question I did not ask and if another study is done it should be included. People did spontaneously offer the information that they chose the program because it was innovative. Others referred to its proximity to their home. A few mentioned in passing that they wanted something different in their lives and had heard that the program was unique. I would recommend asking the question of why people chose this program as the answer to that might shed more light on why mid-career professionals participate in higher education. Insight into those reasons might help provide collateral for administrations that would like to begin non-traditional programs.

I think a longitudinal survey of mid-career professionals' experience of non-traditional education might be very useful. I found that people who had completed the MAL program in 1996 and 1997 had time to reflect on the impact of their learning in ways that those in 1998 and 1999 who were still in their course of studies had not had time to do. A longitudinal study might be able to account for and recognize differences that occur during the year which this study was not able to do.

I would also recommend that a question be included that asks whether participants are considering or have changed their careers as a direct outcome of the MAL program. Two women explained to me during the telephone interview that they had made decisions to leave their present employment because of their learning in the first summer residency. They had not come in to the program with that goal but when they reflected on their learning and evaluated where they were in their work environments they realized they had to change. It seems to me that that is a promising outcome of a graduate program and that deserves more study. Beyond research of this specific program or others like it, a comparison of such programs and different aspects of them would be useful. Comparisons could focus on participants' experiences in residential aspects including group-learning activities, as well as their experiences in distance–learning and individual research projects in graduate programs focused on personal development. Finally, research is needed to establish more clearly the nature of long-term learning outcomes of such non-traditional programs and activities such as problem-based learning.

Researchers' Reflections

I would like to provide some of my reflections on my work and experience while completing the activities required for this thesis. To begin with it is hard to accomplish all the tasks associated with questionnaire design, layout, statistical data entry, computations, evaluation, and formatting tables and documents. I found I needed other people's expertise to succeed at these tasks. I enjoy a process of finding solutions to problems and these were issues I could find help with

I was surprised at how people responded to the questionnaire. Most were positive and completed the questionnaire diligently. Some, however, criticized the layout and

questioned the rigor of the instrument. Still others appeared to be so focused on their own issues that they chose to interpret every question in their own way, changing questions. rewriting responses and filling the open-ended spaces with what might be called "ranting".

I found the Likert scale easy to work with and it translated well to data. However. I found the questions that ranked experiences very difficult to translate to data. I also found it time-consuming to do that coding and the demographic coding. I was overwhelmed by the amount of data that was generated. I did a huge amount of work around the data and I did not use much of this analysis in the final report. This relates to my own learning curve on how to discuss statistical material. I have learned a great deal. I have struggled and I have found people who could provide guidance.

The questionnaire's qualitative comments were most interesting. People provided a lot of detail about what they experienced. It was sometimes difficult to follow their line of reasoning but mostly it was self-evident. It was interesting that the 168 people seemed to agree that their self-knowledge increased and that problem-based learning was very significant to them.

I really enjoyed conducting the telephone interviews. After completing the questionnaire and receiving the feedback, it was straight forward to find the focus for the qualitative part of this study. I enjoyed speaking to people. Everyone was helpful and I found myself laughing with them. Sometimes as people spoke about their life changes I found I was covered in goose bumps and choked up. There were powerful moments as people told me their story. I found the tracing of themes to be an ever-unfolding experience. Each time I read the transcripts or listened to the tapes I found new

expressions and tone that helped to clarify people's intent. My enjoyment of these items probably corresponds to my skills as an English teacher and my fascination with people.

The actual writing of the thesis seemed to be an endless singular event. I have experienced great exhaustion and moments of exhilaration while working through this process. The writing was endless – months of thinking, writing, editing, proof reading, writing again and again editing only to begin again. However, eventually, I realized that as I finished each task it was really complete and I could go on to the next task to complete.

The binding of this document holds much satisfaction for me.

October 2000 found me bogged down in the work I was doing on statistics when my love died. That event shattered me and I began my personal struggles with grief and loss. I experienced with the death of Gerry a malaise, a shutting down. I was unable to function in any way that I had previously been able to. I lay on the couch and cried. In November I got up and went back to work. I gave myself permission, when I was home, to do whatever I needed to do, walk, drink red wine, talk, cry, just sit for hours in exhaustion. I made myself work on my thesis. I traveled to Saskatoon for a conference. I bought Christmas gifts for family and friends. I grieved. In January I took the opportunity to travel to Japan. There I realized that my only job was to grieve Gerry's death, then to heal and become a whole person. I came home in February and tried to get back to work on my thesis. But I could not do it. Every time I tried I became distressed, upset, angry, sad and anxious. Here was my problem – how do I complete a thesis under these circumstances? Before I left for Japan I found a book called "The Grief Recovery Handbook"(1998), I opened that book and began to read. It told me: " Time itself does

not heal; it is what you do within time that will help you complete the pain caused by loss." (p.32). I wanted to be healthy so I began the work. It is an excellent book and I found that as I worked through each chapter my thesis work became easier.

What does one learn in this type of process? I have passed the year mark and these are things I now know. (1) I have learned to process emotion. (2) I have learned that my emotions will not kill me no matter how powerful. (3) I have learned that life marches on without regard to me being on the couch. (4) I have learned that I cannot do two all-consuming activities without giving them both time and expression. (5) I have learned that writing a thesis is isolating work. (6) I have learned that completing a thesis is highly personally rewarding.

In reflection I know I am strong because I have worked through my grief. I know that I am strong because I have completed a thesis. I have recognized skills in organization, commitment, time management and perseverance. I have also created space in my life for walking, thinking, being with friends and alone time. I am aware that the shock and grief is leaving my body and I that I have my concentration back. I have worked hard at grieving and I am healthier for it.

I am fortunate to have worked through this project. My Master's course work was formal in structure, not rigid nor without creativity but still more formal than the program I studied for this thesis. By studying the MAL program I realized that there are many ways to accomplish learning and in a sense it gave me permission to explore my grieving, my thesis work and other elements in my world. It is the acknowledgement that learning happens in all areas of one's being. That element was missing in the program I attended but not missing in my last year of thesis and grieving.

Summary

My impression from the research is that problem-based learning is the single most significant method of learning for the participants of this program. Some described their learning as "magic" and many indicated that this graduate program had given them lifelong learning skills. I found as I researched that I wanted to know more about specifically how and why this learning occurred. What exactly happened to these participants? What is it about problem-based learning that facilitates deep level of insight both into the subject material and the personality of the participants? Is it specifically problem-based learning? Is it the context – the five intensive weeks in a residential environment that facilitates the level of learning? These are questions that I did not study and could be lines of inquiry for future research. As Savin-Baden (2000) states " there is little data that has explored the impact of problem-based learning upon staff and students' lives" (p.5).

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APPENDIX A
Questionnaire

Note: The MAL program name which appeared on the original questionnaire has been deleted to protect the anonymity of the program.

Problem-Based Learning and Self-Assessment in the MAL Program:
A Study of Participants' Experience in the Master of Arts in Leadership and Training at Glendale University

We need your help! We wish to study your personal experiences with two innovative aspects of the MAL summer residency programs: the problem-based learning activities of Summer Residency 1, and the self-assessment process (using the Learning Agreement) throughout the MAL program. There is international interest in the effectiveness of these approaches to graduate education, but we are lacking your perspective - the learner's voice.

Your participation in this study is strictly voluntary. Your time is very much appreciated. We ask that you complete the following questionnaire, which will take approximately 20 - 30 minutes. As well, we will be contacting some of you for a telephone interview. If you are willing to be interviewed, please indicate your interest on the last page of this questionnaire.

Glendale University is supporting this research towards improving the MAL program. The results of this study will also be presented in scholarly journals and conferences, and a final report will be made available to Glendale University. Finally, part of this research is being used as material for a Master's degree at the University of Alberta.

We would like to acknowledge our appreciation by offering a draw for four $50.00 *Chapter's* gift certificates. If you wish to enter complete the section on the last page and return by March 5, 2000. The envelope containing your name will be kept separately from the completed questionnaire to ensure your confidentiality.

Caroline Stuart, Graduate Student
University of Alberta
caroline@oanet.com

General Information: circle the appropriate response

1.	Year you began the MAL program:	1996	1997	1998 1999
2.	Your gender:	Female	Male	
3.	Your age group when you began the MAL program:	18-28	29-39	40-50 51-61 62-72
4.	Highest level of education completed before you began the MAL program:			
	High School	Post-Secondary Certificate	Trade Certificate	
	Professional Certificate	Bachelor's Degree	Master's Degree	
5.	Area of employment before you began the MAL program:			
	Health Care	Financial Services	Business Services	
	Social/ Civic Services	Human Resources	Self-employment	
	Education	Retail	Other:_____	
	Government	Industry		
6.	Province you were living in before you began the MAL program:			
	BC AB SK MB ON QC PI NS NB NF NT YK			

Problem-Based Learning in the MAL Program

Note: Problem-Based Learning refers to the intensive team problem-solving exercises during summer residency 1.

circle the appropriate response

7. Overall, how useful were the problem-based learning activities for your own long-term learning?	Not useful Somewhat useful Very useful 1 2 3 4 5 6 7 8 9 10
8. How useful were the actual problems to your long-term learning?	Not useful Somewhat useful Very useful 1 2 3 4 5 6 7 8 9 10
9. What long term <u>personal</u> learning for you was the most important result of your participation in the problem-based learning activities?	Please rank order your top 3 responses: _____ Confidence _____ Understanding different perspectives _____ Managing group process _____ Self-knowledge _____ Communicating your ideas _____ Problem analysis _____ Decision making process _____ System thinking _____ Creating new vision _____ Leading _____ Other:
10. How useful to your long term learning was the process of working with a group to generate solutions?	Not useful Somewhat useful Very useful 1 2 3 4 5 6 7 8 9 10
11. How useful to your long term learning were the faculty observations and feedback during the problem-based learning activities?	Not useful Somewhat useful Very useful 1 2 3 4 5 6 7 8 9 10
12. By the end of MAL Residency 1, how comfortable were you with the problem-based learning process?	Not comfortable Sometimes comfortable Frequently comfortable 1 2 3 4 5 6 7 8 9 10
13. Would you recommend the continued use of problem-based learning in its current form for the MAL program?	Not recommend Somewhat recommend Very recommend 1 2 3 4 5 6 7 8 9 10

14. Please share any additional comments regarding the usefulness of the MAL problem-based learning activities to your own long-term learning? _____

_____

_____

Self-Assessment using MAL Competencies

circle the appropriate response

15. Do MAL competencies capture what you consider the most important leadership competencies?	Not very much Somewhat Very much 1 2 3 4 5 6 7 8 9 10
16. Was it easy to assess yourself using the MAL competencies?	Not easy Somewhat Very easy 1 2 3 4 5 6 7 8 9 10
17. Was your own self-assessment consistent with the faculty assessment of your competencies?	Not consistent Somewhat consistent Very consistent 1 2 3 4 5 6 7 8 9 10
18. Was self-assessment important in improving your overall leadership competencies?	Not important Somewhat important Very important 1 2 3 4 5 6 7 8 9 10

19. Was self-assessment important in improving your research competencies?	Not important 1 2 3 — Somewhat important 4 5 6 7 — Very important 8 9 10
20. Was self-assessment important in improving your communication competencies?	Not important 1 2 3 — Somewhat important 4 5 6 7 — Very important 8 9 10
21. Have you made use of your MAL competencies at work?	Never 1 2 3 — Sometimes 4 5 6 7 — Frequently 8 9 10
22. Have you continued to self-assess your MAL competencies in your workplace?	Never 1 2 3 — Sometimes 4 5 6 7 — Frequently 8 9 10

23. Please share any additional comments regarding the MAL competencies:

_____

_____

_____

Self-Assessment and the Learning Agreement in the MAL Program

circle the appropriate response

24. Had you ever done systematic self-assessment prior to the MAL program?	No Yes
25. Had you ever kept a learning journal prior to beginning the MAL program?	No Yes
26. What was your attitude towards writing in a personal learning journal before the MAL program?	Not Positive 1 2 3 — Sometimes Positive 4 5 6 7 — Very Positive 8 9 10
27. How much did you use the learning agreement throughout the MAL program?	Never 1 2 3 — Sometimes 4 5 6 7 — Frequently 8 9 10
28. To what extent did you feel you could be completely honest in the self-assessments you posted in your learning agreement?	Not honest 1 2 3 — Sometimes honest 4 5 6 7 — Frequently honest 8 9 10
29. Did you feel that your learning agreement comments were treated with respect by faculty?	Not respectful 1 2 3 — Somewhat respectful 4 5 6 7 — Very respectful 8 9 10
30. To what extent were faculty comments in the learning agreement helpful to your long-term learning?	Not very helpful 1 2 3 — Somewhat helpful 4 5 6 7 — Very helpful 8 9 10
31. Would you consider the learning agreement an important aspect of your learning in the MAL program?	Not important 1 2 3 — Somewhat important 4 5 6 7 — Very important 8 9 10
32. Do you continue to maintain a learning journal of some kind?	Never 1 2 3 — Sometimes 4 5 6 7 — Frequently 8 9 10

33. Please share any further comments regarding your experience with using the learning agreement as a tool for self-assessment: _____

_____

_____

_____

34. What areas of the MAL program did you find contributed most to your long-term learning? Please rank order your top three (3) responses:

_____Ongoing self-assessment
_____Learning agreement
_____Presentations by faculty, learners, and guest speakers in Residency I and II
_____Major project
_____Computer learning opportunities
_____Problem-based learning in Summer Residency I
_____Faculty responses to your work
_____Dialogue with peers
_____Distance learning courses
_____Observing peers in action
_____Other:_____

35. What long-term changes within yourself have you observed are directly related to the self-assessment portion of your MAL program? Please circle all the responses that apply to you.

a) Patterns of personal behaviour
b) Patterns of work behaviour
c) Values related to leadership
d) Self-knowledge
e) Personal relationships
f) Work relationships
g) Attitudes towards your work
h) Other:_____

36. What long-term changes within yourself have you observed that directly relate to the problem-based learning portion of your MAL program? Please circle all the responses that apply to you.

a) Patterns of personal behaviour
b) Patterns of work behaviour
c) Values related to leadership
d) Self-knowledge
e) Personal relationships
f) Work relationships
g) Attitudes towards your work
h) Other:_____

37. Any additional comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Thank you for your time and commitment. Your participation in this study is very much appreciated.

To enter the draw for one of four (4) *Chapter's* gift certificates worth $50.00, please print your name and address below, place this page in the blank envelope and return it with the questionnaire by March 5, 2000, in the stamped, addressed envelope provided.

Name:_____

Address:_____

If you are willing to participate in a telephone interview regarding your MAL learning experiences please read the following and then provide the information below:

I would be interested in being contacted for a telephone interview lasting approximately 30 minutes, arranged at a time convenient to myself. I understand that the purpose of the interview is to explore further my learning experiences in the MAL program. Any information I provide will be kept strictly confidential. The interview will be tape-recorded, transcribed and the data secured at the University of Alberta until the conclusion of the research, when all data will be destroyed. My comments will be reported under a pseudonym with all identifiers carefully removed or disguised. My signature here in no way obligates me to participate in this interview. I may choose to withdraw from the interview at any time, and request that my data not be used in the study. The sole purpose of the information is to provide data for an interpretive study entitled "Problem-Based Learning and Self-Assessment in the MAL summer programs: A Study of Participant Experience in the Master of Arts in Leadership and Training Program at Glendale University".

Signature:_____

Name:(Print)_____

Phone number - day time:(___)_____evening:(___)_____

E-mail:_____

Best time to call:_____

Thank you again for your time and consideration. If you have any questions or concerns please contact:

Caroline Stuart
University of Alberta
(780) 451-1114 office, (780) 451-2267 fax
(780) 424-9643 home
caroline@oanet.com

APPENDIX B
Telephone Interview

Telephone Interview

For each telephone interview I needed to have their name, address, the year they began the MAL program and what their occupation was at the time of beginning the program. After I obtained that information I needed to do a verbal consent with each telephone interviewee.

Each participant had already completed a written consent form. A verbal consent needed to be completed now that the telephone interview was happening.

Verbal Consent

1. Do I have your permission to interview you?
2. Do I have your permission to tape this interview?
3. Do I have your permission to have the tape transcribed?
4. You need to know that you may withdraw from this interview at any time, and for any reason.
5. You may request at any time that the information we tape be destroyed and not used in this study.
6. This data is being collected for a report, a thesis, scholarly articles and conferences and the transcripts will only be seen by the research team.
7. Do you understand these items and do I have your permission to continue?

Problem-based Learning Questions

8. What for you would be the most outstanding learning and development that you experienced through problem-based learning activities of the MAL program?
9. Was problem-based learning an important part of your education?

10. What are some evidences of your long-term learning through problem-based learning activities in your work environment or personal life?
11. How have you incorporated problem-based learning in your work now?

Self-Assessment Questions

12. What for you has been the most outstanding learning and development that you experienced through the self-assessment activities of the MAL program?
13. Was self-assessment an important part of your learning?
14. What are some evidences of your long-term learning through self-assessment activities in your work environment or personal life?
15. How have you incorporated self-assessment in your work now?

APPENDIX C
Email Communication

Telephone Interview Email

-----Original Message-----
From: Caroline Stuart [SMTP:cs_hhsa@telusplanet.net]
Sent:
To:
Subject: Telephone Interview

Hello:

My name is Caroline Stuart and I requested permission to do a telephone interview with you in regards to your experience with the MAL program. I hope you are still able and interested in speaking with me.

I would like to set up a time to speak with you. I realize that it is a busy summer for all of us and I hope we can find 30 to 40 minutes to do this interview. I would like to offer, April 10 - 14, either daytime or evening. If you could respond and give me a couple of times that would work for you during that week then I can set up a schedule and let you know which time and date I will call.

As a reminder the questionnaire and telephone interview focus on the two summer residencies and your experience with problem-based learning and self-assessment techniques.

I am looking forward to speaking with you soon,
Caroline
e-mail: cs_hhsa@telusplanet.net
daytime phone: (780) 451-1114
evening phone: (780) 424 – 9672

APPENDIX D
Thank you Note

Dear

Thank you for the time you gave me for the program research telephone interview.

Your input was helpful and appreciated.

If you would like a copy of your transcript please contact me at the address listed.

caroline@oanet.com

Sincerely.

Caroline Stuart

APPENDIX E
Curriculum Vitae

Caroline Stuart

9638 108A Avenue **Telephone**
Edmonton, Alberta **E-mail:** caroline@oanet.com

Highlights of Qualifications

- Committed to high quality education for adult learners
- Several years experience teaching in a variety of settings
- Well organized and thorough in completing complex projects
- Widely traveled: international living and working experience
- Participate in life with enthusiasm, professionalism and integrity
- Outstanding strength in building long term relationships with clients

Relevant Professional Experience

Research/Teaching

- Researched housing options for persons with disabilities
- Quantitative research on mid-career professional learning in a non-traditional program
- Researched curriculum guides and developed a syllabus for five month course: selected books, determined time lines required, set evaluation standards and grade standings
- Prepared and presented the course material for the English 30, 33 and Social Studies 30,University entrance course, to facilitate students' success in the government Departmental exam
- Prepared and presented an 80 minute session on communication skills to adults
- Reviewed current media material to identify export opportunities for Alberta business in Asia: compiled summations for each area

Organization/Coordination

- Organized and implemented client intake procedures for Handicapped Housing Society
- Developed and implemented a Work Experience Program by developing a syllabus from the Alberta curriculum; contacting employers; arranging appointments; making inspections visits; and promoted a business – education link
- Compiled information, developed and delivered a seminar presentation and hand-outs for communication workshop
- Developed itineraries and arranged appointments for business travelers coming to Alberta for Alberta Economic Development and Trade
- Responsible for classroom management, discipline, learning and achievement

Communication/Public Relations

- Demonstrated listening skills in creating options for clients who have housing needs
- Conducted and compiled qualitative data from telephone interviews
- Experience teaching students both internationally in China and in an Edmonton international school
- Proven ability in facilitating in settings with various learning needs, language levels and cultural backgrounds using a variety of learning methods
- Worked with adults in presenting academic information and relating comments, questions and life examples back to the material being covered
- Contacted Alberta companies to provide current trade opportunities and to promote Alberta
- Economic Development international business trips
- Approaches adult learning from the intent that adults come with knowledge

Caroline Stuart **Resume 2**

Employment History

Housing Registry Coordinator 1998 – 2001
Handicapped Housing Society of Alberta, Edmonton, Alberta

Educator 1992 – 1998
St. Luke's College, Edmonton Alberta

Educator 1992
Kildare Elementary School, Edmonton, Alberta

Facilitator 1991
Alberta Summer Institute for Petroleum, Edmonton, Alberta

Research Assistant/Media Relations 1989 – 1990
Alberta Economic Development and Tourism, Edmonton, Alberta

English Teacher 1987 – 1989
Sichuan, People's Republic of China

Education

Master Degree in Adult and Higher Education (in progress) 2001
University of Alberta, Edmonton, Alberta
Bachelor of Education
University of Alberta, Edmonton, Alberta 1992

Training

Creative Writing 1996 – 1999
Faculty of Extension, University of Alberta, Edmonton, Alberta

Seminars on Mediation, Cross Cultural Communication 1995

FITT International Marketing Course 1994
Grant MacEwan Community College, Edmonton, Alberta

Volunteer

- Board member of the Boyle McCauley Newspaper
- Membership coordinator and past Board member of Innroads Housing Cooperative
- Member of T.A.L.E.S. Edmonton

Interests

- Story Teller at the Annual Fort Edmonton Fort Edmonton Story Telling Festival

References available upon request