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Teachers' Interfaculty Mentorship Efforts: T.I.M.E.
A Study Evaluating the Effects of a Formal Mentoring Program on First-Year At-Risk Students

by

G. Salinitri

A Dissertation
Submitted to the Faculty of Graduate Studies and Research
through the Faculty of Education
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy at the
University of Windsor

Windsor, Ontario, Canada

2004

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Teacher's Interfaculty Mentorship Efforts - T.I.M.E.
A Study Evaluating the Effects of a Formal Mentoring Program on First-Year At-Risk Students

Time is one of life's priceless commodities, but, unlike other commodities, we cannot save, borrow, or recover lost time. However, we can choose to use it. Delzel (1985)

ABSTRACT:

The purpose of this study was to evaluate a unique formal mentoring program at a midsized comprehensive university in Ontario. The retention rates, grade point averages (GPA) and number of courses completed by the students who participated (experimental group) were higher than the retention rates, grade point averages, and number of courses completed by the control group consisting of an equal number of first-time, full-time, credit-seeking students with programs of study and similar exiting secondary school averages (i.e., < 75%). Results from surveys conducted to measure self-concept and satisfaction were not found to be significantly related to mentoring. However, the results of mentor effectiveness and evaluation suggested program satisfaction and effectiveness.

Interviews were also conducted and analyzed using qualitative research methods to enrich the empirical findings. Using an explanatory approach the qualitative analysis linked the program to the theoretical foundations of the study.

Findings from this study illustrate the importance of institutions investing in human capital (e.g., at risk students) through a mutually beneficial mentoring program like T. I.M.E., a practicum course designed for preservice teachers to prepare them as mentors for their students. There was clear empirical evidence that this formal mentoring program is effective with respect to achievement (GPA), failure rates and retention. Also, the qualitative data provided an enriched understanding of the effectiveness of the program to both mentee and mentor. Finally, these data clearly showed that the program

could be linked to various configurations of Social Capital Theory as the executive control mechanism tying together the Theory of Involvement, the Theory of Departure and the Theory of Social Learning, with the Theory of Involvement taking the lead as the most compelling link to the success of mentoring.

Acknowledgements

In pursuing my doctorate, I have learned many lessons. The most important lesson was that this journey was only accomplished through the support, mentoring, patience and encouragement of so many people. First and foremost, I must thank Dr. Larry Morton, my adviser. His intellectual guidance, mentorship and unfailing support helped me develop the confidence and the skills needed to become an innovative and critical-thinking researcher. His impeccable pedagogy, insightful mind and unyielding tenacity are incomparable.

Along with Dr. Morton, my dissertation committee provided the expertise and support to help me design and implement a mixed-methodology study that was the foundation of strength for the results and conclusions drawn. I feel so fortunate to have such an inspirational team. Dr. Kara Smith exemplifies the role of an intellectual, insightful, caring and compassionate advisor and friend. She has been an unsolicited source of strength in keeping me focused. Dr. Rosemary Young has been a truly inspirational role model and mentor. Dr. Lesley Lovett-Doust has been instrumental in supporting my program from its conception and then in advising me on the dissertation. Her generosity throughout has been unconditional; she is a mentor and a "student-centered" professor. I'm no less indebted to my external examiner, Dr. Patrick Solomon from York University. His humble mannerism, professionalism and advice have motivated me in pursuit of expanding my research in the area of mentoring.

Apart from their purely moral support, the Dean and the entire Faculty of Education at the University of Windsor have had a powerful influence on my growth as an educator and researcher. And, without my students, who have been my real inspiration, this dream would not be a reality. I can't forget the formidable John Staley,

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my Secondary School Principal, my closest friend and coach Karen McNeil, and my

assistant Sophan Tan, who shared in endless hours of collecting and inputting data.

My deepest thanks and respect go to my family, as they have been a source of

unyielding love and support. My husband, Vince, has been my rock. My daughters,

Francine and Dina have been my role models. And my parents, Giuseppe and Leonarda

have shown me that hard work, perseverance and love can get us through any challenge.

Unequivocally, this work would not have been possible without the faith, trust and

strength of all those who have supported me.

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Chapter 1

Introduction:

The future belongs to societies that organize themselves for learning.
What we know and can do holds the key to economic progress.... (Marshall &
Tucker, 1992)

Over the last decade, a growing percentage of public institutions offering

undergraduate studies began to organize formal mentoring programs (Wunsch, 1994).

This was premised on the graduate model of mentoring in higher education as well as the

successful senior-junior mentoring relationships often developed formally or informally

within the business sector. In fact, planned mentoring programs pairing an undergraduate

student with a faculty, academic advisor or student peer of the institution have been

implemented at universities across North America.

Apparently this surge of formal mentoring programs is in response to the issue of

student retention for the universities. In Canada universities are now required to supply

data on key performance indicators (KPI), which include graduation rates and average

time to graduate. Many studies of retention use graduation as an indicator for retention

(Karp & Logue, 2003). Some researchers (e.g., Tinto, 1987) have identified student

completion rates as a fundamental measurement of the institution's success in meeting the

needs of its students. Research into the factors that impact persistence (program

completion) is crucial for institutions in order to develop specific policies and practices

that enhance retention. In terms of the university registrar's office, retention rate refers to

how many students in a particular group remain in university during a given time frame

(e.g., one semester, one year, graduation).

According to the Council of Ontario Universities, full-time university enrollment will

likely increase by approximately 25 to 40% by the end of the next decade (COU, 2003).

As more students enter university there may be an increase in the diversity of learning

styles and in the factors that adversely affect the transition of these first-year students from high school to university. These factors could include: an inability to meet the academic standards of the university; an inability to adapt to the new social and academic environment; changes in personal goals and aspirations; a lack of motivation and clearly-defined goals; priority of other commitments, such as work or family; financial difficulty; and incongruence between the institution's orientation and approach and that desired by the individual (Lang & Ford, 1992).

The increase in enrollment along with the diversity of learning styles translate into a growing need for increased academic and counseling programs that will help improve student retention particularly for at-risk students who are defined for the purpose of this study, as students with OAC exiting averages of 70% or less. Universities not only need to accept these at-risk students, but they need to make their transition from high school to university fluid by providing them with the skills, knowledge and confidence necessary to successfully fulfill their degree requirements. These students are a particular challenge because they generally have poor study habits, study alone, usually do not seek help, and often do not know how to seek help. In other words, they often find themselves dropping out because they were isolated and unable to seek and acquire the tools for success.

Studies in higher education have indirectly linked student retention to the implementation of a mentoring program (Moseley, 1999; Kelly & Llacuna, 2000). Tinto (1987, 1975) and Pascarella and Terenzini (1977) have suggested that informal interaction with faculty is one of the key elements to students' social and academic integration. In fact, Astin's (1977) theory of involvement claims that having a personal connection to an educational institution and a high degree of involvement in the education process correlate positively with student retention.

This study evaluates a formal mentoring program designed for first-year at-risk students at the University of Windsor. Specifically, this mentoring program was designed to enhance the first-year experience and to retain the involved students through a supportive relationship between mentor and protégé/mentee. For the purpose of this study, the mentee is defined as the person who makes an effort to assess, internalize and use effectively the knowledge, skills, insights, perspective or wisdom offered by the mentor (Shea, 1997). While there is an absence of experimental evidence about the benefits of mentoring as an instructional strategy (Jacobi, 1991; Merriam, 1983; Wunsch, 1994), more research is needed to examine factors that impact on the outcomes of formal mentoring.

Framing the Study

> *Effective advisory systems support the development and success of*
> *individuals as learners by understanding and working with the specific social,*
> *emotional, intellectual, and physical dimensions and learning requirements.*
> *The Learner's Edge, Toronto District School Board, (Carere, 1998)*

Using an explanatory mixed methodology approach, the effects of an Interfaculty

Mentorship Program for retaining at-risk first-year students in the Faculty of Arts and

Social Sciences and the Faculty of Science was examined. At-risk students, for the purpose

of this study, are defined as students entering university directly from high school with

entrance averages of 70% or less. Some of these students are considered at the last minute

on the basis of records that indicated their average did not fully reflect their potential.

Using the expectations of the Ministry of Education document for secondary schools,

'Choices into Action' (OMOE, 1999), the pilot was developed to in-service teacher

candidates as mentors for first-year students who may be at- risk. The program is a

complement to existing retention programs (e.g., University 101, SIRC [student

information resource center], STEPS [skills to enhance personal success], and

"turnaround" and "probation" workshops offered through the Faculty of Arts and Social

Sciences and the Faculty of Science). The interfaculty approach was intended to build

collaboration and reinforce retention initiatives across the curriculum.

The study is grounded in Social Capital Theory (Coleman, 1988), which forms an

umbrella over the links between mentoring and (1) Social Learning Theory (Bandura,

1986), (2) Astin's Theory of Involvement (Astin, 1972), and (3) Tinto's Theory of

Departure (Tinto, 1975). Figure 1 shows the conceptual framework of the relationships

between the theories and their hypothetical impact on mentoring programs as assessed by

academic and personal outcomes.

Figure 1. Mapping of social capital theory onto the theory of departure, theory of

involvement and the social learning theory as it relates to formal mentoring and outcomes.
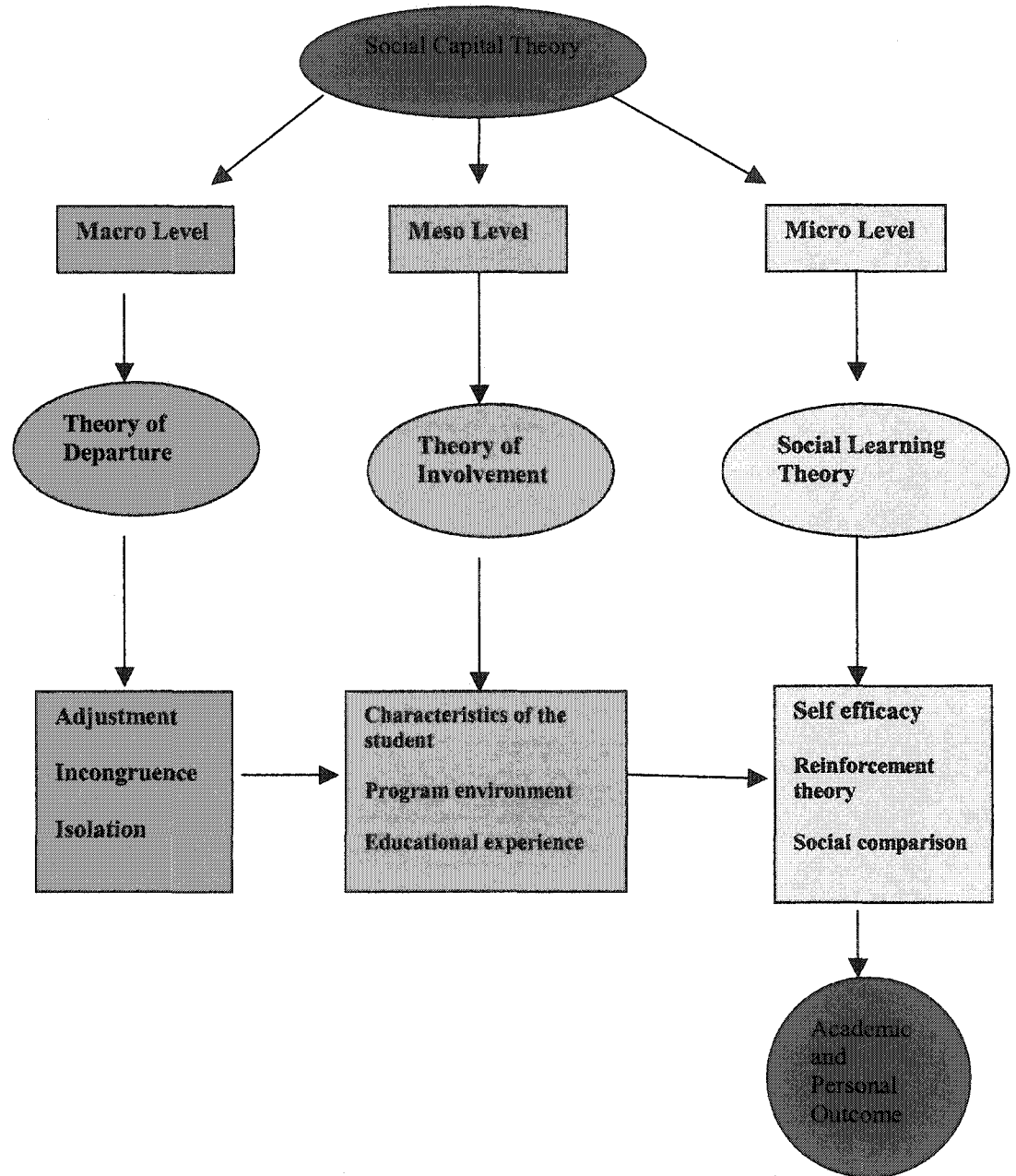
The first phase of the study (the quantitative phase) was designed to determine

whether this mentoring program significantly influenced student academic success and

retention. Five quantitative indicators of academic success were examined: (1) the students' ability to achieve satisfactory grade point averages as defined by the participating university guidelines on satisfactory academic progress, (2) the students' ability to complete a satisfactory percentage of courses as defined by the university guidelines, (3) the status of students for retention in the following year of the program, (4) the students' self-concept, (5) the students' first year experience as measured by a survey, (6) the students' assessment of the program and mentor, and (7) the mentor self-assessment survey.

The second phase of the study was qualitatively designed to explain the nature of the T.I.M.E. mentorship model from the perspective of the participants. More specifically it sought to link the components of the program with in a theoretical framework with the intent of explaining the relationship between social capital theory and a formal mentoring program.

The following were the research questions posed in Phase I:

1. Are there differences between the retention rates, cumulative GPA's, or number of courses failed in a year for students who participated in a mentoring program, as opposed to comparable students who did not participate in a mentoring program?

2. Are mentored students more satisfied with their first-year experience in university than non-mentored students?

3. Are mentors satisfied with the outcome of the program?

In Phase II of the study, the research question addressed the links between mentee/mentor thoughts and behaviors with the various configurations of social capital theory. Semi-structured interviews were conducted randomly with mentors and mentees at

the end of each semester. The weekly journals were collected and analyzed for data. And,

member checks (clarifications with the interviewees) were conducted to verify the

findings.

Chapter 2

Review of Literature

Introduction

In business management and higher education mentoring is highly promoted as an intervention (Kram, 1984) to evaluate retention and satisfaction. Benefits, including career advancement, enhanced individual development, and increased academic persistence have been attributed, by Kram, to different mentoring relationships.

The focus of the present literature review is on mentoring programs for undergraduate students and the theoretical foundations related to the development of such programs. This review begins with an overview of the foundation of mentoring principles, followed by the application of social and cognitive theories related to mentoring, and concluding with issues of mentoring in higher education related to mentoring program evaluation.

Specific topics in the review include:

- An historical overview of mentoring and its definitions

- The theoretical framework of social capital as it relates to mentoring

- Retention issues relating to first-year students

- The theoretical or conceptual basis of mentoring in relation to academic success and persistence

- The effectiveness of mentoring programs

Overview of Mentoring

The word "mentor" originates from Homer's *Odyssey* (Homer, 1880). Homer used the word mentor to refer to a wise and trusted friend to whom Odysseus entrusted his son, Telamachus. In Odysseus' absence, the advising and guidance of his son became the responsibility of Athena. In her surrogate-father role, Athena was known as Mentor. The relationship was intended to touch upon every facet of Telamachus' life including the physical, social, spiritual, moral, intellectual and political.

The original guiding-figure known as Mentor has evolved to take on many images. It has adapted to the particular scope of research investigation being conducted in mentoring or to the setting in which the mentoring relationship occurs (Merriam, 1983). Jacobi (1991) concluded that the phenomenon of mentoring takes one definition when viewed from the field of business management (learning from the experience and expertise of others) and assumes different dimensions from the perspective of adult development, and then, even more diverse dimensions in the field of higher education normally at the graduate level between the advisor (mentor) and the protégé (graduate student). Wrightsman (1981) cautioned about the vagueness of such definitions. The researcher's concerns were that the term became loosely used, leading to conclusions that were limited to the use of the particular procedures. Thus, in Wrightsman's view, the definitional confusion devalued the actual concept of mentoring.

In the educational field a variety of definitions of mentoring are used. Mentoring is regarded as a process by which people of superior rank, special achievements, or prestige, instruct, counsel, guide, and facilitate the intellectual and/or career development of those

identified as protégés (Blackwell, 1989). It also is viewed as a form of professional socialization whereby an experienced individual acts as a guide, role model, teacher and patron of a less experienced, usually younger, protégé.

Flaxman (1988) developed a concrete and synthesized definition of mentoring in education. He defined mentoring as a supportive relationship between a youth or young adult and someone more senior in age and experience, who offers support, guidance and assistance as the younger partner goes through transitions, difficult periods, takes on an important task, and/or corrects an earlier problem. With this type of mentoring, it was found that mentees identify with, and form a strong interpersonal attachment to their mentors. The mentees become able to do for themselves what their mentors have done for them. To succeed, Flaxman found that the mentoring must occur between a younger person and an older person who is ahead of the mentee, but not removed by great social distance. Therefore, through the mentoring relationship, the mentee can achieve a modest goal, already achieved by the mentor.

Levinson (1978), following an extensive research study on mentoring in relation to adult development, viewed it as synonymous with parenting. The researcher further noted that the most crucial developmental function the mentor fulfills is to support and facilitate the mentee's realization of the "dream" or vision of adulthood. Daloz (1987) described mentors as guides directing the younger toward the different developmental changes involved in life.

Schlossberg (1984) offered yet another definition and considered mentoring to be a mutually beneficial relationship that assists both the development of the mentor and the

protégé. Schlossberg further stressed the importance of a mentor providing psychological support and practical guidance through difficult stages of development toward adulthood.

Flaxman, (1984), Levinson (1978), Schlossberg (1986) were primarily thinking about mentoring youth; turning to the field of higher education, Moses (1989) viewed mentoring as a relationship between a professor and an undergraduate or graduate student in which the mentor takes the mentee under his/her wing assisting the student in setting goals, developing skills, and successfully entering both academic and professional circles. From this perspective, mentoring is regarded as a means of facilitating a student's intellectual development while ensuring his/her academic, personal and professional success.

The term "mentor" has become synonymous with role model, coach, guide, sponsor, friend and advisor. Carr (2001) identified mentoring, coaching, teaching, and supervising as having many similarities. They all require the same interpersonal skills, involve learning, have an impact on career development, and are often interchangeable. Mentoring is a learning process as well as a teaching process. The mentor/mentee relationship is one of mutual empowerment. However, the mentor ordinarily has greater skills, experiences, and wisdom (Carr, 2001). Mentor is synonymous with leadership, and philosophically, the following quote is appropriate:

> *The goal of most leaders is to get people to think highly of the leader...But the goal of the exceptional leader is to get people to think highly of themselves.*

> *Anonymous.*

Mentoring is about creating an enduring and meaningful relationship with another person. The focus is on the quality of that relationship and factors such as mutual respect, willingness to learn from each other and the use of deeper interpersonal skills. Mentoring is distinguishable from other retention activities because of its emphasis on learning in general and mutual learning in particular. In this relationship, both the mentor and the mentee take responsibility for maximizing the learning activity. For the relationship to work there needs to be a concrete value component for both the mentor and the mentee grounded in social and human capital theories, the theory of departure, the theory of involvement, and social learning theories.

Social Capital Theory

It's not what you know, it's who you know, is the common aphorism that sums up the conventional wisdom surrounding social capital (Woolcock & Narayen, 2002). It is the wisdom of experience where gaining membership to exclusive clubs requires inside contacts and those with friends in high places usually win close competition for jobs and contracts. When people fall on hard times, they count on their friends and family who constitute the safety net attached to self-efficacy. Therefore, the basic idea of social capital is that a person's family, friends and associations constitute an important asset, called upon in a crisis, enjoyed for its own sake and sometimes leveraged for beneficial performance or material outcomes. Further, communities endowed with a varied stock of social networks and civic associations are in a stronger position to confront poverty and vulnerability, resolve disputes and take advantage of new opportunities (2002). Conversely, the absence of social ties can have a serious negative impact.

Putman (2000) defines social capital as the features of social organization such as networks, norms and trust that facilitate coordination and cooperation for societal benefits.

Effectively, social capital is the product of human relationships and the resources that arise

from interactions and connections among people. It results from the bonds that unify

people in common purpose and the trust and security developed from the ongoing

relationship. Social capital also reflects the reality that social relationships are one of the

ways individuals cope with uncertainty, as they extend their resources and achieve

outcomes unattainable without assistance.

      Putnam (2000) noted that levels of social capital relate to traditional public policy

concerning crime, health and education. He documented the fact that areas with strong

social capital enjoy good educational performance, reduced crime levels and a higher

neighborhood quality of life. Reciprocally, communities with less social capital showed

lower educational performance and higher teenage pregnancy, child suicide and prenatal

mortality rates.

      In a study of Italian politics, Putman (2000) examined the social health of a

community through its democratic vibrancy. The flourishing democracy in northern Italy

was contrasted with the collapse of politics in the south. Researching Italian history,

Putnam found a strong tradition of voluntary association, trust and civic engagement in the

self-governing city republics of the industrialized north. This resulted in a flourishing

economy and healthy polity. By contrast, the more rural south was exploited by a Mafia

culture with little history of voluntary association causing mutual distrust and defection.

In the absence of strong social capital, democracy fell apart resulting in lack of economic

growth and poverty.

      Putnam (2000) applied this model to modern America in a book, "Bowling Alone",

which charted the collapse of American social capital across a range of indicators. Putnam

identified a public becoming increasingly detached from family, friends and social

structures, from the PTA to the political party to the bowling league. The frequency of

family dinners declined by one-third over 25 years, the number of times friends entertained

each other in their homes fell by 45% in the same time, and participation in clubs

collapsed by 50 percent. Putnam proposed that there was an association between these

trends and a weakening democracy, with lower voter turnout and collapsing civic

engagement.

On the positive side, Putnam (2000) envisioned deep parallels between the turn of

the 20th century and the turn of the 21st century. In both, there was generalized suffering

from major technological, economic and social changes that were destroying the stock of

social capital. Between 1890 and 1910, Putnam identified the invention of American civic

institutions of the 20th century including the Urban League and the Knights of Columbus

as key tools that improved the social capital in that era. Today, strategies for improving

social capital are embedded in the understanding of the theoretical framework.

Accordingly, networks of civic engagement that stem from past success at collaboration

can serve as a cultural template for future collaborations. The historical repertoire of

forms of cooperation that have proven their worth are available to citizens for addressing

new issues of collective action.

According to Putnam (2000) social capital is a *public good,* and like other public

goods, from clean air to safe streets, it is often not provided by private agents. It is most

often a by-product of other social activities. Social capital typically involves civic

engagement that relies on the trust and the reciprocity between people that in turn,

facilitate collective action for economic and political benefits.

Other theorists focus more on social capital as a resource that arises out of family

relationships and enables them to increase their human capital and thus gain greater

economic rewards. For example, Coleman's (1988) conception of "social capital" identified the importance of a network of sustained personal connections to convey expectations and conventional norms, which can also be acquired through rich and extensive interactions with adults. Coleman (1990) showed how long-standing features of social organization such as trust, norms and networks-all of which constitute social capital-foster spontaneous cooperation and coordination for the common good. According to the theory, the development of social capital by students is significant because it contributes to their readiness to internalize school norms and expectations. These expectations call for personal effort to develop the knowledge and skills that make up human capital, without which students may drop out of school unprepared for responsible participation in mainstream society.

Coleman (1990) explained how social structure shapes and constrains rational action through an understanding of relationship patterns between people. The source of trust was identified as a central problem in rational choice theory. In observing that differences in the nature of social networks affected the levels of trust among individuals within those networks, Coleman concluded that socio-structural context must be an important factor in construction of rational action. This led to further observations of the creation of outstanding obligations between two individuals constituting a bond between them as well as a resource from which people can draw in times of need. A basis for generalized trust is created when the pattern is in a social network. This opens the door to cultural and normative explanations for the formation of social capital. This theory provides the foundation for the conceptual framework of the present study (Figure.2).

Figure 2. Conceptualization of social capital theory in mentor/mentee relationship.
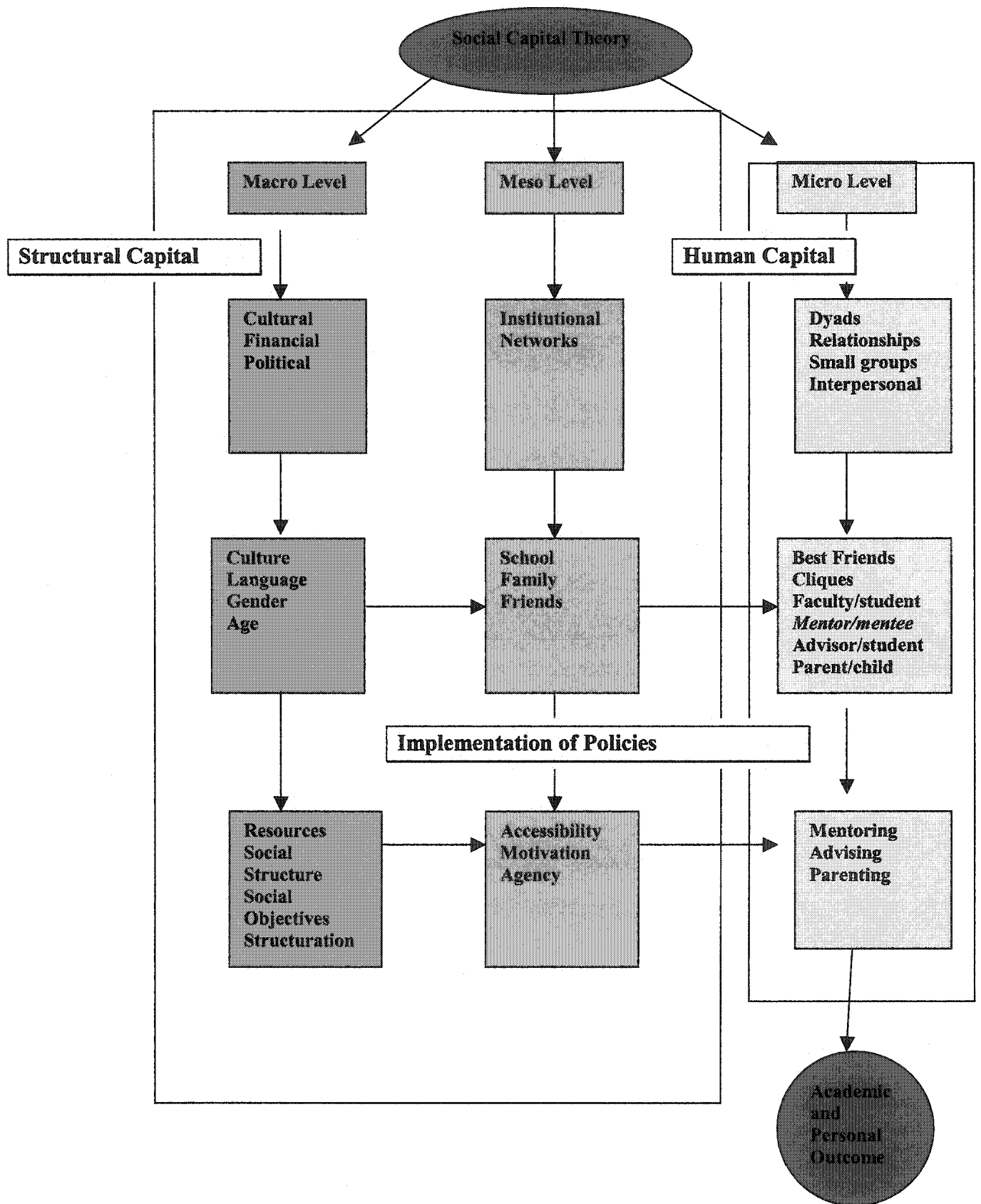
Brown (1997) developed an ontological starting point for the conceptualization of social capital. Social capital was defined as a "processual" system for allocating resources across a social network according to the pattern of relations among the individual egos that comprise the network. Brown examined three levels of analysis, micro, meso, and macro, incorporating and integrating the best of existing theory. Accordingly these three levels work together to inform and provoke empirical inquiry. In a system of social capital, the components are the individual egos that comprise the social network. The system's structure is the pattern of relationship ties among the egos and the system's environment that constitute the greater social ecology in which the system is embedded.

Brown (1997) depicted the micro level of social capital as the "embedded ego" perspective. The meso-level was the structural perspective or the patterning of ties between egos in the network and the ways that resources flow through the network as a consequence. The macro level was defined as the embedded structure perspective. Here, the focus was on external cultural, political and macroeconomic influences on the nature of social ties in a network. These influenced the structure of the network and the dynamics of the network's construction, change and tendency to devolution (decentralization).

At the micro level, an individual's potential to mobilize resources through the social network in which the ego is embedded is considered. The focus is on individual outcomes within the context of a particular social structure.

At the meso-level of social capital Brown (1997) considered the "structuration" of a specific network, the patterning of ties among egos in that network, and how resources flow through the network. The focus here is on the process of network "structuration" and its distributional implications. "Structuration" refers to the production and reproduction of the social systems through members' use of rules and resources in interaction. These

resources are personal traits, abilities, knowledge, and possessions people bring to interactions. Production happens when people use rules and resources in interaction while reproduction occurs when actions reinforce what is already in place in the social structure (Giddens, 1984).

Giddens (1984) developed "structuration" theory as a general theory of social systems in an attempt to resolve the fundamental division that incorporates both objective and subjective interpretations of the world and of social capital. Accordingly, human agents (human capital) and social structure (structural capital) are a mutually interacting duality. Human agents produce, reproduce or modify social structures through their actions and in turn social structures enable or disable human actions. For example, the mentoring program is a structure created by the innovator (coordinator) that did not exist in the institution (University of Windsor). The coordinator's actions, and mentor's actions, may create the momentum to enact a change in the existing structures of the institution. This can be visualized in terms of the institutional networks within the university community, shown in the model in Fig.2.

At the macro level of analysis, Brown (1997) explained how a network in which social capital is created is rooted within larger systems of overlapping political, economic, cultural and normative systems. Accordingly, these networks may: (1) determine the types and amounts of resources available to the network; (2) describe the relational ties, bounding and structuring of the network; (3) legitimize and regulate transactions; (4) construct and implement sanctions in response to violations of the regulatory system; (5) describe and regulate social status within the network; (6) construct the motivations underlying network transactions; and (7) construct and regulate competition between different networks.

Brown (1997) categorized three ideal types of social capital networks, according to the motivation behind the network's transactions at the macro level: (1) Economic describes a network motivated by economic considerations; (2) Status describes a network motivated by reputational considerations; and (3) Sociability describes a network according to altruistic or particularistic motivations. Formal mentoring programs in academic institutions of higher learning such as the one described in this study identify with all three social capital networks categorized by Brown. It is only through collaborative efforts, as seen in the mentoring program, and understanding of the struggle, perseverance, negotiation, and mutual willingness to learn that genuine progress will be made (Woolcock & Naygeran, 2002).

Schuller (2000) integrates human/knowledge capital with social capital. As education and training rise on policy agendas at the national and international level, policies have recognized the need for investment in human capital as essential for economic competitiveness. Accordingly, human capital as defined by the OECD (Organization for Economic Cooperation and Development, 1998) acknowledges the skills, knowledge and competences found in individuals that are relevant to economic activity. These are factors that will determine the prosperity of organizations as well as nations (social capital). This supports Brown's (1997) ideal type of social capital network, one that is motivated by economic considerations.

Basically, human capital focuses on the way individuals accumulate knowledge and skills to enable them to increase their productivity and their earnings. As a result, the productivity and wealth of their society increases.

Social capital focuses on networks and the relationships within and between them as well as the norms that govern these relationships. It implies that trusting relationships are good for social cohesion and for economic success (Schuller, 2000).

Social capital has such complexity and diversity that it has been used to explain a wide range of social phenomena, including general economic performance, levels of crime and disorder, immigrant employment, and health and education trends. Simplistically, it is understood as a matter of relationships or as a property of groups rather than the property of individuals.

Even though trust is a positive normative connotation, some very strong ties can be dysfunctional, excluding information and reducing the capacity for innovation (Schuller, 2000). Thus social capital should aspire to channel and guide human/knowledge capital without impairing its growth and fertility.

Table 1

The Relationships Between Human and Social Capital (from Schuller, 2000, p.4)

	Human Capital	**Social Capital**
Focus	Individual agent	Relationships
Measures	Duration of schooling Qualifications Membership/participation	Attitudes/values Trust levels
Outcomes	Direct: income, productivity Indirect: health, civic activity	Social cohesion Economic achievement More social capital

Although social capital may not ensure quality and manageability of knowledge or human capital, it signals a way of exploring the kinds of values, processes and structures which link human capital at the micro level with structural (organizational) capital at the meso and macro levels.

Mentoring is once again seen as a major way of developing and disseminating knowledge and competence in diverse contexts including education. Effective learning means enabling the learners to rely more on one another and less on the direct transfer from instructor or technological knowledge sources (Schuller, 2002). Mentoring systems are a powerful means of transferring the knowledge and skills that are transferable from human capital at the micro level to social capital at the meso and macro level.

Buerkle (2002) conducted an empirical study focusing on the importance of face-to-face networks (like mentoring). Data for this study were drawn from the "Social Stratification in Eastern Europe" using an adapted version of "the 1989 General Population Survey." Analysis was performed on 2902 Czechs and 1864 Poles. Buerkle used income as evidence of occupational success in examining four hypotheses: (1) attending school during the day will result in greater social capital than attending school at night or via correspondence as a result of increased socialization with instructors and peers; (2) attending school and working in the same town leads to higher incomes than does relocation following completion of studies; (3) people with higher levels of education will be helped more by social capital; and (4) less work experience makes the effect of school related social capital more pronounced.

Buerkle (2002) found that social relations that have a significant effect on income are developed in college (university). In Poland, those who were schooled in a smaller town and those who attended post-secondary education during the day and remained in

that larger town following their education, earned more than their counterparts who only

invested in human capital (knowledge and skills acquisition). Thus the quantity and

quality of school-related social networks (micro and meso level) impacts on personal,

academic, and economic outcomes.

Retention Issues for First-year University Students

An extensive literature exists on the topic of college or university student retention. Retention efforts and academic achievement are therefore primary concerns of all universities. Several researchers (Astin, 1977; Bean, 1980, 1983; Tinto, 1987, 1993) have studied it from a variety of perspectives, including dropout, withdrawal, attrition, and retention. Research on student retention in university is relevant for colleges and universities that are competing with one another for students with varying (academic and social) skills (Peltier, Laden, & Matranga, 1999). Retention is now viewed as part of the educational agenda.

The theoretical frameworks dominating retention research today were constructed in the 1970s. Astin (1977) developed the theory of involvement contending that student learning and retention are related to the student's involvement within an institution. True involvement was found to require the investment of energy in academic relationships and activities related to the campus. The amount of energy invested varies depending on the student's interests and goals along with their other commitments. The more students invest physical and psychological energy to get involved in the academic and social culture of the college, the greater the potential for student success. Hence the most important institutional resource is student *time*; the more involved students became, the greater the student's success in learning and staying in school (persistence).

For nearly three decades, Astin (1993) used the input-environment-output (I-E-O) model as a conceptual guide for studying college student development. Astin referred to inputs as the characteristics of the student at the time of initial entry to the institution; environment was defined as to the various programs, policies, faculty, peers, and

educational experiences to which the student was exposed; and outcomes were the student's characteristics after exposure to the learning environment.

Astin's (1993) study involved 309 four-year institutions with a total of 24,847 freshmen with institutional environmental data. Since no individual institution accounted for more than one percent of the student body, there was an overall response rate of 29.7 percent. In the first stage of the study, Astin statistically combined input information on each entering freshman through multiple regression techniques to generate a predicted score on each of 82 outcome measures. The 192 environmental measures used in the study included 16 measures of institutional characteristics (e.g., type [public or private], control, size), 35 measures of the student's peer group characteristics (e.g., socioeconomic status, academic preparation, values, attitudes), 34 measures of faculty characteristics, 15 measures of the curriculum, 15 measures of financial aid, 16 measures of freshman major field choice, 4 measures of place of residence, and 57 different measures of student involvement (e.g., hours spent studying, number of classes taken in different fields, participation in various programs).

The most compelling generalization derived from Astin's (1993) findings was the pervasive effect of the peer group on the individual student's development. Cognitive, affective, psychological and behavioral developments were all affected by peer group characteristics. Students tended to change their values, behaviours and academic plans in the direction of the dominant orientation of their peer group. Also, two faculty characteristics were found to have substantial and wide-ranging effects: the extent to which the faculty is research-oriented (R.O.) and the extent to which it is student-oriented (S.O.) with the former having negative effects and the latter positive effects. Institutionally, due to the distributional system of general education of 90 percent of the

universities, there was little direct impact on student development. However, a true-core curriculum (one that requires all students to take exactly the same courses – e.g., engineering, nursing) appeared to have distinctive effects such as high satisfaction, and positive effects on leadership. Ultimately learning, academic performance and retention are positively associated with academic involvement, involvement with faculty, and involvement with the student peer group.

Figure 3 illustrates a new conceptualization of the interconnection of social capital and the mapping of the theory of involvement onto the concept. The meso level of social capital represents structural capital while the micro level constitutes human capital. Underlying is "structuration" theory, illustrating how actors are at the same time the creators of social systems (e.g., educational institutions) and created by the institutions (policies of the institution). Connecting the two theories supports the theory of social capital.

While Figure 1 (p.5) illustrates an overview of how social capital forms an umbrella over the theories of departure, involvement and social learning, Figure 2 (p. 16) expands on the theory of social capital, breaking it down into 3 levels identified as structural capital and human capital. The colours translate into the theories visually identified in Figure 1 (blue-departure; orange-involvement; green- social learning). Figure 3 focuses on the specific interaction between the theory of involvement and social capital maintaining the visual cues.

Figure 3. Social capital theory link to the theory of involvement and institutional initiatives.
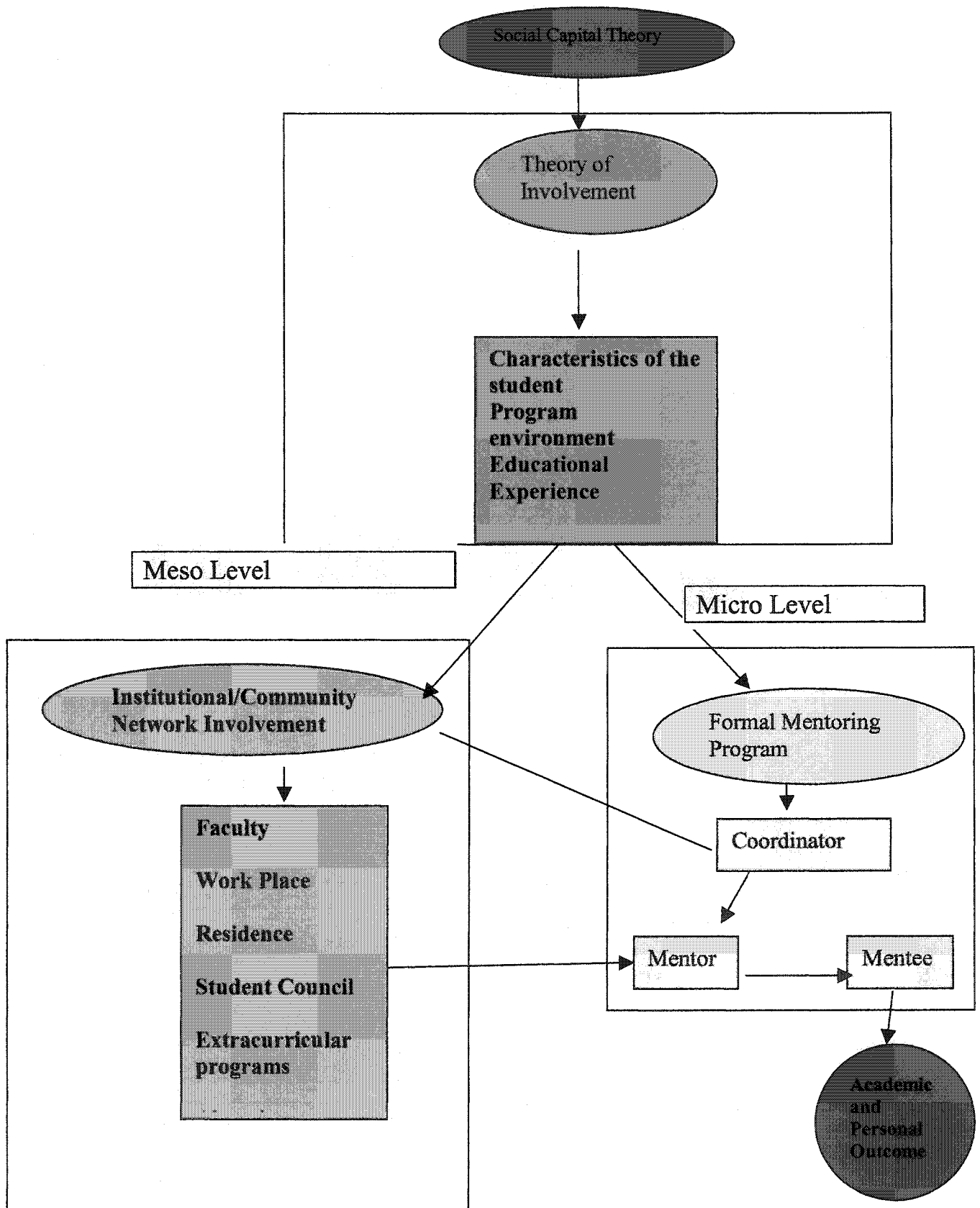
Concurrently with Astin's (1977) early comprehensive development of the Theory of Involvement, Tinto (1975) developed the Theory of Student Departure that is the most commonly cited theory of student persistence. Later, in a longitudinal model of institutional departure, Tinto (1987) attributed an individual's decision to continue attending an institution to pre-entry attributes, the student's goals and commitments, academic and social institutional experiences, and academic and social integration. According to this model (Figure 4), it is important to distinguish individual factors from institutional factors. Tinto focused on three important aspects: 1) an educational career in higher education is a longitudinal process of failure and success; 2) the structure of the institute of higher education influences students in their decision making; and 3) social and intellectual integration of students in the new system stimulate students during their educational career.

Tinto (1987) distinguished individual roots (personal factors) of student departure from education (i.e., intention and commitment) from interactional roots (external factors) of institutional departure (i.e., adjustment, difficulty, incongruence and isolation). In terms of intention and commitment, Tinto referred to important personal dispositions with which individuals enter institutions of higher education. They set the boundaries of individual attainment and paint the character of individual experiences within the institution following entry (Tinto, 1987). Further, Tinto described the four forms (adjustment, academic difficulty, incongruence and isolation) on the institutional level as interactional outcomes arising from individual experiences with the institution as well as mirroring the attributes, skills, and dispositions of individuals prior to entry. In terms of the importance of mentoring, Tinto found that external forces (interactional roots) on individual participation played a significant role (Figure 4).

Figure 4. Model of institutional departure.

Pre-Entry	Goals &	Institutional Experiences	Personal/Normative	Goals &	
Attributes	Commitments		Integration	Commitments	Outcomes
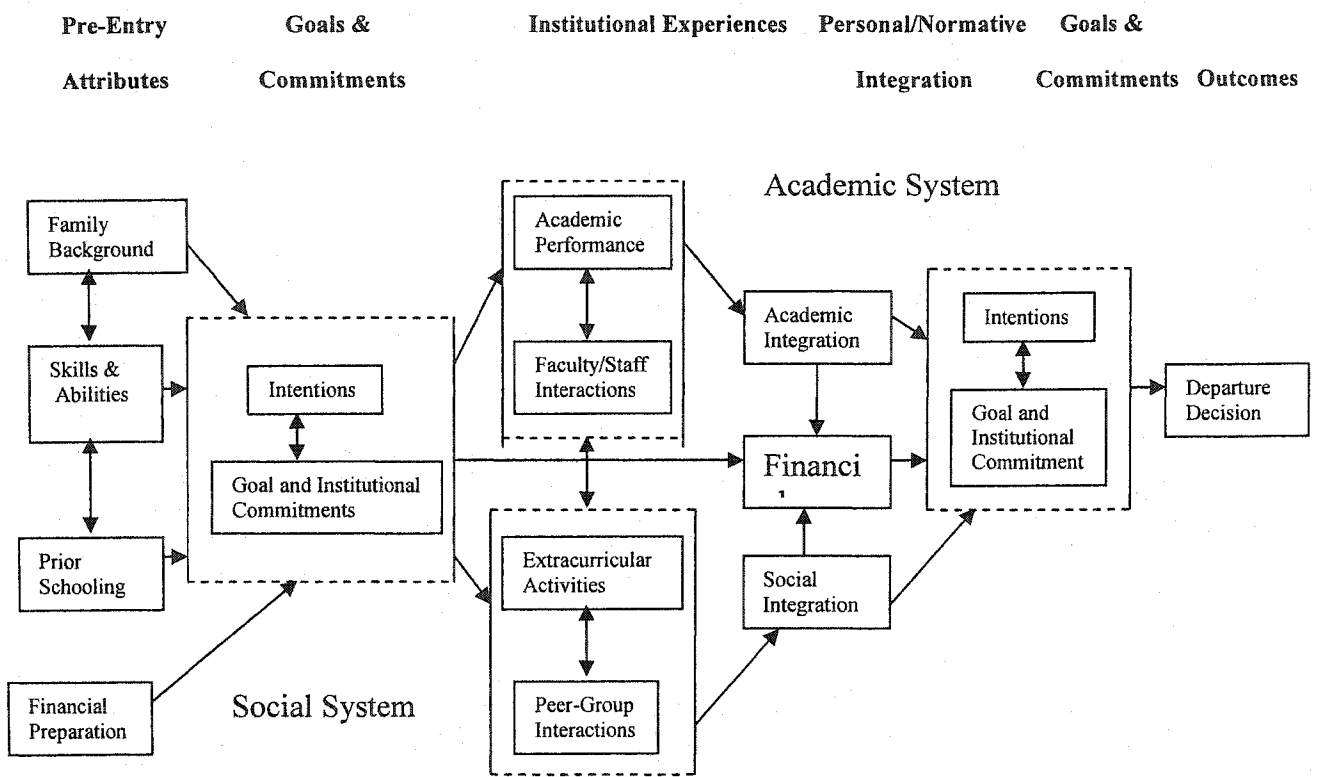
Source: Reproduced with permission from Tinto, 1987, p.114.

American and Canadian universities have recognized student retention as a critical

issue since the early 1970s (Strommer, 1993). Tinto (1993) reported that more students

leave institutions of higher education prior to degree completion than stay. It was

projected that of the nearly 2.4 million first-time students who entered higher education

institutions in1993, over 1.5 million will leave without receiving a degree. Of those, 1.1

million leave higher education altogether without ever completing either a two- or four-

year degree program. It was discovered through The College Testing Program (ACT,

1998) that students entering private and public higher education institutions in 1995

experienced dropout rates of 29.9 percent and 32 percent, respectively within the first year.

Astin, Tsui, and Avalos (1996) conducted a large-scale study examining degree attainment. They reported on the persistence of 75,752 freshmen at 365 baccalaureate-granting institutions from 1985 to 1996. Only 39 percent of the students were able to complete a bachelor's degree within four years of entering college. The rest either dropped out or attended part time and took longer than four years to graduate. The results of another study (CSRDE report, 2001) were similar. Over a period of six years, 42 percent of the students dropped out of college. Twenty-one percent left during the first year, 11 percent in the second year and 10 percent in the third and later years. Evidently, more than half the students who dropped out did so in their first year.

Recent researchers have reported that the length of time that students take to graduate has increased (Peltier et al., 1999). They found that about one-half of the 1966 first-year students obtained their baccalaureate degrees within four years, compared to one-third of those entering university in 1982. They found that only 28 percent of the 1993 and 1994 first-years graduated within four years, while an additional 30 percent took longer than four years. The eventual degree completion rate for a first-year student is estimated to be 58 percent. Institutions with a higher percentage of part-time undergraduate enrollments had lower retention and graduation rates. The graduation rates for the 1993 and 1994 cohorts were 66 percent for institutions with less than 10 percent part-time undergraduates, and 39 percent for those with a part-time enrollment higher than 20 percent (CSRDE report, 2001).

In the last decade the information era has impacted on higher education and the student population it now serves (Watford, 1995). The academically skilled, middle-class students who used to compose most of the university population have been replaced by a

more complex mix of students with respect to academic preparation, age, socioeconomic

background, and reasons for enrolling in college (Gordon & Grites, 1984).

To further complicate matters, Nagda et al. (1997) found that most students,

including academically prepared students, enter university unprepared for the required

level of work and often need assistance to acclimate to the new environment.

Accordingly, these students have naïve notions about the scope of undergraduate

education, especially about where it should lead and what is expected of them. They go to

campus with a different set of needs then students from more than a decade ago, which

must be addressed in university so that they may succeed (Strommer, 1993). Student

difficulties in identifying with and connecting to the academic and social cultures and

subcultures within the institution can lead to poor academic performance and eventual

withdrawal (Astin, 1993; Nagda et al., 1998; Tinto, 1993).

For almost 160 years, first-year students have been a topic of concern in terms of

retention for institutions of higher education (Levine, 1991). Programs have been

developed for first-year students that deal with such issues as academic achievement,

academic persistence and graduation for its participants (Levine, 1991; Tinto, 1993).

These programs include intensive orientation, developmental course work, advising,

counseling, and mentoring programs for first-year students (Brown, 1995; Capolupo,

Fuller, & Wilson, 1995; Strommer, 1993). In particular, Strommer (1993) and Tinto

(1993) realized that critical components of successful first-year programs include

academic advising, orientation, support programs, tutoring, supplemental instruction, first-

year seminars, skills development programs, mentoring programs, and placement testing.

Although the more widespread implementation of first-year programs was in

response to a national concern regarding decreasing rates of retention, national initiatives

cannot provide the practical solutions needed to deal with the problem (Colton et al., 1999). Tinto (1987, 1993) suggested that successful student retention occurs at the local institutional level since student retention strongly relates to student-institution interaction after admission rather than individual student characteristics. Accordingly, each institution should examine its unique interaction process (i.e., faculty-student, student-student, student entry characteristics, institution resources, student academic/social expectations, institution academic/social demands) to develop need-based programming that supports and prepares first-year students for the demands of their transition year.

Further, Tinto (1993) identified the use of intrusive interventions (e.g., required courses or programs) for at-risk students that resulted in efficient and positive academic and retention outcomes. Colton et al. (1999) described a Pennsylvania University's Student Support Services Freshman Year Program (SSSFYP) as an "intrusive" intervention program. The SSSFYP conducted a three-year (1993-1995) longitudinal comprehensive evaluation to assess its effectiveness in strengthening student persistence. The total number of freshmen involved in their analyses was 211. Ninety-one were in Cohort 1, 61 in Cohort 2, and 59 in Cohort 3. The researchers collected and analyzed data in four specific areas to determine the program's overall influence on student academic progress and retention: 1) demographic background, 2) student satisfaction with programming, 3) GPAs, and 4) retention rates as compared to the general population of the university.

All three cohorts had higher percentages of first-generation students, students of color, students with learning disabilities, and conditionally admitted students when compared to the general population of that university (Colton et al., 1999). Conditionally admitted students were considered those who scored below 400 on math and /or English

SATs placing these students at higher risk of withdrawal from university (Colton et al., 1999). The researchers noted that SSSFYP program required the following minimum semester participation: 1) attendance at four meetings with a SSSFYP advisor/counselor, 2) participation in a minimum of two SSSFYP-sponsored social activities, 3) completion of one academic skills workshop, 4) attendance at all SSSFYP freshman colloquium sessions (10 weekly 1 hour non-credit sessions in the fall semester), 5) assessment testing, and 6) participation in weekly group and/or individual meetings with a student mentor.

Students in the three cohorts expressed overall satisfaction with the program in terms of the availability of counselors (76%), the length of meeting times (91%), and assistance from counselors with issues presented. They credited counselors with demonstrating respect, interest and genuine concern. The mentoring and freshman colloquia generated the lowest satisfaction ratings with 38% and 46% respectively. Colton et al. (1999) concluded that student satisfaction and imposition of intrusive programming were not perceived as mutually exclusive.

Academically, all three cohorts of SSSFYP freshmen performed within an acceptable range for major grade point and cumulative point averages. Cohort 1 (mGPA=2.26) and Cohort 2 (mGPA=2.06) students were found to improve their major grade and cumulative point averages over time. Cohort 3's (mGPA=1.87) first semester academic performance compared favourably with those of their counterparts in the general population (mGPA=2.01) of the university. These data were found to be significant when compared to the demographic characteristics between SSSFYP students and the general population at the university.

Using this outcome-based research, Colton et al. (1999) found positive correlations with the retention rates of participants. Results of participation in the program compared to

non-participation in the program by students of the same qualifiers showed that the first-year retention rate was 88 percent for the SSSFYP group compared to 54 percent. In second year, participants had a retention rate of 83 percent compared to 33 percent for non-participants. By third year, the participants had a retention rate of 78 percent compared to 25 percent for non-participants.

According to Colton et al. (1999), success of intrusive intervention programs demands a critical evaluation of retention needs and the target population (demographically) of the adopting institutions. The following were considered intrinsic components for adoption of intrusive intervention programs like a formal mentoring program: the philosophy of intrusive interventions, the fostering of positive faculty/staff-student interactions; the use of a well-designed, comprehensive advisement component, the use of an appropriate colloquium, and the use of extrinsic rewards.

Similarly, Williford, Chapman, and Kahrig (2001) conducted a 10-year longitudinal study investigating the relationship between participation in an extended orientation course and student academic performance, student retention, and student graduation at Ohio University. There was an enrollment of 16,000 undergraduates (85% Ohio residents; 60% female in the program). Participants selected for this study were first-year students in the entering classes from 1986-1995 and were divided into two groups: 1) students who took the University Experience Course (UC115) (n= 410) and 2) students who did not take UC115 (n=2,650). Students who took UC115 represented approximately 13 percent of the total first-year class. Year-end GPAs were collected. In addition, previous academic performance, American College Test (ACT) scores, and high school percentile rank respectively were collected for analysis. To control for the effects of possible differences between UC115 participants and non-participants in aptitude, ACT

composite scores were used to partition each group into high aptitude and low aptitude

individuals. In each year, the researchers found the ACT composite mean for UC115

participants (e.g., 23.0 in 1995) was slightly lower than the mean for non-participants (e.g.,

23.8 in 1995). Although enrollment in the course was based on self-selection and

voluntary, the course maintained a high enrollment of undeclared majors for the College of

Arts and Science. Non-faculty administrators from academic affairs and student affairs

taught the course in sections of twenty students. In addition, graduate students and

undergraduate peer teams provided mentoring.

Williford et al. (2001) also found statistically significant differences between high

and low aptitude groups, which supported the need to control for aptitude (ACT scores).

Although there were no statistically significant differences between average GPAs of

participants and non-participants, when measured prior aptitude was controlled using

analysis of covariance, the group means were significantly different, with participants

having higher year-end GPAs.

In the last five years of the study all the retention rates as well as graduation rates

were significantly higher for participants (3% higher). Additionally, over the past 10

years, the course saw a 22 percent increase in enrollment. Clearly, controlling for the

confounding effects of aptitude and prior performance strengthens the conclusions that can

be drawn from the results. Also, quantitative studies such as this are limited by the

individual (demographic) dynamics of the participants.

Tucker (1999) revisited Tinto's (1987) theory of departure. He conducted a micro-

ethnographic study focusing on the socio-cultural phenomena related to transition for first-

year students. The participants were a group of five students who had recently completed

high school and had just enrolled in the fall term in one institution. These students were

interviewed multiple times, using information from previous students to elicit clarification and deeper responses upon re-interview. This process was intended to reveal common cultural understandings related to the phenomena under study.

According to Tucker's (1999) phenomenological research into transitions, retention relates to the students' need to feel a sense of community. The data indicated that two factors contributed significantly to the perception students had of their transition. Participants who stated that they were content about the first term were those who had established career goals prior to establishing educational goals making the transition a simple phase. Secondly, those who established themselves with new friends at the new institution seemed to enjoy activities associated with the first term more than those who were less involved in institutional social life.

Nine themes emerged from Tucker's work (1999). These were *vision, sense of community, students' preparation and preparedness, institutions' preparation, support from parents, role of the student, desire for change, community college stigma*, and *commuting distance. Vision* and *sense of community* were suggested by Tucker (1999) to have an effect on transition. *Vision* was defined as the image that students hold of the future, while sense of community included any phenomena that make students feel a sense of belonging in the new educational environment. Those with the clearest, most detailed *vision* of what they would be doing several years after graduation appeared to be guided through the vicissitudes of their transitions. Where there were no clear paths or where students entered university with a view to explore and test, anxiety and faltering were commonplace. These students lost confidence in their choices since they had no design for the future to provide the momentum. More importantly, Tucker was surprised by the

depth and intensity of trouble that a lack of *vision* would cause. These students became distraught, unsatisfied and blamed themselves and educators for their discontent.

Tucker's (1999) second factor, *sense of community*, included any phenomena that made students feel a sense of belonging to the new educational environment. These included peer group relationships, living arrangements, and feelings generated by physical surroundings. Students with the greatest sense of belonging in the new environment found transition easier. Challenges were manageable, old high school relationships gave way to new university friendships. However, those who did not have a sense of belonging appeared to be constantly aware that they did not fit and they did not know how to go about changing the situation.

According to Tucker (1999), these factors were related. A healthy *vision* increased confidence and a sense of well-being increased the individual's social attractiveness. Reciprocally, a strong *sense of community* reassured the efficacy of the *vision*. Further, Tucker implied that those whose transition began well continued to do well while those who began in difficulty saw their difficulties increase.

Tucker (1999) pointed out that every student is different. Each case is different. In fact, some conditions aid transition for some but not others because circumstances have differing effects. This informed the establishment of programs to ease student transitions in an organizational context. These initiatives may involve mailings to incoming students, visiting high schools, establishing a one-on-one help line, and/or providing adequate and readily available psychological, academic, and peer counseling. Any efforts that enhance the sense of belonging ease the transition for students who are stressed by the new surrounding and new condition. Institutions can facilitate the establishment of a *sense of community* for most students by designing structures to respond to a wide range of specific

cases. Each year, new groups arrive, with new sets of concerns, so the model of student

assistance must be flexible and responsive to the new data derived from high school

students as well as the first year students. Although Tucker's research is based on only

five students, the depth of the study and the interesting themes emerging warrant further

qualitative research and consideration.

Sarkar (1993) studied the Planning and Research Office of the Saskatchewan

Institute of Applied Science and Technology (SIAST) model, which was designed to

elaborate the various criteria that affect retention, such as goal commitment, student

characteristics, educational ability, academic integration, social integration and labor

market conditions. This study uniquely considered retention as a function of the

fluctuations in economic conditions. A questionnaire was mailed to all first year

Certificate/Diploma students enrolled in 1991 in the four institutions (2,822 students).

Sarkar received and analyzed 1,557 completed questionnaires (a 55% response rate). A

follow-up questionnaire was sent to the respondents in June 1992; and 720 students

completed questionnaires were received (a 47 % response rate). Of these 720 students, 105

respondents identified themselves as non-completers, an attrition rate of 14.5% of

respondents. The analysis compared the responses of these non-completers to the

responses of the remainder of the group.

Sarkar (1993) found that non-completers differed on all of the factors with the

exception of academic/social integration. In terms of their reasons for taking the program,

working conditions, personal interest/aptitude and acquiring skills were more important to

the non-completer. Non-completers were found to be less certain about their career

choices, to express less goal commitment and to be willing to take a job requiring their

skills over finishing the program. Non-completers had lower academic entrance GPAs

leading to greater involvement in tutorial help, counseling, and computer facilities. Demographically, non-completers were more likely to be disabled, of aboriginal ancestry, female, married, and/or have dependent children. In terms of labour market economy, non-completers were more influenced by the current economic conditions. They would quit school if a job opportunity arose and would persist if no job were available. However, there was little emphasis placed by the authors on the relationship between the student's decision to persist or to drop out and the broader economic environment.

The implications of this study (Sarkar, 1993) were: (1) the need for awareness of the fluctuating economic activities, and (2) the need for awareness of fluctuation changes in job opportunities. It was suggested that students are more persistent when they perceive that this will give them a competitive edge in the job market. Thus, dissemination of information about job markets and realistic employment prospects should be an ongoing part of student support. Sarkar suggested mentoring, peer counseling and pairing students with employees as initiatives with beneficial results.

Blimling (1989) used a meta-analysis to integrate and summarize the empirical research from 1966 through 1987 regarding the influence of college residence halls on the academic performance of undergraduate students in the United States. The source studies were organized into three comparison groups: 1) residence hall students compared with students living at home; 2) residence hall students compared with students living in fraternity and sorority houses; and 3) residence hall students compared with students living in off-campus apartments. A separate meta-analysis was used on each of the groups. Effect-size homogeneity was established and followed by meta-analytic statistics for each group.

Included in the analysis, the 21 studies had to report at least one statistic from which an effect size could be computed. Included studies also needed to contain the means and standard deviations for both the residence hall and non-residence hall students, and use a univariate statistical test (e.g., t, r, X^2). An analysis of institutional and demographic variables showed interesting findings. First, 77.14% of all of the research was conducted at either a Carnegie Research-I or Research-II University, yet there are only 98 institutions classified as R-I or R-II by the Carnegie Council (7.1% of post-secondary institutions) (Blimling, 1989). Second, more studies were conducted at public universities (87.1%) than at private universities (12.9%) although, nationwide, 35.8% of institutions are public, and 64.2% are private.

Bearing in mind the above caveats about the generality of conclusions, the results of the 21 studies (Blimling, 1989) indicated that when controls for differences in past academic performance were used, the research did not show that living in a conventional residence hall significantly influenced academic performance over living at home nor did it show that conventional residence halls negatively influence a student's academic performance, as is often asserted. The meta-analysis also showed that residence hall students are likely to perform academically better than student living in fraternity or sorority houses. Blimling further found that students living in residence halls perform better academically than those living off-campus. It was suggested that the difference was due to the presence of organized mentoring and social integration of the residence students.

Tinto (1996) feels that retention programs have had limited impact. More recently, Tinto (1998) expressed the view that the educational community is not adjusting academic or organizational processes to enhance student retention. Student retention in college is

related to a complex set of factors, including student involvement, ethnicity, gender, and age, as well as place of residence (Peltier et al., 1999). Women generally have higher rates of graduation than men, while older students have many barriers to overcome that are not common among traditional-age students. Retention appears to be a key issue for first-year students (an increasingly heterogeneous group) faced with higher educational demands in western society.

A formal mentor program based on human capital may impact more than the structural capital approach to retention programs such as University 101. At the University of Windsor (the institution of the current study) University 101 is offered as an introduction to the purposes and processes of university education, emphasizing the skills and strategies needed to make a successful transition to the academic and cultural environment of the university. Students who are admitted with less than program requirements (64%-70%) are required to take this course. It is also recommended to most undeclared majors and students who did not get into their first choice of program. Generally, any first-year student can take this course as a credit option.

Supplementary services include staff and student volunteers within the Educational Development Centre who collectively address issues of transition during the student's development as a university student. They provide leadership and volunteer development programs, career exploration and assessment, a tutoring and special needs program as well providing individualized needs services. The Student Development and Support group delivers services to students that support and complement the academic objectives of the University of Windsor, particularly as they relate to student success and retention. This is accomplished through the delivery of diverse programs and services from various offices within the division. The network is created to branch to students, faculty and staff who are

committed to help student success. Although the retention programs are specific to the University of Windsor, the model can be generalized to include any university retention programs and incentives.

All of these services are designed at the macro/meso level of social capital (structural level). The students, however, function at the micro level and must cross over that bridge of transition to assess their needs and find the appropriate programs that fit their needs. This is where the mentoring program can theoretically fill in the gap between student and the institutional services.

From the concept pattern in Figure 5 of Social Capital's relation with Tinto's Theory of Departure, it is apparent that the cross links create a complex systemic process. Creating a network at the micro level where the focus is on the individual as in human capital can be creatively combined with collective engagement as suggested by Coleman (1988) and adapted by the author.

Figure 5. Mapping social capital theory onto the relationship between the theory of

departure and formal mentoring.
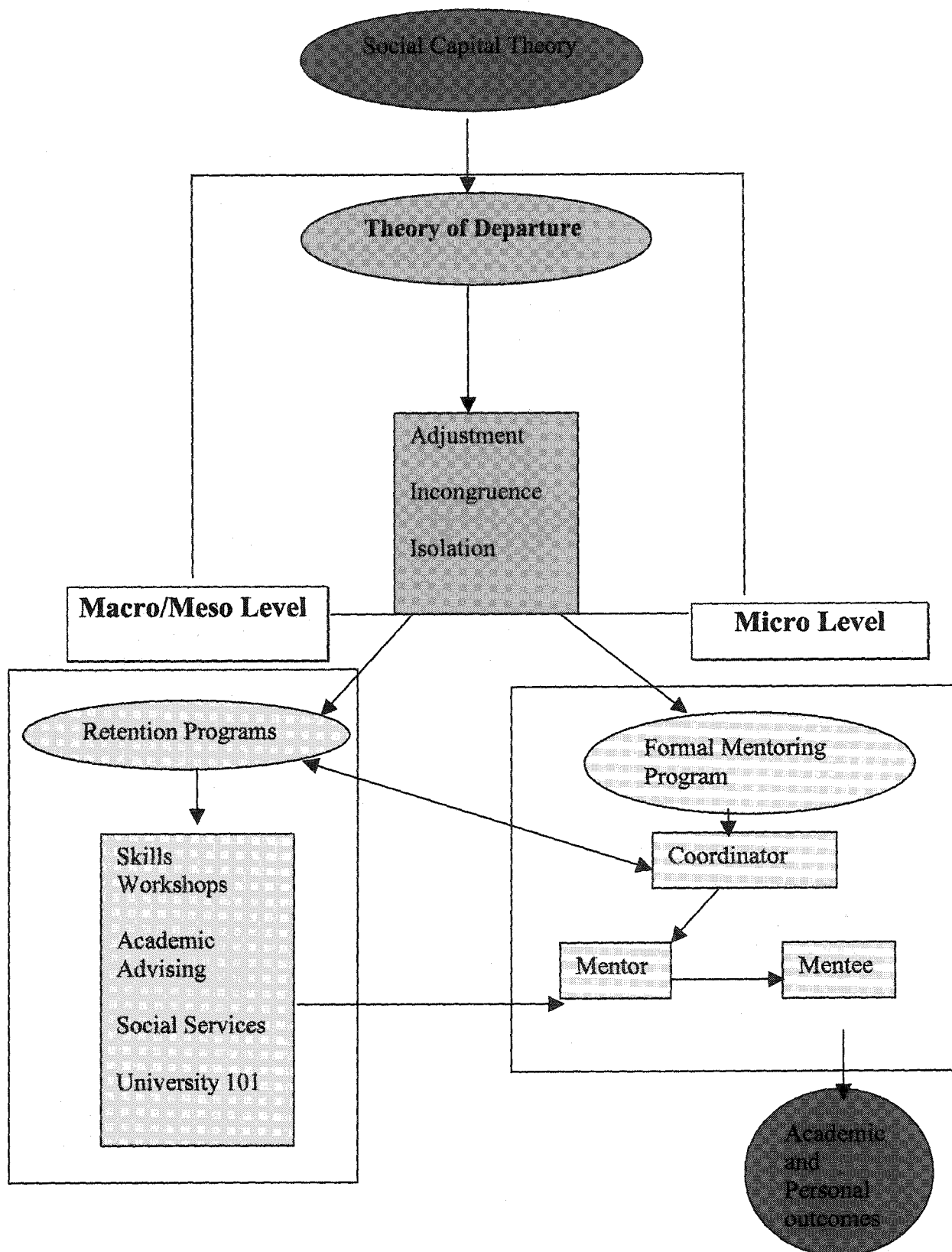
Social/Cognitive Theories Related to Mentoring

Social Learning Theory

A theoretical foundation for mentoring is provided by Social Learning Theory (Bandura, 1963) or Social Cognitive Theory (Bandura, 1986), according to Erkut and Moros (1984) and Petruolo (1998). Bandura's Social Learning Theory focuses on cognitive concepts: the way children and adults operate on their social experiences and how these cognitions work to influence behaviour and development. Bandura introduced the notion of modeling or vicarious learning as a form of social learning. In 1986, Bandura renamed Social Learning Theory as Social Cognitive Theory, with the introduction of concepts including self-efficacy and the idea that there can be significant implicit variation in time lapse between cause and effect. The Social Cognitive Theory defines human behaviour as a triadic, dynamic, and reciprocal interaction of personal factors, behaviour, and the environment (Bandura, 1986). Hence, the introduction of mentoring provides the environment for positive outcomes.

Jones (1989) suggested that the Social Cognitive Theory determines the mind as an active force that constructs one's reality, selectively encodes information, performs behaviour on the basis of values and expectations, and imposes structure on its own actions. Through feedback and reciprocity, a person's own reality is formed by the interaction of the environment (including other people, mentors) and one's cognitions. Also, cognitions change over time as a function of maturation and experience (McCormack-Brown, 1998). Therefore, through an understanding of the process involved in one's construction, human behaviour can be understood, predicted, and changed.

Further, humans are able to model observed behaviour through cognitive processes (Bandura, 1989). Symbols provide the mechanism that allows for cognitive problem

solving and foresight. Observational learning allows one to develop a concept of how a new behaviour is formed without actually performing the behaviour. Also, the observer is most likely to attend to and model, behaviours of people that are most like themselves and those that they associate with the most. Bandura (1986) believed that modeling was an important way of teaching people overt behaviour and also one of the most powerful means of transmitting values, attitudes, and patterns of thought and behaviour. Further, he believed people could learn not only by imitating the overt behaviour of others, but also observing how others were affected by situations that occurred in their lives. Reciprocally, the vicarious success experience of others provides incentives for individuals to undertake challenges. Bandura also noted that expectations of behavioural outcomes, more so than actual outcomes, influence the likelihood that behaviour will be performed again. While social learning theory describes the role of modeling in learning, it does not deal with other aspects of mentoring such as professional or emotional support (Jacobi, 1991).

Self – Efficacy

Students must be taught how to educate themselves to become adaptable, proficient learners. Well-paying industrial and manufacturing jobs demanding minimal cognitive skills are rapidly disappearing (Jacobi, 1991). Communication and critical thinking skills are required to fulfill the more complex occupational roles and demands of contemporary life. Bandura has noted, "the hope and future of individuals and their societies reside in their capacities for self-renewal" (Bandura, 1997, p. 213).

Bandura (1997) further noted that efficacy beliefs are intimately involved in the cultivation of cognitive competencies. These mediators include cognitive, motivational, affective, and selective processes. Bandura found three ways in which efficacy beliefs operate as contributors to the development of cognitive competencies governing academic

achievement: student's beliefs in their efficacy to master different academic participants; teachers' beliefs in their personal efficacy to motivate and promote learning in their students; and faculties' collective sense of efficacy that their students can accomplish significant academic progress.

Bouffard-Bouchard, Parent, and Larivée (1991) corroborated Collins's (1982) finding that students with stronger belief in their efficacy were able to solve more problems, rework those in which they had failed, and work more accurately than elementary school students of equal ability with less self-efficacy. Bouffard-Bouchard (1990) further connected the causal contribution of efficacy beliefs to cognitive functioning in a study where high or low efficacy beliefs were instilled in 64 Canadian college students compared with fictitious peer norms irrespective of their actual performance. High and low self-efficacy perceptions were related to measures of the number of problems completed from a task consisting of seven problems, each comprise six different sentences. Meaningful target words were to replace the nonsense word in the sentence. Students whose sense of efficacy was raised set higher aspirations, demonstrated greater strategic flexibility problem solving, achieved higher intellectual performances, and provided more accurate evaluations of their performances than those with lower self-efficacy.

Schunk (1996) found that although efficacy beliefs are influenced by acquisition of cognitive skills, it is not a simple concept. Accordingly, several factors may account for the predictive superiority of efficacy belief over acquired skills only. Participants vary in how they interpret, store, and recall their successes and failures. They evaluate social influences that contribute to efficacy beliefs independently of skills. Academic performances are the products of cognitive capabilities applied through motivational and

other self-regulatory skills. Schunk (1996) concluded that perceived self-efficacy with skills is a better predictor of intellectual performance than skills alone.

Proximal or short-term goals seem to serve as cognitive motivators and effective vehicles for developing a sense of personal efficacy (Bandura, 1997). Self-motivation is sustained by combining long-range goals that set the course of one's endeavours with a series of tangible sub-goals that guide and sustain efforts along the way.

In an earlier study, Bandura and Schunk (1981) conducted an experiment to test the hypothesis that self-motivation through proximal goal-setting serves as an effective mechanism for cultivating competencies, self-efficacy, and intrinsic interest. The participants were 40 students from six elementary schools with middle-class demographic backgrounds, with the mean age of 8.4 years. There were 21 males and 19 females distributed equally by age and sex across experimental conditions. Children who exhibited gross deficits (solving fewer than 4 problems) or disinterest with reference to mathematical tasks pursued a program of self-directed learning under conditions involving either proximal subgoals, distal goals, or no goals. Specifically, proximal sub-goals (tangible, within immediate reach) provide immediate incentives and guides for performance as well as developing self-efficacy. Results of the multifaceted assessment study provided support for the superiority of proximal self-influence. Under proximal subgoals, children progressed in self-directed learning, achieved mastery of mathematical operations, and developed a sense of personal efficacy and intrinsic interest in mathematics activities that initially had held little attraction. Further, goal proximity fostered self-knowledge of capabilities as reflected in high congruence between judgments of mathematical self-efficacy and subsequent mathematic performance. In fact, Bandura and Schunk (1996) noted that perceived efficacy impacts directly on academic performance by affecting

quality of thinking and effective use of acquired skills, and indirectly by heightening persistence in the search for solutions. The motivational link was convincingly demonstrated when efficacy beliefs were altered by arbitrary means without changing skills. Other researchers (Brown & Inouye, 1978; Lyman et al., 1984) confirmed that individuals with high efficacy were also persistent in trying to solve intractable or insoluble intellectual problems.

Schunk and Rice (1989) demonstrated that the benefits of the strategies for goal setting to cognitive development are replicable across different academic domains and types of goals. The conceptual focus was theory and research showing that goal setting, involving establishing a standard for performance, represented a source of motivation. The researchers taught remedial readers (30 students from two grade 5 classes) a comprehension strategy for finding main ideas in stories. Some received a product goal of correctly answering comprehension questions while the rest of the experimental group was given a process goal of learning the strategy. The control students (30) were given a general goal of working productively. Emphasizing the strategy, the researchers lead students to view the strategy as an important means for improving comprehension. Students who believe they had learned a useful strategy felt they had greater control over their learning, which raised self-efficacy (Schunk & Rice, 1989). From a later study, Schunk (1996) further concluded that the progress one makes with learning goals for gains in knowledge and skill is more effective in developing a sense of personal efficacy and proficiency than goals that focus solely on level of performance accomplishment. Proximal learning goals, therefore, create the means for these proposed accomplishments. This links to mentoring practices that provide for short-term goal and long-term development. In this mentoring program, mentors are trained to work with mentees in

establishing goals. They become aware of the need to emphasize the inherent link

between self-regulation and performance with setting goals. Mentors assist their mentees

in learning effective ways to manage their live, academically and professionally. Goals

also direct mentees to relevant tasks, behaviours to be performed and potential outcomes.

For university students, setting goals helps keep them focused on the task; helps them

select and apply appropriate strategies; and gives them the strategies to monitor success by

comparing their performance with their goals (Schunk, 2001).

Schunk (1996) used an informative experimental paradigm that enhanced our

understanding of factors that affect perceived cognitive efficacy and its impact on

scholastic performance. The research participants presented severe deficits in

mathematical and language skills. They followed a self-directed learning program of basic

principles and practices applied to mathematical problems. This was supplemented with

instructional social influences that might potentially affect their beliefs of their cognitive

efficacy. The influences included modeling of cognitive operations, instruction in higher

order strategies, and the use of different forms of performance feedback, self-appraisal of

capabilities, and positive incentives and aspirational goals as further motivators for the

development of cognitive skills.

In this paradigm, Schunk (1996) included several positive features for causal

analyses. The school-aged children had few pre-existing skills to serve as a source of

perceived efficacy. In fact, their sense of efficacy was instilled to differential levels

through systematic variations of instructional influences applied over an extended period.

Using experimental variations removed ambiguity about the source and direction of

causation. The acquisition of cognitive subskills (learning outcomes) could be assessed in

terms of the contribution of efficacy beliefs to academic performance independently of

acquired skills. The treatments involved complex sets of academic skills found in natural educational settings. The findings suggested that efficacy beliefs are influenced by acquisition of cognitive skills, but they are not a reflection of them. Those with the same level of cognitive skill development differed in their intellectual performances depending on the strength of their perceived efficacy. Factors affecting these results included the way children interpret, store, and recall their success and failures. As a result, self-efficacy varies. Further, in judging their capabilities, children evaluate social influences that contribute to efficacy beliefs independently of skills. Thus academic performances are the products of cognitive capabilities implemented through motivational and other self-regulatory skills.

Further, researchers (Pajares & Kranzler, 1995; Pajares & Miller, 1994; Pajares, Urdan, & Dixon, 1995) found that efficacy beliefs play an influential mediating role in academic achievement. These factors included level of cognitive ability, prior educational preparation and attainment, gender, and attitudes toward academic activities. The more these factors altered efficacy beliefs, the greater the impact they had on academic achievement. Self-efficacy was noted to play a powerful role in determining the choices people make, the effort they will expend, how long they will persevere in the face of challenge, and the degree of anxiety or confidence they will bring to the task at hand. Bandura (1989) acknowledged the need for sustained involvement in activities to develop cognitive competencies. Enduring self-motivation is achieved through personal challenges that create a sense of efficacy and self-satisfaction in performance accomplishments.

Bandura (1989) found that those who set themselves goals for progressive improvement accompanied by external feedback outperform those who do not set improvement goals. Informative feedback enables one to achieve progress leading to

beliefs of personal efficacy not evident from level of performance attainments. Schunk and Swartz (1993) verified the benefits of combining training in strategies with feedback of progress in mastering them particularly where transferred skills are necessary. Locke and Latham (1990) identified that self-set goals increase satisfaction but do not improve performance over assigned goals. Researchers further noted that increased perceived efficacy is accompanied by higher academic attainments (Bandura, 1997).

In the area of social cognitive theory, Bandura (1997) adopted an ecological perspective on the contribution of efficacy beliefs to cognitive and social development. A child's intellectual development cannot be isolated from the social relations within which it is embedded. Accordingly, children who have a high sense of efficacy to regulate their own learning and to master academic skills act more prosocially, are more popular, and experience less rejection by their peers than do children who believe they lack these forms of academic efficacy. In fact, Bandura noted that a low sense of self-efficacy is associated with physical and verbal aggression.

Family, education and peer influences operate as multiple interacting influences in shaping the student's development (Bandura, 1997). These affiliations promote different developmental courses depending on the types of values, standards of conduct, and life-styles that are modeled and sanctioned by those with whom one regularly associates.

Bandura (1997) found that a family's socio-economic status affects children's academic achievement by promoting parental aspirations and children's prosocialness. The researcher concluded that children whose parents have a high sense of efficacy influence their children's intellectual development by holding high aspirations thus raising their children's beliefs in their capabilities. Different aspects of children's efficacy beliefs were found to contribute to their academic attainments through partially different paths of

influence. Perceived academic efficacy was found to raise academic attainments both directly and by nurturing academic aspirations and prosocial relationships and counteracting antisocial behaviours.

Bandura (1997) noted those children's beliefs in their efficacy to resist peer pressures for risky activities contributed directly to academic attainment. Perceived social efficacy was found to contribute to academic attainments principally by promoting academic aspirations and reducing vulnerability to feelings of hopelessness and depression. The other paths of influence revealed the ways in which emotional well-being and interpersonal relationships affect the course of cognitive development. Accordingly, strong prosocial connectedness and peer popularity promoted academic achievement directly and by curbing socially alienating conduct.

Figure 6 illustrates Bandura's (1997) path analysis of the pattern of influence through which parents and children's efficacy beliefs and academic aspirations promote children's academic development. All of the path coefficients are significant at the $p<0.05$ level.
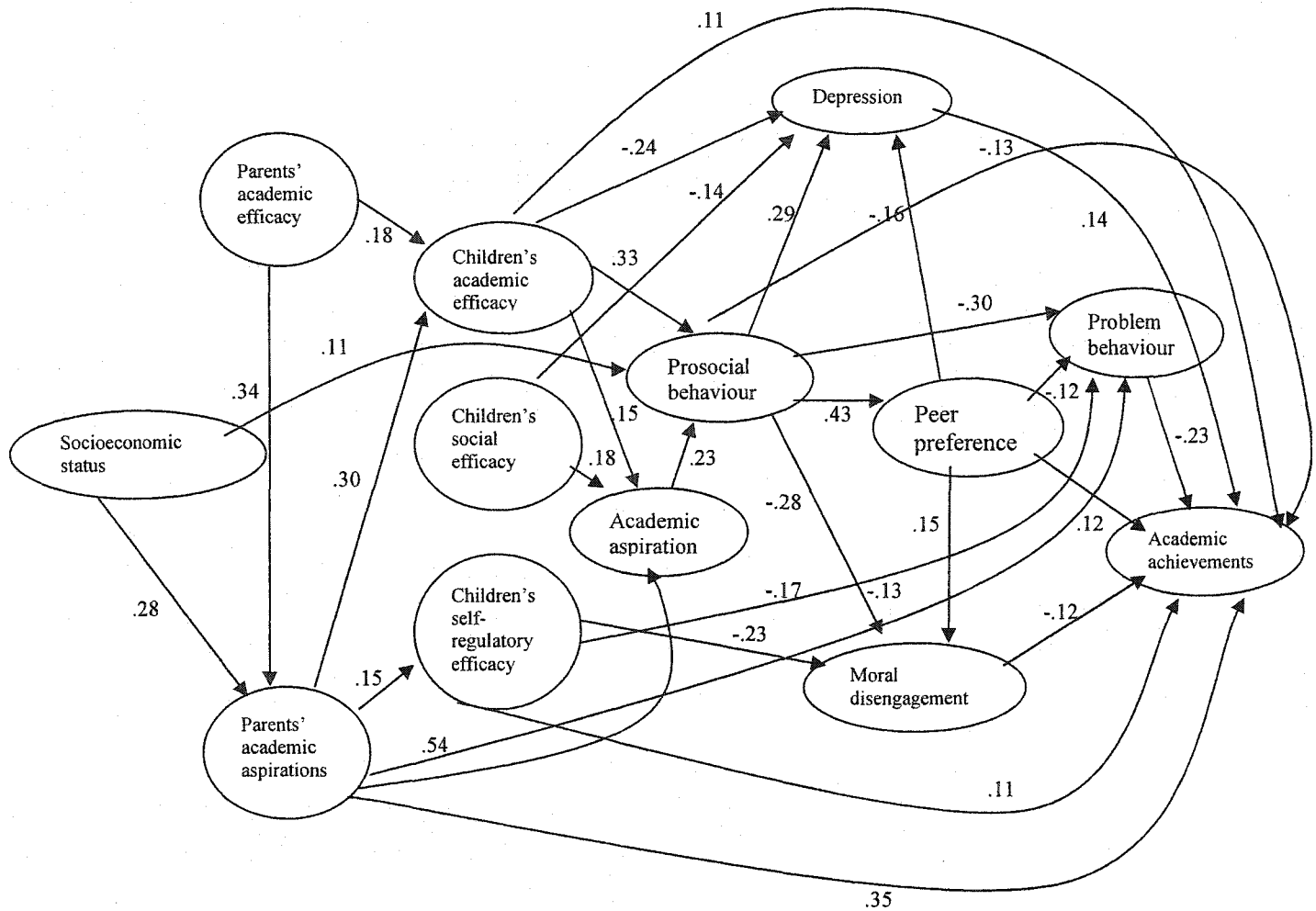
Figure 6. Path analysis of the pattern of influence through which parents and children's efficacy beliefs and academic aspirations promote children's academic development. All of the path coefficients are significant p< .05. (Bandura, 1997)

Importantly, children's academic efficacy and self-regulatory efficacy showed an equal and significant effect on academic achievement (r=. 11). The child's connectedness to the community (classroom or other) reflected in their behaviour (r=. 43) and ultimately their interaction with peers and academic achievement. Through formal mentoring, these two areas can easily be tapped into, along with the suggestion of increased social commitment to the situation and the development of appropriate decision-making skills.

Through an extensive review of literature examining the strength of the conceptual and measurement issues surrounding externalizing behaviour problems and academic underachievement, Hinshaw (1992) noted that among the different types of competencies, academic deficiencies are those most likely to predict adoption of antisocial styles of behaviour. Hinshaw extrapolated interplay of the diverse types of influences that shape child development.   First, externalizing behaviour and underachievement are clearly associated. Hinshaw noted externalizing behaviours as those marked by defiance, impulsivity, disruptiveness, aggression, antisocial features and over-activity. However, the association of IQ-discrepant achievement deficits (learning disabilities) with conduct disorder is less than 20%.   Second, there is a crucial developmental progression with regard to the association. In childhood, the specific link is between hyperactivity-inattention and underachievement while by adolescence clear links have emerged between antisocial behaviour and variables related to verbal deficits and underachievement.

Hinshaw (1992) re-examined a series of key epidemiologic investigations and clinical reports with sample sizes ranging from 100-800 (e.g., Lambert & Sandolval, 1980; Dunedin Multidisciplinary Child Development study, 1980; Isle of Wight, 1970; the Ontario Child Health Study, 1989; all cited in Hinshaw, 1992). Hinshaw assessed the cognitive, achievement and behavioural measures used, and cautioned that the findings underscore the potential complexity of causal mechanisms and transactions among social, familial, linguistic, and neurobehavioural variables that may culminate in the overlap between underachievement and externalizing behaviour.

Therefore, Hinshaw (1992) argued that perceived inefficacies that impair cognitive functioning were found to breed socially alienating adaptations producing increasing academic deficiencies. It appears evident that, among the different types of competencies,

academic deficiencies are the ones most likely to foreshadow adoption of antisocial

behaviours. This has implications regarding the destruction of social capital. Antisocial

behaviours lead to dropping out of school, dissociation of connections with conventional

job referral networks, and ultimately economic isolation. According to Putnam (2000)

joblessness and inadequate education truncate the opportunities provided by social capital.

At the university level, students are expected to choose which education directions

to pursue and assume responsibility for their own learning. Students who have a high

sense of efficacy are more successful in regulating their learning and achieve better

academically than those who are uncertain about their intellectual capabilities (Pintrich &

Schrauben, 1992). A meta-analysis of academic achievement provided conclusive

evidence that efficacy beliefs contribute significantly to scholastic performance (Multon,

Brown, & Lent, 1991). This was supported by Shell, Murphy, and Bruning (1989), who

found that beliefs in personal efficacy have substantially greater impact on academic

performance than the personal, social, and occupational outcomes expected for proficient

performance. Lent et al. (1993) suggested that students' beliefs in their academic efficacy

mediate the relationship between ability and educational goals and achievements. For the

institutions, teachers, or researchers, these findings suggest that the development of

scholarly careers, mastery experiences, modeling of strategies, and supportive feedback

should be structured in ways that build a clear and strong sense of personal efficacy.

Few studies have focused on processes that could explain the relation between

achievement and perceived competence or self-efficacy. Guay et al. (1999) examined the

role of social comparison in student's self-evaluation. Their self-evaluation of their actual

performance depended on how well their "reciprocated" friends (those considered to be in

a mutual relationship) performed academically. Self-evaluation of performance was not

affected when the comparison was based on levels of "nonreciprocated" friends'

achievement.   From a sample of 1,102 students of elementary age, 87% of them believed

that academic achievement was relevant to their self-definition. Thus, social comparison

was likely to be activated in them.

Using regression analysis to test their hypotheses, Guay et al. (1999) found that

although academic achievement was positively related to perceived academic competence,

this relation depended on the performance of close friends. As expected, the relation

between scholastic achievement and perceived academic competence was maximized

when reciprocated friend's achievement was low and minimized when reciprocated

friends/ achievement was high. Social comparison with friends who have high levels of

achievement may create a potential threat to self-evaluation by minimizing the

contribution of performance to their perceived academic competence. High levels of

achievement from non-reciprocated friends did not appear to affect their perceptions of

academic competence.

Guay et al. (1999) suggested that social comparison theory would support self-

efficacy. Bandura (1986) discovered that comparing one's own competence and

achievements with those of relevant others are important in the development and

maintenance of self-efficacy. This social comparison may be with a person who is worse

(downward comparison) or with a person who is better (upward comparison). It has been

suggested that downward comparison (Wills, 1991) is prompted by a person's need to

strengthen his or her self-esteem. It can either enhance a person's well being or put the

individual in the same negative state as the comparison person evoking negative feelings.

In studying university students, Vrugt (1994) found that downward comparison

only leads to negative feelings in people who feel threatened. Those who are non-

threatened tend to think that there is little chance of having unpleasant experiences due to illusions, which normally enhance a person's self-esteem. Further, those who were non-threatened felt better after downward comparison and worse after upward comparison.

Vrugt (1994) derived three hypotheses from the social comparison theories and findings. The first hypothesis was derived from the theory of perceived self-efficacy. Accordingly, perceived self-efficacy will, by way of a person's feelings about self-competence, contribute to the level of performance. Those with high self-efficacy will show higher performance. The second hypothesis was based on the literature on downward comparison. Basically downward comparison is a coping mechanism or "yard stick" in favour of self efficacy. Here, downward comparison will, by way of a person's feelings with regard to his or her skills, contribute to performance. Those with high self-efficacy will compare themselves with those with lower performances. The third hypothesis concerned people with high self-esteem. A student's perception of the capabilities of the fellow student selected for comparison affected feelings concerning their own skills.

In Vrugt's (1994) study, first-year psychology students (N=206) participated in a number of collective test sessions measuring perceived self-efficacy, social comparison and feelings regarding their own skills. Hierarchical regression analyses were used to test the three hypotheses. Supporting the first hypothesis, Self-Efficacy magnitude (SEM) contributed significantly to the feelings of students concerning their skills (t=2.93, p<.05). In testing the second hypothesis, "comparison" has a negative relationship with feelings concerning a person's skills (t= -3.69, p<.01). Thus downward comparison is associated with positive feelings concerning a person's skills. Such feeling affected students' course scores. The third hypothesis was not supported (t=-.95, p>.05). Vrugt (1994) concluded that self-efficacy, in combination with downward comparison, will contribute to a person's

feelings regarding his or her skills and through these feelings will affect his or her performance.

There were no significant correlations between intelligence (t=.75) and direction of comparison, and participants' judgment of fellow students (t=-.44). However, there were significant correlations between comparison and participants' judgment of fellow students, and positive feelings of participants concerning their skills. The correlation between feelings and comparison was found to be negative. Thus, positive feelings are directly related to downward comparison.

Figure 7 further explores the relationships between social capital theory and Bandura's social learning theory. As in the case of the theories of departure and involvement, the social learning theory links to human capital, which in turn impacts on social capital. The theories of departure and involvement are directly connected to the network of institutional services, academic and social, which fall in the meso and macro levels of social capital. Social learning theory is closely connected to human capital. It focuses on the individual and the interactions in dyads that improve self-regulated learning. The formal mentoring program provides the training for goal setting and networking to link the mentee (human capital) to the institutional network and individualized programs (retention program) that will lead to academic and personal success.

Figure 7. Social capital theory links to the social learning theory, which links the theory

of departure and theory of involvement in relation to formal mentoring.
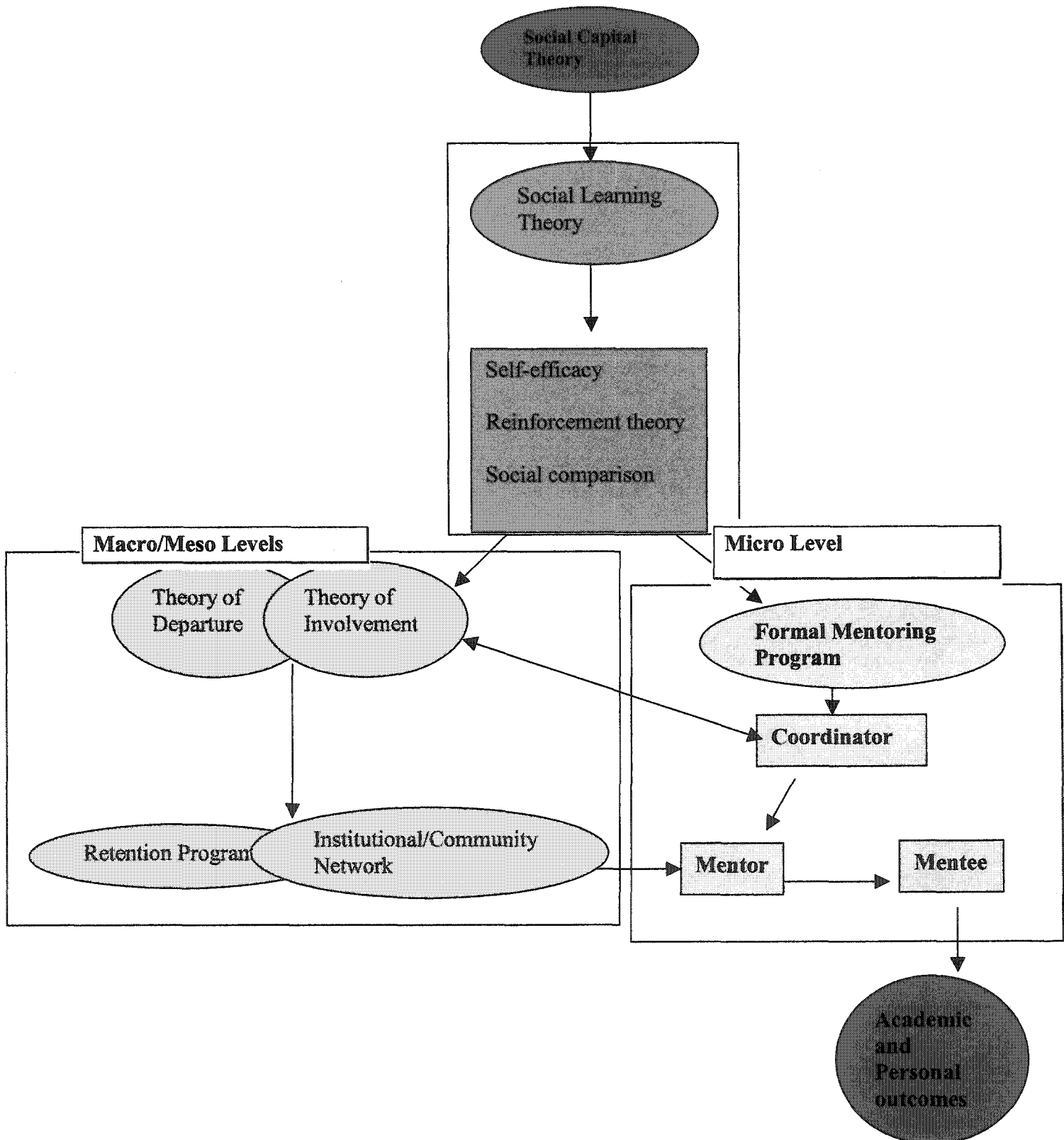
Learning through Mentoring

Constructivist theory and socialization theory can be interpreted as being

fundamental to mentoring and learning. Kerka (1997) found that mentoring supports much

of what is currently known about learning, including the socially constructed nature of

learning and the importance of experientially situated learning experiences. Constructivism

holds that knowledge is synthesized, modified, and is evolutionary in character (Novack,

1985). Some claim that the most effective learning takes place when it is situated in a

context in which new knowledge and skills are used and the individual constructs meaning

within the context of interaction with others (Driver et al., 1994; Hewson et al., 1992;

West & Pines, 1985). Consequently much of what is perceived as knowledge or

understanding results from a process of socialization. The impact of the socialization

process on individual perspectives and understandings has been well documented

(Bandura, 1977; Erickson, 1991; Kuhn, 1970; Lortie, 1975; Sarason, 1981).

Experts facilitate learning by modeling problem-solving strategies that guide

learners while they articulate their thought processes. They coach learners with

appropriate scaffolds or aids, gradually decreasing assistance as learners internalize the

process and construct their own knowledge and understanding (Kerka, 1997). Mentors,

functioning as experts, provide authentic, experiential learning opportunities in their

diverse roles (Galbraith & Cohen, 1993; Haney, 1997). Bell (1997) used the analogy of

Bluebirds guiding their young to leave the nest to explain the mentor's role in guided

learning. Bluebirds don't just hatch eggs and depart but instead prepare them for the

independence of flight from the security of the birdhouse. "Bluebirds know when their

fast-growing offspring are ready to be pushed from the nest through their genetically

coded ... instinct" (p.32). According to Bell, bluebirds often perch some distance away

from the offsprings to gauge their reaction time and preparedness. Like bluebirds, Bell suggested that mentors seek opportunities to foster discovery, watch for signs of progress both socially and academically.

Kaye and Jacobson (1996) identified trust (social capital) as the foundation of the relationship where mentors give protégés a safe place to try out ideas, skills, and roles with minimal risk. The knowledge acquired is constantly reinterpreted and developed through practice (Cleminson & Bradford, 1996).

The interpersonal relationship of mentor and mentee is recognized as essential to learning in a social context (Kerka, 1997). Galbraith and Cohen (1995) identified two primary functions related to mentoring: career/instrumental and psychosocial. Instrumentally, the mentees benefit from their mentor's knowledge, contacts, support, and guidance. Psychosocially there is an internal value developed from the ongoing interpersonal dialogue, collaborative critical thinking, planning, reflection, and feedback. This function of mentoring is a form of relational learning (learning from relationships), the value of which is becoming increasingly evident in a less hierarchical, team environment (Kerka, 1998).

Bierma (1996) studied mentoring relationships for executive women. The researcher found that relationships informed the women about their company's culture and helped them process both cognitive and experiential learning experiences. According to Kerka (1998), mentoring is a personalized and systematic way to be socialized into an organization's culture.

This cultural competence is important in work as well as academic environments. Galbraith and Cohen (1995) found that first-generation college students experience culture-clash in academic environments that can be overcome with a mentor's guidance.

Ensher and Murphy (1997) found that perceived and actual similarity between partners affected the amount of instrumental and psychosocial support mentors provided as well as mentee satisfaction. In contrast, Russell and Tinsley (1997) showed mixed results for diversified mentoring. Jossi (1997) argued that race and gender do not play a role in mentor selection although mentors need to be sensitive to different cultural perspectives.

Researchers reported an array of roles, functions and responsibilities attributed to those who serve as mentors (Jacobi, 1991). Lacking in the literature is a delineation of mentor functions, roles or responsibilities directly associated with positive mentoring relationships in undergraduate education. Jacobi (1991) noted that few studies have documented or confirmed which mentor functions are correlated with increased student academic success, enhanced student development, and overall positive education experiences.

Kram (1984) conducted systematic and detailed research on developmental mentoring relationships within the business setting. He identified two given functions, career functions and psychosocial functions, which were elaborated upon in later studies on mentoring within education (Flaxman & Ascher, 1992; Kerka, 1997). According to Kram, career functions relate to providing sponsorship, visibility, coaching, protection, and challenging assignments. Psychosocial functions are aspects of the relationship that enhance sense of competence, identity, and effectiveness in a professional role. Flaxman (1988) categorized mentor functions based on Kram's analysis and used the term "instrumental" instead of "career" to describe functions which were considered extrinsic and directed at facilitating the mentee in changing the external environment.

Cohen (1993) conducted research on mentor functions within higher education aimed at adult learners while also incorporating functions, which have been traditionally

associated with facilitating at-risk student populations. The researcher developed a self-assessment instrument for mentor effectiveness. Cohen described six broad categories of mentor effectiveness that are critical to mentors of adult learners in undergraduate education. These functions were described as follows: 1) relationship emphasis, in which the mentor conveys genuine understanding of the student's feelings; 2) information emphasis, in which the mentor provides detailed information and offers suggestions to guide the current and future development and achievement of students' personal, academic, and career goals; 3) facilitation focus in which the mentor guides students through a reflective review of their interests, abilities, ideas, and beliefs in an effort to facilitate the decision-making process; 4) confrontive focus, in which the mentor respectfully challenges students' decisions as they relate to their development as adult learners; 5) mentor model, in which the mentor self-discloses fitting life experiences in an effort to serve as a role model and to personalize the mentoring relationship; and 6) student in whom the mentor stimulates critical thinking in relation to developing their personal and professional goals.

Planned vs. Natural Mentoring

Gallimore (1992) contrasted planned mentoring and natural mentoring. Planned or formal mentoring is the structured matching of mentor and mentee while natural mentoring relationships usually arise from context and sometimes accidentally. Flaxman (1988) identified natural mentoring relationships as taking the form of friendships, collegiality, advocacy, coaching, and pseudo-parenting usually resulting in a long-term relationship. These are typically voluntary relationships with the mentee seeking the mentor through some link.

Flaxman (1988) cites numerous famous mentor pairs including Merlin's mentorship of the young King Arthur, Copland's mentorship of Leonard Bernstein, and Fleiss's mentorship of Freud (Flaxman, 1988). According to Flaxman, academic research, popular literature, and personal anecdotal accounts emphasize the value of natural mentoring in every conceivable vocation as illustrated by the above relationships.

In contrast to natural mentoring, planned mentoring is more purposeful and less intimate. The duration is typically shorter, the mentor and mentee are matched, and the encounters are less frequent and less sustained over time (Flaxman, 1988). Faddis (1988) pointed out that planned mentoring gained mutual commitment to the relationship from the beginning because of the clearly defined objectives based on the needs of the mentee, as well as, the ability of the mentor to meet the needs and have a plan by which the objectives could be achieved.

Redmond (1990) suggested that planned mentoring was a way to address society's injustices by providing increased opportunities for advancement for racial and ethnic groups targeting those who had experienced societal racism, lack of access to social

resources and inadequate educational preparation. This interpretation is used in many of the current specialized mentoring programs for minorities and at-risk students.

Modern planned mentoring programs started in the corporate world in the late 1970s (Brown, 1995). Collins and Scott (1978) described and glorified mentorship in an article profiling three male executives in *The Harvard Business Review*. The use of planned mentoring came at a time when women and racial minority groups were entering managerial positions without the natural male mentoring connections (Brown, 1995). Mentoring programs have since become widespread in such areas as business, nursing and education (Cheng & Brown, 1992; Slicker & Palmer, 1993).

Planned mentoring programs for at-risk students became increasingly common in the 1980s (Brown, 1995). Planned mentoring is a research mandate at colleges and universities seeking to improve retention and graduation rates (Ross-Thomas & Bryant, 1994). Redmond (1990) found that the psychosocial comfort of mentoring empowered students to successfully remain at the institution. Although there is a wide variety of research available discussing planned mentoring in higher education, few studies are related to undergraduate academic outcomes (Grissom, 1998). Johnson and Sullivan (1995) identified the rampant decentralized growth in the current mentoring movement in higher education with little available research to help direct practice. The National Mentoring Institute estimated that due to ineffective mentoring practices in institutions, only 20 percent of all provider organizations can be considered effective in supporting mentoring relationship (Grissom, 1998). Program design was noted to be a function of a program's objectives and the degree of program variation created a highly decentralized definition making it difficult to validate program effectiveness.

Evaluation of Mentoring Programs

In a qualitative study of five exemplary intergenerational mentoring programs, Freedman (1988) suggested that two types of relationships were formed in the mentoring programs: primary relationships and secondary relationships. Primary relationships were identified by the mentor's unconditional commitment, great intimacy, and engagement of both the "good" qualities and "bad" qualities of the mentee. Secondary relationships depicted more limited but supportive involvement, with the mentor focusing on functions and tasks and retaining more emotional distance. When the purpose of a mentoring program was to improve students' academic performance and retention, primary relationships may be too close for both mentor and mentee to feel comfortable, especially between cross-gender pairs (Sullivan, 1992).

In attempting to discern the correlation of function to outcome in mentor relationships, the level of intimacy or intensity characterizing the mentoring relationship makes it unclear. Some have described mentoring as the highest end on a continuum of helping relationships (Hunt & Michael, 1983; Kram, 1984). Others (Shapiro et al., 1978) use a continuum with points in a Likert scale with peer pals at the lowest rank, followed by guides, sponsors, and mentors who represent the most intense and paternalistic type of relationship. Clawson (1980) assessed the relationship by the degree of mutuality in the relationship and the comprehensiveness of the mentor's influence on the mentee. In contrast, Kram and Isabella (1985) suggested that further studies be conducted to determine how individual differences in developmental task, self-concepts, and attitudes toward intimacy and authority, as well as other individual attributes, shaped the nature of the mentoring relationships.

It is apparent that mentoring programs need to be evaluated in a way that is meaningful. Johnson and Sullivan (1995) suggested that is difficult to isolate and attribute outcomes to the mentoring component. Students were noted to participate in a wide variety of activities within the university setting and received many services both within and outside a mentoring program. At best, using evaluation designs with randomly assigned experimental and comparison group studies will be limited in the ability to control for all relationships and interventions.

Flaxman (1992) identified the need for two types of evaluations in measuring the effectiveness of mentoring. First, he described impact evaluations involving studies that determine the success of the program, what types of mentoring are effective, what factors are affected by mentoring and who can profit from mentoring programs (social capital relations). Secondly, Flaxman described process evaluations relating information about the implementation of mentoring programs. Process evaluations reveal what is happening in the programs that contribute to the effects of the program. Accordingly, process evaluation should reveal who should be mentored, how the program should be organized and managed and which mentors will be effective to maintain the program. Fundamentally, process evaluations determine which processes (through the principles of social capital) work together to establish a mentoring relationship that provides the necessary social and developmental opportunities for the mentoring program participants.

Petruolo (1998) conducted a longitudinal correlational study to evaluate a formal mentoring program at a two-year college. This college extends an invitation to all freshmen and minority students to participate in the college's mentoring program. While assessing the impact of the mentoring program on various student outcomes, such as persistence and GPA, Petruolo examined the relationship between the mentee's assessment

of mentor effectiveness and student outcomes. Petruolo found that the quality of mentoring was not related to academic persistence and achievement but that the quantity of mentoring (frequency and length of mentoring sessions) was found to be significantly related to academic persistence and achievement ($r=.2027$, $p<.05$). Further, the estimate of association between frequency of contact and academic/work self-concept was found to be statistically significant at the 10% level.

Given the significant relationship between the frequency of mentoring sessions and the outcomes of academic persistence and academic/work self-concept, Petruolo (1998) speculated that frequent mentoring sessions provide a number of benefits including academic and social integration within the educational institution, the opportunity for students to get assistance with various academic and personal needs as they arise, afford the mentor the chance to assess mentee's progress, and facilitate the establishment of the mentoring relationship advancing in its stages of intimacy.

Mentoring has been conducted using diverse research designs. Through a mixed methodology design a better understanding of the mentoring process and its impact on learning may be achieved. Mentoring relationships need valid and reliable measurement instruments leading to a meaningful evaluation of mentoring programs that respond directly to the goals of the program. In using a mixed methodology the quantitative data provides the empirical evidence while the qualitative results permit exploration of the link between the practices of the formal mentoring program to the theories outlined in this literature review.

Research Questions and Hypotheses

Given the importance of social capital theory for education, it is reasonable to predict that the social capital based practices of mentoring would lead to:

1. higher retention rates, higher cumulative grade point averages, and less courses failed in a year for students who participate in a mentoring program as opposed to comparable students who do not participate in a mentoring program;

2. mentored students being more satisfied with their first-year experience in university than are non-mentored students; and

3. a sense of satisfaction with the outcome of the program?

Phase I: Quantitative

Hypothesis 1

There will be a significant positive relationship between mentorship and grade point average, number of courses completed and academic standing.

Hypothesis 2

There will be a significant positive relationship between mentorship and the mentees' enrollment during the semester subsequent to the mentoring experience.

Hypothesis 3

There will be a significantly positive relationship between a mentee's assessment of his/her mentor's overall effectiveness and satisfaction with the university experience.

Phase II: Qualitative

This study will also explore both the mentee and mentor experiences with the program through a descriptive analysis based on their journals, semi-structured interviews, and follow-up member checks to examine how the responses align with the various configurations (Figures 1, 2, 3, 5).

Chapter 3:
Methodology

This is an explanatory mixed-method design involving a multi-phase approach

(Creswell, 2002) exploring the nature and the effects of mentorship in supporting first-year

students through the transition from high school to university. The intent was to use

multiple databases to best understand the phenomenon of formal mentoring and provide a

rich, authentic assessment of the program. The quantitative data (collected for two

freshman cohorts in 2001 and 2002) and qualitative data were collected separately in three

databases (two quantitative and one qualitative). This was done so that the data from the

qualitative phase would enhance, elaborate and complement the data from the quantitative

phases. Further, it is nested as Creswell (1994) noted, where the qualitative data becomes

"less dominant" in the "dominant" quantitative design. Accordingly, the quantitative data

provide the empirical evidence to assess the mentorship program while the qualitative

results were analyzed to explore the link between the practice of the formal mentoring

program and the theories outlined in the literature review.

Phase 1: Quantitative Data Collection Year 1

Using the University of Windsor's Student Information System (SIS) with

permission from the Registrar, and the consent of the students involved, exiting high

school averages were collected for those participants who volunteered to participate in the

program and who had been verified as fitting within the range of the study parameters.

The SIS was then used to select the control group by anonymously selecting first year

students who had comparable exiting high school averages. For both groups, the

experimental (mentored group) and the control group (the majority were from University

101 course, a compatible course offered to assist students in skills development) the

database was created to compare (1) the number of courses failed by each student in each group in both semesters, (2) the GPA (Grade Point Average) at end of each semester, and (3) the students' academic status. Academic status refers to students as being (1) in good standing, (2) on academic probation or (3) required to withdraw from their program. The Mentor Assessment Survey was given to the experimental group to provide a descriptive analysis of the program from their perspective. Participants responded to a series of questions using a Likert Scale rating.

Phase 2: Quantitative Data Collection Year 2

As in Phase 1 exiting high school averages were collected for those participants who volunteered to participate in the program and verified to be within the range of the study limits. The SIS was then used to select the control group by anonymously selecting first year students who had comparable exiting high school averages. Once again, for both groups, the experimental (mentored group) and the control group, the database was created to compare: (1) the number of courses failed by each student in each group in both semesters; (2) the GPA (Grade Point Average) and major GPA at end of each semester; and (3) the students' academic status. Academic status refers to students as being (1) in good standing; (2) on academic probation or (3) required to withdraw from their program.

Along with the Mentor Assessment Survey, which was given to the experimental group, the mentors were asked to complete a similar survey, "The Assessment of Mentor Effectiveness Scale–Principles of Adult Mentoring Scale"(Cohen, 1993), (Appendix E). Two self-concept surveys were administered pre- and post- intervention to both the experimental and the control groups. They included the Tennessee Self-Concept Scale (TSCS: 2, Fitts & Warren, 1996), and the Academic Self-Efficacy Questionnaire (ASE) (Wood & Locke, 1987). Finally the adapted First College Year Experience Survey

(YFCY, 2002) was administered toward the end of the second semester, second year to the experimental and second control group to determine the effect of mentorship on student satisfaction.

Participants in the Quantitative Phases

Overall, there were 128 participants in the study (56 in the experimental group or mentored group and 72 in the control group or non-mentored group). Of the 56 experimental participants, 22 were mentored in year two (2002) of the study and 34 were mentored in year one (2001). Similarly, 19 of the control group entered in year two of the study while 53 entered in year one.

Phase 3: Qualitative Analysis Methodology

The third phase of the study was qualitatively designed to explore the nature of the T.I.M.E. mentorship model from the perspective of the participants. More specifically, it was intended to explore how the formal mentoring program links to the theoretical principles outlined in the literature review.

Using qualitative research methods, meanings were interpreted in context and data were inductively analyzed using axial coding, linking the categories of information to the concepts in the related theories. The data collected were based on a two-year program implementation. Triangulation was used to enhance the validity and reliability of this qualitative phase of the study. This involved using a variety of sources and methods to substantiate and validate claims. Examples of triangulation in this study included transcripts from the journal writings, interviews, member checks (verification or clarification with participants), and transcripts of video taped interviews. This task was completed through the audit process and an audit trail. From journals, interview

transcripts, videotapes, raw data and questionnaires available for review by the dissertation committee members (who are not affiliated with the project) the flow of analysis from data to findings was corroborated. Further the data were organized and coded to link to the multiple theories and perspectives found in the review of literature. More specifically the theories of Departure (Tinto, 1987), Involvement (Astin, 1984), Social Learning (Bandura, 1986) and Social Capital (Putnam, 2000) were emphasized in this study.

It should also be understood that there are, and should be, interpretations that reflect the personal and subjective views of the researcher, who designed the program, was the instructor of the partial credit course for mentors and therefore was involved in both sides of the research. The researcher has the expertise in the field and has a relationship with the participants particularly, and most directly, with the mentors. A different investigator might have been inclined to gather different evidence or make different interpretations.

Research Participants

Mentees -Experimental Group

The participants were volunteer high school graduates (traditional- first year out of high school) with final year averages at the lower limit (approximately 70%) accepted in the Faculty of Arts and Social Sciences and the Faculty of Science. For Phase I and Phase II of the quantitative study (the first year of the program), the participants were obtained through recruitment at the early orientation program, Head Start and/or through the Academic Counseling offices of the Faculties involved (Arts and Social Science, and Science). Each quantitative phase had a new group of participants. Although the researcher intended to focus on students with averages around the lower limit for admission (approximately, 70%), for ethical reasons any student, who applied, was welcomed and allowed to participate. Those participants in the program who entered with much higher averages were not included in the data analysis.

Non-mentored -Control Group

The participants were high school graduates (traditional - first year out of high school) accepted in programs in the Faculty of Arts and Social Sciences and the Faculty of Science. These students were selected anonymously to match the volunteer group from the database of admissions (SIS) for first year. They were identified in terms of student numbers only, and sorted by the criteria of entering averages, academic averages, academic program, age and gender.

Mentors

These individuals were Faculty of Education pre-service students in the Intermediate/Senior Division, with teachable participants from the Faculties of Arts and Social Sciences and Science, respectively. Initially they were each sent a letter (Appendix

A5) inviting them to volunteer for the program as part of the 80-303 Integrated Course requirements. These pre-service student teachers had already obtained at least an undergraduate degree, BA or B.Sc.; some has an M.A., or an MSc. These students were interviewed and matched with 1 - 2 participants (mentees) each. The expectations of the Teacher Advisory Program mandated in the OSS (Ontario Secondary School) document was the foundation for in-servicing of the mentors and was adapted to meet the needs of the advisory committee of the program. A copy of the course outline was made available in late August or early September (Appendix I).

Those Assigned to the Experimental Group were required to:

1. meet with their mentor on a regular basis – once per week for a minimum of 30 minutes to a maximum of 1 hour (September to March),

2. develop an education plan with their mentor,

3. assess the program in meeting their needs as a student,

4. maintain confidentiality in participation in the study,.

5. complete the First Year Experience Survey (Appendix B) by the researcher (as for the experimental group), and

6. complete pre- and post- ASE and Tennessee Self-Concept Surveys (Appendix C, D) (as for the experimental group), and

7. complete a Mentor Assessment Survey (Appendix F).

The mentor was required to:

1. be a Faculty of Education student who will be graded on his/her involvement in this project, (see Appendix A),

2. meet regularly with the mentee at a convenient time in the Faculty of Education

     building,

3. contact the mentee by email or by phone,

4. establish a safe, nurturing environment,

5. ensure confidentiality within ethical guidelines,

6. apply practical strategies to enhance the mentee's learning,

7. provide strategies for the mentee to set realistic education goals,

8. create timelines with the mentee,

9. assist the mentee to identify and use appropriate resources offered by the university,

10. ensure the mentee is aware of the various workshops and activities that would

     enhance the mentee's academic performance and achievement,

11. be assessed and graded by the instructor as a course requirement,

12. assess themselves through the Adult Mentoring Survey (Appendix E)

13. maintain professionalism throughout the study,

14. guide the mentee toward resources available on campus, and

15. complete a research project on one aspect of mentoring as the culminating

     assessment task and present it to their peers and the Faculty Advisors.

The Mentor was not required to:

1. provide personal, psychological, or academic counseling, nor

2. act as a tutor.

Those Assigned to the Control Group (group identified for survey purposes only

from University 101 class) were required to:

1. complete the Your First College Year Experience Survey by the researcher (as

   for the experimental group), and

2. complete pre- and post- ASE and Tennessee Self-Concept Surveys (as for the

   experimental group).

Instruments for Analysis

Each of the following instruments will be described following the list:

Phase 1: Instruments for Quantitative Analysis

1. Background Information Data Form (Appendix A4)

2. T.I.M.E. Mentor Assessment Survey (Appendix G)

Phase 2: Instruments for Quantitative Analysis

3. Survey of first-year university students adapted from Your First College Year

   Experience Survey (YFCY, 2002), (Appendix B)

4. The Academic/Work Self Concept Scale -Tennessee Self-Concept Scale (Appendix

   C)

5. The Academic Self Efficacy Questionnaire (Appendix D)

6. The Assessment of Mentor Effectiveness Scale–Principles of Adult Mentoring

   Scale (Cohen, 1993), (Appendix E)

7. Background Information Data Form (Appendix A4)

8. T.I.M.E. Mentor Assessment Survey (Appendix F)

9. T.I.M.E. Mentor Evaluation Form (Appendix G)

Phase 3: Instruments for Qualitative Analysis

       10. Journals and reflections of mentors

       11. Interviews with mentors and mentees (Appendix J)

       12. Follow up member-checks (taking word back to the participants)

Description of Quantitative Instruments

Your First College Year Experience Survey (Appendix B)

Your First College Year Experience Survey (YFCY, 2002) was designed by the Higher Education Research Institute at UCLA and the Policy Center on the First Year of College. It is a comprehensive survey tool that provides information on the academic and personal development of first year college students. Information is collected on a wide range of cognitive and affective measures, providing comprehensive data for single-or multiple- institution analyses of persistence, adjustment, and other first-year outcomes. It allows for longitudinal research on the first year as well as being a stand-alone instrument. A two-year pilot study included samples of 3680 YCFY respondents at 50 four-year pilot schools (N=17,331). The norm was weighted to compensate for non-response bias, therefore the likelihood of response was calculated by regressing the dependent variable, YFCY Response, on 374 variables derived from the 2000 CIRP (The Cooperative Institutional Research Program) Survey. The full report is available online at: (http://www.gseis.ucla.edu/heri/yfcy/yfcy_report_02.pdf).

The first of the three studies served as a model for CIRP-YFCY research that focused on a particular college outcome while study 2 provided a template for research focusing on a particular environment and its effect across multiple college outcomes. Study 3 compared response rates and nonresponse bias across four survey administration groups: paper, paper with web option, web-only with response incentive, and web-only with response incentive. Findings from all three studies enhanced researchers' understanding of how to assess the experiences using different research methods.

In study 1, the sample included 3,106 first-year students who completed both the CIRP Freshman Survey and the YFCY survey at 43 four-year pilot campuses that provided

second-year re-enrollment information. The data were weighted to approximate the survey responses for all first-year students in the mail-out sample. A logistic regression analysis was used to explore the predictors of first-to second-year re-enrollment. Logistic regressions were also conducted for each of six student types: the Artist, Hedonist, Leader, Scholar, Social Activist, and Status Striver.

The results of descriptive analyses from a national cohort of 3,680 at 50 four-year institutions indicated that first-year participation is related to a host of positive academic and social experiences in college. In highlighting the third study, the overall response rate to YFCY across all modes of administration was 21.5 percent. This rate of response is comparable to other national mail-out surveys in recent years.

In terms of non-response bias analyses, logistic regression was used to determine the odds of responding for each of the four administration groups. For all groups, the odds of survey response were higher for women than men. Further, students classified as "Hedonists" were less likely to respond. In three of the four groups, the response was lower among "Status Strivers" and higher among "Social Activists". In terms of web-responses, the odds were higher for men, students living farther from home, students reporting higher levels of emotional health, and students valuing the learning opportunities. In terms of response bias, students were found to respond to items on web-based surveys similarly to those on paper forms. Web-respondents did however report higher levels of self-confidence with respect to technical skills and mathematical ability (

The Academic/Work Self-Concept -The Tennessee Self-Concept Scale (Appendix C)

The Academic/Work Self-Concept Scale developed by Fitts and Warren (1996) enhances the Tennessee Self-Concept Scale (TSCS: 2). This scale was constructed to

allow individuals to describe how they perceive they perform in academic and work settings as well as how they believe others perceive them in those settings. This instrument consists of 12 items addressing the affective and cognitive aspects of academic and work self-concept.

Construct validity of the scale had been assessed through factor-analytic studies. Fitts and Warren (1996) determined that it was critical to demonstrate through factor structure that test items and scales of the TSCS:2 were consistently related to each other in ways which would be predicted based on the constructs they attempt to represent. They assessed the construct validity of the TSCS:2 and its various scales and verified the multiple dimensions represented by the self-concept scales. The results from 6-factor extractions for positively and negatively worded item sets provided evidence as to the unique contributions of these test items as well as support for the scoring of the Academic/work self-concept scale (Fitts & Warren, 1996).

Content validity of the scale had been determined through item evaluations conducted by four psychologists who were also test construction experts. This team reviewed statements specifically constructed for this scale. A review had also been conducted of independently generated items and self-descriptions of hospital personnel who were asked to write statements relating to their perceptions in their work setting. Four psychologists agreed upon the content representativeness of 26 items. The final Academic/work self-concept scale includes a balanced set of 12 negatively and positively worded items whose correlation with the scale exceeded their correlations with other self-concept scales by a margin of at least .10 and which were proven through statistical analysis to be a relatively homogenous set (Fitts & Warren, 1996).

Concurrent validity of the scale had been established through correlations with the widely used Piers-Harris Children's Self Concept Scale (PHCSCS). The strongest correlations of the TSCS:2 scale were with the PHS|CSCS Intellectual and School Status scale (.62 and .59 for the Adult and Child forms, respectively). Also, there was a strong correlation with the grade point (.34 for the adult form and .38 for the child form, respectively) (Fitts & Warren, 1996).

Fitts & Warren (1996) utilized both internal consistency and test-retest reliability estimates in assessing the scale for test reliability. Cronbach's alpha (cited in Fitts & Warren, 1996) was calculated to estimate internal consistency. The scale had an alpha coefficient of .85 for the adult-aged group and an alpha coefficient of .81 for the adolescent group tested. Test-retest reliabilities of the TSCS:2 scales were determined by administering the Adult Form to a group of 135 high school students and retesting within a one- to two-week time interval. The estimated test-retest reliability for the scale was .76 (1996).

The Academic Self-Efficacy Questionnaire (ASE) (Appendix D)

The Academic Self-Efficacy (ASE) (Wood & Locke, 1987) measures the participant's perceptions of his/her ability to perform various academic tasks, such as reading, note taking and memorization. The questionnaire has seven subscales: class concentration, memorization, exam concentration, understanding, explaining concepts, discriminating concepts, and note taking. It has been used to examine the relationship between self-efficacy, goals and performance. With 32 questions each having two parts, the task are rated yes or no and the confidence levels are measured on a Likert Scale.

With the outcome (grade) self-efficacy, participants were asked to indicate their level of confidence on a scale of 1 to 10 for attaining each of three grade categories on the

next examination. The outcome self-efficacy measure was the average confidence score across the grade levels on this scale. Reliability (Cronbach's alpha) for this scale was .87. Grade self-efficacy was correlated at .60 with Wood and Locke's (1987) Academic Self-Efficacy (ASE) measure.

A process (academic) self-efficacy measure comprised six 2- to 4-item subscales that measure specific academic self-efficacy components, including memorization, class concentration, understanding, explaining concepts, discriminating concepts, and note-taking. For each subscale, respondents were asked their confidence on a scale of 1 to 10 for attaining successive performance levels. Wood and Locke's six subscales were derived from a series of four validation studies indicating that these 17 items (out of 29) resulted in the highest inter-item reliability, lowest standard error, and greatest predictive validity for academic performance. Process self-efficacy was the average for the confidence responses across the subscales for different performance levels. Scale reliabilities (Cronbach's alpha) on the academic self-efficacy ranged from .73 to .87 with an overall reliability for the 17-item scale of .82.

The personal grade goal measure was the average of subsequent goals and performance. After the scores were converted to a 5-point scale the Cronbach's alpha for this measure was .70. The actual grades for the midterms and the final examination constituted the performance measure. As was done with the grade goals, the actual letter grade earned was converted to a 5-point scale.

The Scale for Assessment of Mentor Effectiveness Scale – Principles of Adult Mentoring (Appendix E)

Cohen (1995) developed a scale of 55 items, which was used to measure mentor effectiveness as perceived by the mentor. Each item had a statement relating to specific

mentor behaviours which was assessed on a 5-point Likert scale with the following point values assigned to each descriptor: (1) never, (2) infrequently, (3) sometimes, (4) frequently, and (5) always. The mentor's overall effectiveness score was obtained by summing the item scores producing a range of mentor effectives from 28-140.

Cohen (1995) tested the scale for construct validity through a "back translation" process in which item statements were read and matched with the specific category of mentor functions, which they most closely represented. Cohen defined these functions as follows:

1. Relationship Emphasis (RE) which conveys through active, empathetic listening a genuine understanding and acceptance of the student's feelings;

2. Information Emphasis (IE) which directly requests detailed information and offers specific suggestions to students about their current career plans and progress in achieving personal, academic, and career goals;

3. Facilitative Focus (FF) which guides students through a reasonably in-depth review and explanation of their interests, abilities, ideas, and beliefs; and

4. Mentor Model (MM) which shares appropriate life experiences and feelings as "role model" to students in order to personalize and enrich the relationship.

Feedback from evaluation judges indicated that the scale met the general requirement for construct validity in that the scale clearly measured the mentor behaviours it claimed to identify. Further comments led to some refinements of the scale.

Cohen tested for content validity by employing an evaluation jury of 10 nationally recognized scholars (experts) on mentoring and counseling relationships, and 12 experienced community college personnel who had been involved in mentoring. This jury

reviewed proposed definitions and analyzed the prototype of the Principles of Adult

mentoring Scale. Items of the scale were evaluation with either a *yes* or *no* response in the

categories of *realistic, clear language*, and important in *Overall Development.* Item

statements rated by three or more evaluators as *no* in any of the three categories were

reviewed and modified to eliminate any problems. The evaluation jury reviewed the final

version, and a total of 55 item statements of mentor behaviours were deemed appropriate.

Cohen performed a reliability analysis of the scale by utilizing the SPSS-PC+

program. The reliability coefficient of mentor responses for the overall scale showed an

alpha of 0.95 for the 55 items.

Qualitative Analysis Strategies

Journals

Following weekly timelines designed by the Department of Student Services, mentors would initiate the conversation with the mentees using guided questions related to the timelines. In the first week, mentors would work through the "Passport to Graduation" workbook distributed to all first year students in Science, FASS and Business by their academic advisors at Head Start or September Orientation. Subsequent weekly meetings were guided by proximal goal setting and attainment. A few goals included attending at least three workshops designed to assist first year students (e.g., time management, note taking, multiple choice exams) and meeting with each faculty in their first semester along with their academic advisors (minimum of two meetings). The mentor would assist the mentee in preparing questions related to the course, or career goals to facilitate the meetings. The mentor would document the achievements, disappointments, attitude and plan of action for the mentee for the following session. The mentor would write a brief self-reflection assessing the session. Mentors would be asked to prepare reflections for ongoing assessment of the relationship and program. The journals were collected for data analysis. Nineteen were randomly selected for analysis and coded using the NUD*IST program.

Interviews (Appendix I)

For this explanatory study, the process of collecting data involved video taped interviews (Creswell, 1998) with a focus group of six participants, three mentors and three mentees from year one (2001) of the program. An interview protocol was also used with the year two (2002) mentees and mentors (Appendix J2). The questions were open-ended

to allow participants to provide insight on the experience. The participants responded in writing.

Ethical Considerations

Good ethical practices are important in all forms of research involving human participants. Permission to conduct the research was required and obtained from the University of Windsor Ethics Committee. All participants signed written permission to use any information from surveys, interviews, transcripts and journals to meet ethics approval criteria.

The participants' rights, interests and sensitivities were ensured by protecting their confidentiality, keeping all information confidential, seeking their voluntary participation in the study, allowing them to withdraw at any time, and obtaining written consent. Any names used were pseudonyms protecting the identity of the participants. The role of the investigator was only to interpret the findings in journals, interviews and commentaries. The researcher shared no access to any personal information.

The participants were not exploited in any way. The expectations, rights, and responsibilities of the participants were outlined in writing and explained by the investigator. The time commitment included four 15-minute questionnaires and five written interview questions. There was one videotaped interview and one follow up interview with only a few participants. Mutually convenient times were arranged for the interviews. All the participants were made aware of the research objectives and purpose of the study in writing, and through direct personal solicitation. In addition, all participants have full access to the final report. Finally, all documents used were kept securely locked in the researcher's office.

Procedures while Conducting the Study

The data for this study were gathered from a variety of sources. For Phase 1 and 2 quantitative analysis, data relative to participants' academic performance (experimental and control groups) using the GPA (Grade Point Average) per semester, the number of courses failed per semester, and the participant's academic status at the end of the year to determine retention were obtained through access (by permission of the Registrar) to the university SIS (Student Information System). Volunteer mentees were contacted and asked to complete a consent form along with a demographic profile identifying the program in which they had been accepted, gender, family dynamics, family involvement in university studies and sibling placement, involvement in extracurricular or other activities while in high school (Appendix A1).

Also for Phase 2 (quantitative) self-concept surveys were added as a pretest, the participants were asked to complete the Tennessee Self-Concept Scale (Appendix C) and the Academic Self-Efficacy Questionnaire. Both were repeated as a post-test at the end of the semester.

Similarly, mentors who have been sent letters to invite them participate with their acceptance package were contacted by phone and asked to complete a consent form along with a demographic profile (see Appendix A4). Mentors were given a set of criteria through a course syllabus stating the expectations of the course (Appendix I). The mentors were required to participate in an initial workshop for in-servicing them as mentors with follow-up classes throughout the semester. The mentors also worked in groups of four to present related topics on their work as mentors and "Teacher Advisors" to their colleagues in the integrated class at the end of the year. Mentors maintained a journal to assess the

progress of the mentoring pair, including the setting and attainment of tangible proximal

goals. Self-reflection was also recorded. Journals and presentations were used as data.

In both years, an initial meeting between the investigator and all the mentees was

conducted within the first week of the program. Concerns and expectations of the mentees

were recorded and relayed to the mentors through their classes. Two social gatherings

took place by invitation to all participants. The first was an informal pizza party to get to

know the participants, the faculty advisors and the deans of the respective faculties. The

second was a celebration of the first semester achievements just prior to the final exams as

an encouragement and demonstration of social connectedness of the group and the

institutional support. Participation and field notes were taken at both gatherings. The

mentees also completed a Mentor Satisfaction Survey. A final social gathering took place

at the end of the year. Certificates of participation were awarded to everyone, along with

Certificates of Distinction for the top mentors. Bookstore awards were given randomly to

the mentee for their persistence in the program.

In the second year of the program the First Year Experience Survey (Appendix B)

was distributed to all mentees at this time. The survey was also distributed to University

101 first-year classes as a control group. The Mentor Evaluation Form and Mentor

Effectiveness form were completed by the mentees at the final social. Mentors also

completed a mentor satisfaction survey at this time, the Adult Mentoring Survey

(Appendix E). Both mentees and mentors were asked to reflect on the program and

respond candidly to a series of interview questions (Appendix J).

Earlier, mentors had been divided into groups of four to study one aspect of the

mentor/mentee relationship. Each group was given a topic and asked to prepare a 20-

minute presentation to their colleagues on the topic. The topics included: 1) transition

from high school to university; 2) the effect of gender and age on the mentor/mentee relationship; 3) the affect of mentorship on perceived academic performance of mentees; and 4) assessment of the pilot mentoring program. A criterion for grading was given to the members to assist in their presentation. At this time as well, mentor journals were submitted for grade evaluation and Phase 2 qualitative analysis.

To further enhance the phenomenological component of this study in Phase 2, three mentors and three mentees were interviewed and videotaped at the end of the program in the first year. The interview was conducted in the University studio with the primary investigator asking the questions.

All of the qualitative data were transcribed into text files and then transferred to NUD*IST (Non-numerical Unstructured Data Indexing Searching and Theory-building)(QSR, 2001). NUD*IST is a qualitative analysis software program that allows you to import and code textual data; edit the text without affecting the coding; retrieve, review and recode coded data; search for combinations of words in the text or patterns in your coding; and import data from and export data to quantitative analysis software.

Tree nodes and sub-nodes were created to relate to the theoretical foundations researched in the review of literature. Text was retrieved and reviewed by both the researcher and sorted by the nodes established and the links were made with triangulation and frequencies noted in Tables 1 and 2.

Chapter 4

Phase I and II: Quantitative Results

To evaluate the effect of the mentoring program, the performances of students in the experimental groups (mentored students in the 2001 and 2002 cohorts) were compared to the three control groups (2001 cohort, 2002 cohort, and New Controls who had no experience with University 101[1]). The overall GPA, the GPA in their Major, the academic status and the number of courses failed were tracked. As a working hypothesis, it was predicted that the mentoring program would have a positive effect on first-year, at-risk students in terms of (1) cumulative GPA for both semesters, (2) a reduced number of failed courses, and (3) increased retention by the following year as identified for year-end academic status.

GPA

Preliminary analyses indicated that the groups differed in terms of their incoming OAC averages, $F(4, 149) = 4.09$, $p < .01$. See Table 2 for means and standard deviations.

Table 2

Incoming OAC Averages for the Mentee Groups and the Control Groups

	N	Mean Percent	SD
Mentee 2002	22	72.13	6.26
Control 2002	19	73.00	6.92
Mentee 2001	34	69.95	5.66
Control 2001	53	66.78	4.45
New Control	31	68.42	11.99

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[1] The students in the control groups for 2001 and 2002 were drawn from students taking University 101-a remedial-type course for at-risk students. This increases the possibility of a Type II error, and interferes with detecting a mentoring effect. Thus, a third control group was added using students who had no involvement with the University 101 course. This serves as a control for the University 101 course.

To control for this difference in OAC averages, all subsequent analyses used the OAC average as a covariate. In addition, gender was not a relevant variable as the test scores (First Semester GPA, Final GPA) were comparable for males and females in the two-way MANCOVA, $F(2, 138) = .42$, $p > .1$, and the gender distribution was comparable in the groups, $\underline{X}^2 (4) = 7.72$, $\underline{p} > .1$. The gender variable was considered in the first analysis and found non-significant; it was therefore not considered in subsequent analyses. Also, there were no differences with respect to the mentees' faculty (Science, and Arts and Social Sciences).

Table 3

Means and Standard Deviations for Males and Females in the Mentored and Control Groups for First and Second Semester Grade Point Averages (GPA)

	Group	Gender	Mean	SD
Semester1	Mentee 2002	Male	7.10	1.96
		Female	6.52	1.95
	Control 2002	Male	5.54	1.63
		Female	5.67	2.39
	Mentee 2001	Male	6.49	2.00
		Female	6.18	1.99
	Control 2001	Male	4.38	2.00
		Female	4.49	2.18
	New Control	Male	4.44	1.34
		Female	4.04	1.01
Semester2	Mentee 2002	Male	6.74	1.30
		Female	6.39	1.72
	Control 2002	Male	5.67	1.30
		Female	5.80	1.93
	Mentee 2001	Male	6.41	3.07
		Female	6.44	1.71
	Control 2001	Male	4.65	1.66
		Female	4.58	1.90
	New Control	Male	4.49	1.50
		Female	4.51	1.03

In this principal analysis, the significant main effect for Group in the MANCOVA, $\underline{F}$(8, 278) = 3.25, $\underline{p}$ < .001, was evident in the subsequent univariate F-values for both First Semester GPA, $\underline{F}$(4, 139) = 6.54, $\underline{p}$ < .001, and Final GPA, $\underline{F}$(4, 139) = 5.93, $\underline{p}$ < .001. The post hoc analyses, (LSD) for the First Semester GPA showed that the Mentee 2002 group did better (mean = 6.78) than the Control 2002 group (mean = 5.6), $\underline{p}$ <.05, the Control 2001 group (mean = 4.4), p < .001, and the New Control group (mean 4.24), p < .001. Similarly, the Mentee 2001 group did better (mean = 6.24) than the Control 2001 group (mean = 4.4), p <.01, and the New Control group, (mean = 4.2), p <.001. For the Final GPA the Mentee 2002 group did better (mean = 6.74) than the New Control group (mean = 4.5), p < .001, and the 2001 Control group (mean = 4.6), p < .001, but not the 2002 Control group (mean = 5.73), p >.05. The estimated marginal means for the groups with respect to the covariate are reported in Table 4.

Table 4

Estimated Marginal Means for GPA (First Semester, and Final GPA)

GPA	Group	Est. Mean	Letter grade Equivalent
First Semester	Mentee 2002	6.55	C
	Control 2002	5.32	C-
	Mentee 2001	6.19	C
	Control 2001	4.62	D+
	New Control	4.37	D+
Final GPA	Mentee 2002	6.32	C
	Control 2002	5.47	C-
	Mentee 2001	6.28	C
	Control 2001	4.78	D+
	New Control	4.61	D+

As may be seen in Table 4, the students in the Mentored groups do much better than the students in the Control groups in semester 1. The proportional gain with mentoring appears quite dramatic. In semester 2, while there were no differences between the three Control groups, the Mentored group in 2002 did better than the New Control group so a mentoring effect was evident. That the Mentored group did not perform better than the 2002 Control group may be due to a modest impact on the 2002 Control group from the University 101 course. The impact was not sufficient to distinguish the 2002 Control group (that is, the University 101 course) from the New Control group (a non-remedial group) but the University 101 intervention may have contributed to the diminished mentoring effect with respect to the 2002 Control group.

Major GPA

In this analysis of Grade Point Averages (GPA) within an identified Major, the significant main effect for Group in the One way-MANCOVA, $F(8, 186) = 2.052$, $p < .05$, was evident in the subsequent univariate F-values for both First Semester Major GPA, $F(4, 93) = 4.02$, $p < .01$, and Final Semester GPA, $F(4, 93) = 2.50$, $p < .05$. The post hoc analyses for the First Semester GPA showed that the three Control groups did not differ, $p > .1$. However, the Mentee 2002 group did better (mean = 7.03) than the Control 2001 group (mean = 4.09), $p < .01$, and the New 2002 Control group (mean = 3.97), $p < .01$. Similarly, the Mentee 2001 group did better (mean = 6.56) than the Control 2001 group (mean = 4.09), $p < .01$, and the New Control group (mean 3.97), $p < .01$.

The second semester Major GPA did not reveal any differences from the Control group, $p > .1$. The Mentee 2002 group was not significantly different from the Control 2002 group, nor the New Control group, thus the mentoring effect was not evident in the second semester for the 2002 Mentees.

However, the Mentee group for 2001 did do better (mean = 6.72) than the Control

2001 group (mean = 4.65), p < .01, and the New Control group (mean = 4.73), p < .01. The

estimated marginal means for the groups with respect to the covariate are reported in Table

5.

Table 5

Means and Standard Deviations for the Five Groups on their GPA in their Majors for First and Second Semesters

	Group	Mean	SD
Semester1	Mentee 2002	7.03	2.17
	Control 2002	5.86	2.53
	Mentee 2001	6.56	2.51
	Control 2001	4.09	3.63
	New Control	3.97	2.81
Semester 2	Mentee 2002	6.49	1.90
	Control 2002	6.23	2.43
	Mentee 2001	6.72	2.19
	Control 2001	4.65	3.30
	New Control	4.73	2.15

Table 6

Estimated Marginal Means for GPA for Major for Mentees and Controls

	Group	Mean
Semester 1	Mentee 2002	6.89
	Control 2002	5.64
	Mentee 2001	6.51
	Control 2001	4.22
	New Control	4.06
Semester 2	Mentee 2002	6.29
	Control 2002	5.93
	Mentee 2001	6.67
	Control 2001	4.83
	New Control	4.85

Failing Courses

In terms of failing courses in the first semester, there was a statistically significant difference between the experimental groups (mentored) and the control groups (non-mentored), $X^2(4) = 14.13$, $p < .01$. In fact, for students experiencing failure of at least one course (N = 66) it was in the control group where the numbers were high (Control 2002 = 42.9%; Control 2001 = 55.6%, New Control = 50.0%), whereas, only 19.2% of the 2002 mentored group, and 25.7% of the 2001 mentored group. In the second semester the difference was significant, $X^2(4) = 14.58$, $p < .01$, but the pattern was more complex. For students experiencing failure (N = 48) (31 or 65% were in the control groups), yet the value for the mentored group 2002 (failure rate =15.4%) was not lower than the Control 2002 (failure rate = 9.5%) but was lower than the New Controls (failure rate = 19.2%).

The University 101 program may be impacting the failure rate, positively, by the second semester. Perhaps then, the mentor program has its most dramatic impact with respect to reducing failure in the early part of the students' university career.

Student Status

The data for group standing show a statistically significant difference in the number of students in good standing between the five groups, $X^2(8) = 38.16$, p<.001. Of those in "good standing" in the mentored groups we see rates of 88.5% in the mentored 2002 group and 71.4% in the mentored 2001 group (see Table 6). In the control groups the rates ranged from 57.1% in the Control 2002 group to 23.1% in the New Control Group. The mentor program seems to have a dramatic positive effect with respect to retention. Moreover, the Control groups from University 101 do seem to experience greater retention rates than the New Control group. The mentoring program would appear to be a value-added program.

Table 7

Status of Students in the Five Groups

Group		Good Standing	On Probation	Required To Withdraw
Mentee 2002	Count	23	3	0
	% within Group	88.5%	11.5%	0%
Control 2002	Count	12	6	3
				1
	% within Group	57.1%	28.6%	4.3%
Mentee 2001	Count	25	7	3
	% within Group	71.4%	20.0%	8.6%
Control 2001	Count	19	18	18
	% within Group	34.5%	32.7%	32.7%
New Control	Count	6	13	7
	% within Group	23.1%	50.0%	26.9%

Profiled Students

Of the students in the sample, 21 were profiled[2]— 7 in the mentee group and 14 in

the control group. For exploratory purposes two-way, 2 X 2 MANCOVAs were run with

Profiled (Yes, No) and Group (Mentee, Control) as the independent variables. There were

no significant main effects or interaction effects for the Profiled variable with respect to

overall GPA, Major GPA, or courses failed. Thus, no further analyses were warranted with

respect to the Profiled variable.

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[2] Profiled students are those who have been admitted below the minimum requirement (60-65%). They are admitted on condition.

Academic Self Esteem

To examine the impact of mentoring on confidence with respect to performance in processing skill areas (Concentration, Memory, Focus, Understanding, Explaining, Discriminating, Note-taking, and Getting Good Grades) the students were asked to respond to the questions on the ASE. They were required to indicate their level of confidence (on a 10-point Likert-type scale). A score was computed to serve as a measure of confidence by summing the responses for items in a particular scale and then dividing by the number of items in the scale (see Table 6). A 2 X 8 X 2 three-way MANCOVA was computed (Group by Scale by Time) with repeated measures on the last two variables, and OAC average as the covariate. There were no main effects or interaction effects ($p > .1$).

Table 8

Means and Standard Deviations for Pretest and Posttest Scores on the ASE

Scale	Group	Mean	SD
Concentration	Experimental	4.50	.80
	Control	4.33	.50
Memory	Experimental	5.58	1.00
	Control	6.33	.87
Focus	Experimental	5.08	2.58
	Control	4.44	.73
Understanding	Experimental	4.58	.79
	Control	4.56	.73
Explaining	Experimental	4.75	.62
	Control	4.89	.93
Discriminating	Experimental	4.67	.78
	Control	5.00	.87
Note-Taking	Experimental	4.42	.90
	Control	5.00	.87
Getting Grades	Experimental	4.17	.39
	Control	4.11	.33
Concentration	Experimental	4.33	.65
	Control	4.56	.53
Memory	Experimental	7.17	1.59
	Control	6.56	.73
Focus	Experimental	4.33	.78
	Control	4.56	.73
Understanding	Experimental	4.50	.90
	Control	4.78	.97
Explaining	Experimental	4.75	.62
	Control	4.89	.93
Discriminating	Experimental	4.75	1.29
	Control	5.44	.89
Note-Taking	Experimental	4.67	.78
	Control	5.00	1.00
Getting Grades	Experimental	5.17	1.40
	Control	4.22	.44

First Year Experience Survey

Although the First Year Experience Survey was administered to both the experimental and control group of 2002, there was an insufficient number of completed surveys on the part of the experimental group to justify an analysis.

Academic Self Concept

To evaluate the impact of the mentoring program on self-concept, 16 students (8 experimental and 8 controls) filled out the self-concept instrument. Although a small sample, the data were analyzed using a 2 X 2 MANCOVA (Group by Time) with time being a repeated measures variable. The OAC average was entered as the covariate. Means and standard deviations are reported in Table 9. There were no significant main effects or interaction effects ($p > .1$).

Table 9

Means and Standard Deviations for the Self Concept Measure

Time	Scale	Groups	Mean	SD
Pretest	Academic Self Concept	Experimental Control	45.63 41.88	9.21 2.36
Posttest	Academic Self Concept	Experimental Control	44.38 44.50	6.41 3.82

The mentor program effects are not evident in confidence or strategies related to self-esteem or self-concept. However, there are clearly evident effects with respect to achievement (GPA), failure rates and retention.

Mentor Assessment and Evaluation

To examine the perceived effectiveness of the mentors, the frequency tables of two surveys were examined. The first was a self-assessment survey (Appendix E), which was completed by 25 mentors. The scale of 55 items were read and matched with categories of

mentor function (ranging from "inadequate" to "extremely adequate"). Surprisingly, 27%
of the mentors perceived themselves as less than adequate in terms of their skills in
conveying an empathetic listening or having a genuine understanding and acceptance of
the mentee's feelings.

Table 10

Factor #1: Mentoring Relationship with Relationship Emphasis

	Frequency	Percent
Inadequate	5	15.2
Somewhat Adequate	4	12.1
Adequate	6	18.2
Very Adequate	7	21.2
Extremely Adequate	3	9.1

Only 30% of the mentors perceived themselves as very adequate or extremely adequate to
offer specific suggestions to their mentees regarding their current career plans and progress
in achieving personal, academic, and career goals yet, they were very comfortable
(63%>/= very adequate) with facilitating or guiding mentees with skills, interests, ideas
and beliefs (Appendix E2, factor 3). Many mentors felt only adequate (21%) or less than
adequate (30%) in their perceived ability to challenge their mentees to be reflective and
assess their own progress.

As expected, more than half the mentors (58%) felt that they could be good role
models and were open to disclosing their own life experiences. Unexpectedly, however,
only 18% perceived themselves being able to help the mentees set goals (Appendix E2.
factor 6, >/= very adequate). Overall, only18% of the mentors assessed themselves as
extremely adequate at mentoring functions while 9% actually considered themselves
inadequate.

Table 11

Frequency Totals Measuring Perceived Effectiveness of Adult Mentoring

	Frequency	Percent
Inadequate	5	9.1
Somewhat Adequate	5	15.2
Adequate	6	18.2
Very Adequate	5	15.2
Extremely Adequate	6	18.2

Mentor Effectiveness as Perceived by Mentee

The second survey used to evaluate mentor effectiveness (Appendix E3) contained

28 Likert-scale statements and was completed by 16 mentees. The results (Appendix E4,

Q1- Q28) were consistent with positive outcomes. More that 50% of all responses were

frequent to always in terms of mentor effectiveness in addressing the   appropriate issues

of the formal mentoring program. All mentors provided encouragement for the mentees to

express their feeling about academic and social experiences related to university (100%).

Table 12

Q1 – My mentor encourages me to express my honest feelings about my academic and social experiences as an adult learner in college.

	Frequency	Percent
Agree	6	37.5
Strongly agree	10	62.5

As a facilitator for resources within the university, the mentees found that 94% of the mentors were very effective in this area (Appendix E4, Q3). Time management and scheduling were also noted to be a priority in the mentoring role (87.5%, Appendix E4, Q5). Mentors were also found to be very effective in helping mentees to develop study strategies and other ways to improve academic performance (100%) (see Table 8).

Table 13

Q8 – My mentor inquires in some depth about my study strategies and offers practical suggestions and/or refers me for help to improve my academic performance.

	Frequency	Percent
Agree	5	31.3
Strongly agree	11	68.8

As for personal advice specific to the mentee, the mentor effectiveness was only 62% (Appendix E4, Q9). This may imply that the mentors were complying with the recommendations of the coordinator to act as a facilitator and determine the resources on campus that would best meet the mentees' needs. However, the mentees did find the mentors effective with verbal communications over concerns expressed by the mentees (75%) (see Table 8).

Table 14

Q13 – My mentor verbally communicates his/her concerns to me when my negative attitudes and emotions are expressed to him/her through such nonverbal behaviours as eye contact, facial expression and voice tone.

	Frequency	Percent
Somewhat agree	4	25.0
Agree	6	37.5
Strongly agree	6	37.5

The mentors were also found to be very good with guidance in exploring realistic options and attainable academic and career objectives (94%) (see Table 15). And as role models in sharing their own experiences, 100% were found to be effective in this position (see Table 16).

Table 15

Q20 – My mentor uses his/her own experiences to explain how college courses or activities I believe will be boring, too demanding, or not relevant could be valuable learning experience for me.

	Frequency	Percent
Disagree	1	6.3
Somewhat agree	4	25.0
Agree	4	25.0
Strongly agree	7	43.8

Table 16

Q23 – My mentor shares his/her own views and feelings when they are relevant to the college-related situation and issues we are discussing.

	Frequency	Percent
Agree	6	37.5
Strongly agree	10	62.5

When dealing with issues of self-efficacy (self-esteem, self-confidence) not all mentees found the mentors to be very effective. Only 68% of the mentees found that they could discuss their feelings of self-efficacy. In fact, 19% of the mentors did not discuss

issues of anxiety, self-doubt, and anger (see Table 17). These were mandated in the

program requirements.

Table 17

Q25 – My mentor informs me that I can discuss 'negative' emotions such as anxiety, self-doubt, and anger in our meetings.

	Frequency	Percent
Strongly disagree	1	6.3
Somewhat agree	2	12.5
Agree	6	37.5
Strongly agree	7	43.8

Overall, 50% of the mentees found the mentors to be effective in all areas of

mentor function. More than 80% reported them to be effective in areas of skills

development, facilitation, providing resources, and in providing strategies for academic

improvement.

Chapter 5

Phase III: Qualitative Analysis

In this chapter both the mentees' and mentors' experience with the formal

mentoring program are explored. Specific examples of their assessments of the program

are cited and analyzed in the context of the theoretical bases of the program expectations.

Each of the theories is reviewed and the data interpreted to conceptualize the

implementation of the program as it relates to these theories. Under the general umbrella

of Putnam's Social Capital Theory (2000) are Astin's (1998) Theory of Involvement,

Tinto's Theory of Departure (1993), and Bandura's (1988) Social Learning Theory. It is

the theory of Social Capital that is used to frame and explain the elements and dynamics of

successful mentoring. The perceptions of the participants in terms of academic and

personal outcomes are described to reflect the conceptual framework of the theoretical

principles.

Mentees and mentors met the first week of classes. Since the program coordinator

was unable to meet with all the mentors prior to orientation because many of them were

coming in from other areas, mentoring match was completed within days. The mentors

were in-serviced on expectations of the program and the course requirements. They were

given a course syllabus that required them to maintain a weekly journal, to complete a

group research project on the theoretical bases of mentoring, and to attend focus group

sessions. Mentors were expected to meet with their mentees face-to-face on campus. The

session took anywhere from 15 minutes to a maximum of one hour. Timelines with

expectations were provided (Appendix A7). Mentors were required to assess all sessions

and make recommendations for the mentee. They were also responsible for following up

on the recommendations, and discussing strategies and goals for academic success and social involvement. Their weekly reflective journal entry addressed these strategies.

Mentors met as a group with the coordinator to confidentially discuss issues, strategies, possible solutions and general assessment. Mentors conducted pre-and post-surveys and interviews with the mentees. In the second semester of the second year of the program, the face-to-face meetings were biweekly and there appeared to be more phone and email contacts amongst the pairs (at the suggestion of participants in the first year). There was an agreement with the mentor that the mentee may contact them at any time that was within a reasonable time window if there was a particular problem or concern. Social gatherings at Christmas, and at the end of the academic year, provided an opportunity to celebrate the accomplishments of the mentees and mentors and to connect the group to the supportive administrators. This included the deans, associate deans and academic advisors of each of the participating faculties.

By the second semester in both years, mentors were grouped by fours to study an aspect of theoretical principles behind mentoring. This would result in a group presentation to their peers in the Faculty of Education. The presentation constituted 10% of their final grade in the integrated course (Appendix I). An example of the presentation has been attached (Appendix L). Some mentors from the first year of the program opted to include their thoughts and suggestions in a paper submitted for the 10% of their mark (Appendix I). This also provided triangulation of the data, especially with regard to assessment.

The stage was set to attend to the aspects of the theory of involvement, theory of departure, the theory of social learning and the theory of social capital. Evidence for

existence of concepts from each theory in the program is noted in the following sections of

this analysis.

Representation of Qualitative Data as it Links to the Theories

Table 14 illustrates the emergent themes along with methods of triangulation.

The data have been organized based on the multiple theories found in the review of

literature: the theories of departure, involvement, social learning and social capital. Social

Capital provides the umbrella for the overlapping theories of social learning, departure,

and involvement, all with an interest in the academic and personal outcomes for the

mentees (see Figure 2, p.16). It is a socially constructed framework that requires all the

parts (theories within) to overlap to provide human capital (students, mentees) with the

skills to improve social capital (the connectiveness within the community).

Table 18

Triangulation of Themes (evidence of the key concepts within the theoretical framework from different sources)

	Journals	Interviews	Member Checks	Video Transcript
Theory of Departure	x	x	x	x
Adjustment	x	x	x	x
Incongruence	x		x	x
Time Management	x	x	x	x
Isolation	x		x	
Financial	x			
Skills	x	x	x	x
Theory of Involvement	x	x	x	x
Institutional Network	x	x		
School	x			x
Faculty	x	x		x
Family	x		x	
Friends	x		x	x
Accessibility	x		x	x
Resources	x	x	x	x
Motivation	x	x	x	x
Agency	x	x		
Advising	x	x	x	x
Extracurricular Involvement	x	x	x	x
Work	x			
Residence	x			
Social Learning	x	x	x	x
Self Efficacy	x	x	x	
Anxiety	x	x		
Reinforcement	x	x	x	x
Social Comparison	x	x		
Academic Outcomes	x	x	x	x
Goals	x	x		
Short-term Goals	x	x	x	x
Long-term Goals	x	x		
Personal Outcome	x	x	x	
Social Capital	x	x	x	x
Trust	x	x	x	x
Relationship	x	x	x	x
Lost Contact	x			
Mentor Effectiveness		x	x	x
Program Needs		x	x	x

Using the NUD*IST Program (qualitative analysis software), the attached

frequencies to the responses illustrate how often the theme emerged. Existence of themes

within different sources of data collection is illustrated this way.

Table 19

Frequency of Responses Related to the Themes from Each Source

	Journals (19 Documents)	Interviews (13 Documents)	Comments (40 People)
Theory of Departure			
Adjustment	94%	62%	5%
Incongruence	88%	15%	0%
Time Management	88%	38%	8%
Isolation	38%	8%	3%
Financial	38%	0%	0%
Skills	25%	46%	6%
Theory of Involvement			
Institutional Network	31%	0%	0%
School	38%	15%	0%
Faculty	81%	8%	0%
Family	62%	8%	1%
Friends	62%	31%	1%
Accessibility	56%	46%	3%
Resources	100%	77%	7%
Motivation	94%	46%	1%
Agency	88%	0%	0%
Advising	88%	54%	8%
Extracurricular Involvement	62%	23%	1%
Work	38%	0%	0%
Residence	31%	0%	0%
Social Learning			
Self Efficacy	94%	23%	1%
Anxiety	81%	38%	0%
Reinforcement	50%	38%	1%
Social Comparison	56%	8%	0%
Academic Outcomes			
Goals	56%	46%	1%
Short-term Goals	56%	15%	0%
Long-term Goals	62%	31%	1%
Personal Outcome	50%	31%	2%
Social Capital			
Trust	62%	23%	2%
Relationship	81%	46%	4%
Lost Contact	12%	15%	0%
Mentor Effectiveness	100%	54%	13%
Program Needs	100%	38%	2%

For example, within Tinto's Theory of Departure, adjustment/transition to university, incongruence (false expectations) and time management were identified by mentors as the main concerns for retention of their mentees (in 94%, 88%, 88% of the journal entries respectively). Similarly, in linking to Astin's Theory of Involvement, meeting faculty (81%) and advisors (88%) or agencies (e.g., psychology services, 88%) were noted as very important. Finding resources (100%) and maintaining motivation (94%) were high on the priority list for the participants.

As illustrated above, the frequency table (Table 15) was used to identify the priority of the themes (to the participants) within the theoretical concepts as they relate to the program. In the following sections, each theory is explored as it relates to the above table of frequencies. The purpose of this qualitative analysis is to illustrate how the formal mentoring program practices link to the following theories identified in the review of literature: 1) the Theory of Involvement; 2) the Theory of Departure; 3) the Theory of Social Learning under the framework of 4) the Theory of Social Capital. Documentation from the journals, interviews, and commentaries is used to show the existence of the theoretical elements within the practices of the program.

Throughout the analysis, it was found that the participants often interchanged the "program" and "the mentor", thus the participants' evaluation of the program is confounded with the evaluation of the mentor. Mentees may consider the program effective or not effective when really they may be talking about the mentors. It is apparent in the documentation that the program effectiveness is intimately tied to the mentor effectiveness.

Tinto's Theory of Departure (1975)

Tinto (1975) developed the Theory of Student Departure that is the most

commonly cited theory of student persistence. Tinto focused on three important aspects: 1)

an educational career in higher education as a longitudinal process of failure and success;

2) the structure of the institute of higher education influences students in their decision

making; and 3) social and intellectual integration of students in the new system stimulate

students during their educational career. Tinto identified the interactional (social) roots of

institutional departure as: (1) adjustment, (2) incongruence, (3) time management, (4)

isolation, (5) financial, and (6) skills. Responses were classified according to these roots.

Figure 8. Comparative frequency of responses related to the theory of departure.
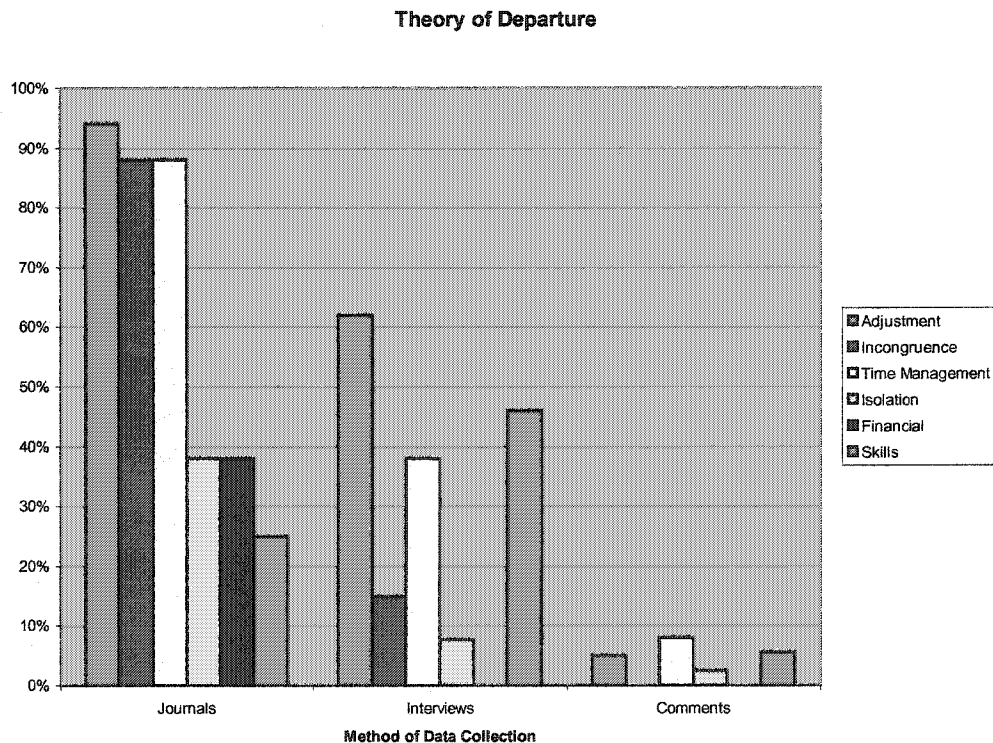
Figure 8 illustrates the frequencies of the "interactional roots" as they relate to the

formal mentoring program. Because the program goal was to ease student transition from

high school to university, interactional roots were examined such as adjustment, incongruence, time management, isolation, financial needs and skills became part of the expectations of the sessions for the mentors.

For those who adjusted well in the program, there was a positive link between adjustment/transition (transition from high school to university) and assessment of the program. Most mentees (Figure 8, adjustment, interviews, 62%) and mentors (adjustment, journals, 94%) claimed that the program and the mentor helped ease the transition into first year. Comments included:

> Very good, [my mentor] was a very helpful mentor. She helped me with many
>
> things and she was very comforting, as I was having a hard time getting
>
> adjusted. Overall she was very helpful. Thanks." (Mentor 1, 12-22).
>
> She indeed helped me with my confidence because I am now able to locate
>
> help efficiently when needed, and I am no longer afraid to ask for it. I
>
> feel confident that my questions will be answered, when I ask
>
> (memberchecks2, 12 - 17).

One mentee enthusiastically noted that this was "One of the best things for me in University. I needed someone to guide me. I lost a lot in my high school and when I came to university I had no clue of my life. I knew I was a good fighter but I need a way to guide me and give me hope for the best. Thanks [mentor], you made a difference in my life " (Mentor 1, 10).

Most mentors (incongruence, journals, 85%) noted an incongruence (false expectations) in the mentee's ability to adjust to the academic and social requirements of university life. If a student does not fit in there is incongruence with one's student peers, which can lead to withdrawal. Incongruence may also arise through formal interaction

with staff encouraging a belief that the personal and intellectual climate of the institution is not suited to the intellectual preferences of the individual. Incongruence can also be the result of a wide variety of informal interactions (Tinto, 1997). Usually it leads the individual to cite the irrelevance of academic life as a reason for leaving.

One mentee showed frustration with incongruence when he stated,

"I would say that my mentor was a significant contributor to my confidence. I was very far from home and anyone I knew. When at your first year of university, the feeling of being alone can overwhelm you. Not many people seem interested in truly helping you through your problem, even when you ask. You have the very distinct impression they would rather shuffling you along like the nameless number you are to them" (follow-up, case3, 7-13).

One mentor wrote with great concern regarding life in residence: "Major concern - mentee was kicked out of residence for two weeks for being caught in someone's residence room. The R.A. found 'marijuana' in this room and the police were called. The police only gave [my mentee] a warning but the residence executive decided to temporarily kick out those involved for two weeks" (Case4, 184 – 188). The mentee contacted the mentor immediately for a listening ear. When the mentee moved in with family, the mentor was relieved. He "mentioned that he is getting a lot of school work done since moving in with his sister - less distraction" (Case4, 207 – 208). Obviously, his experience with residence led to his need to become detached from the university campus. The mentor continued working with the student in using agency and advisors to help him with his situation.

There was some incongruence with one mentee as her mentor reflected, "[that she] felt that she (mentee) did fairly well. She could have done better on her communications' essay, but had been concentrating on her psych. test" (Case5_2002, 390 – 391). The

results of the test did not meet her expectations. Further, one mentor in particular found his mentee "had very high expectations of herself" (Case 8, 70 – 70). Her grades did not match her expectations. On the contrary one mentor noted that her mentee "Generally seemed more confident on questionnaire than indicated verbally in meetings" (Case3, 67 – 71). Finally one mentor "mentioned to [faculty] that [she] always appears very confident, prepared and on top of school when her marks and attitudes are indicating otherwise" (Case6_2002, 234 – 236).

To address skills development (purposeful learning as it relates to retention) all mentors recommended workshops on skills development. Those that took advantage most often went to the "Time Management Workshop". One mentor stated that his mentee "had attended one STEPS (Skills To Enhance Personal Success) workshop so far on EXAM strategies" (Case 1, 81), (skills, interviews, 46%). The issue of "Time management" appeared in most journals (88%) at the beginning of the journal writings and less in interviews (38%) that were conducted at the end of the school year. While following the timelines, all mentors were required to assist their mentees in developing a workable schedule for each semester that included academics, work, and extracurricular activities.

Similarly, the issue of financial need appeared at the beginning in the journals (88%). Concerned with the possibility of her mentee leaving, one mentor noted, "She wants to stay here. Money is tight at home so she considered going back to help out. She receives OSAP however, so she will be fine for now" (Case4_2002, 476 – 478). It appeared to be of no concern in the interviews or member checks (financial need, interviews, 0%), which were completed toward the end of the school year lending probable explanation to a time adjustment.

The program was designed to create a mutual learning environment, where mentees develop skills for academic and personal success while mentors develop skills that are transferable to teaching and coaching. Persistence in the mentoring program and the university appeared to be linked to development of skills. One mentor found "She still has her good attitude and work skills. She seems more confident than last term" (Case 8_2002, 337-338). Another stated that, "The program was well researched and planned and well laid out. It met my expectations and I developed a good relationship with my mentee right from the start" (Question2_InterQsMentor, 10). There was also a mentor that found "It is great for first year students to get advice from people who have gone through it. It is great for student teacher because they can mentor on their own without being evaluated" (Question7_InterQsMentor, 4).

As noted in Figure 8 the frequency of the responses relates to the weight the participants put in terms of importance of the categories to the participants and program. Adjustment or transition from high school to university was discovered in the journals and interviews to be the most frequently occurring topic (adjustment, journals, 94%, interviews, 62%). Further, because it was an expectation of the mentors to help ease the transition, they addressed strategies and recommendations in their journal that were often tied to the Theory of Departure. They discussed the need to participate in the STEPS workshops; getting to know the faculty and the campus for resources; and creating a schedule that is do-able. Time management was an important issue in retention (time management, journals, 88%, interviews, 38%). All mentors were asked to help their mentees devise a workable schedule following the recommendations of the academic advisors and the passport to graduation. The development of skills was brought out in the

interviews of both groups as a reflection of the program goals (interviews, 46%). Students

need to feel that they are learning in order to remain in their academic setting.

Overall, there appeared to be strong links between the mentoring function and three

of the interactional roots of Tinto's Theory of Departure as perceived by the mentors in

their journal entries. These are (1) the importance of adjustment (in particular in easing

the transition from high school to university) (94%, fig. 8), (2) finding incongruence

(noted as a sense of false expectations on the part of the mentee)(88%, fig.8), and, (3) time

management (purposely addressed by mentors to link students to resources) (88%, fig.8).

However, in analyzing the interview, the link weakens for the interactional roots of

incongruence (15%, fig. 8) while it strengthens for skills development. The perception of

the mentors and mentees changes by the end of the program (when the interviews are

conducted). Financial need or concerns do not emerge from the comments or interviews

which may be an anomaly caused by the financial demographics of the population.

Theory of Involvement

The basic principle of Astin's Theory of Involvement is that students learn more

the more they are involved in both the academic and the social aspects of the university

experience. Accordingly, an involved student devotes time to: concentrating on academics

(school); being on campus (institutional network, residence); participating actively in

student organizations and activities (extracurricular involvement); and interacting often

with faculty (faculty/ advisors/agency). Equally, the more quality resources available, the

more likely students who are involved will grow or develop (Astin, 1984).

The frequencies shown in Figure 9 qualitatively illustrate how the formal

mentoring program in this study puts this theory into practice. The program systematically

attempts to encourage student involvement and the data illustrate where the mentors and/or

mentees noted the involvement.

Figure 9. Frequency of responses related to the theory of involvement.

Theory of Involvement
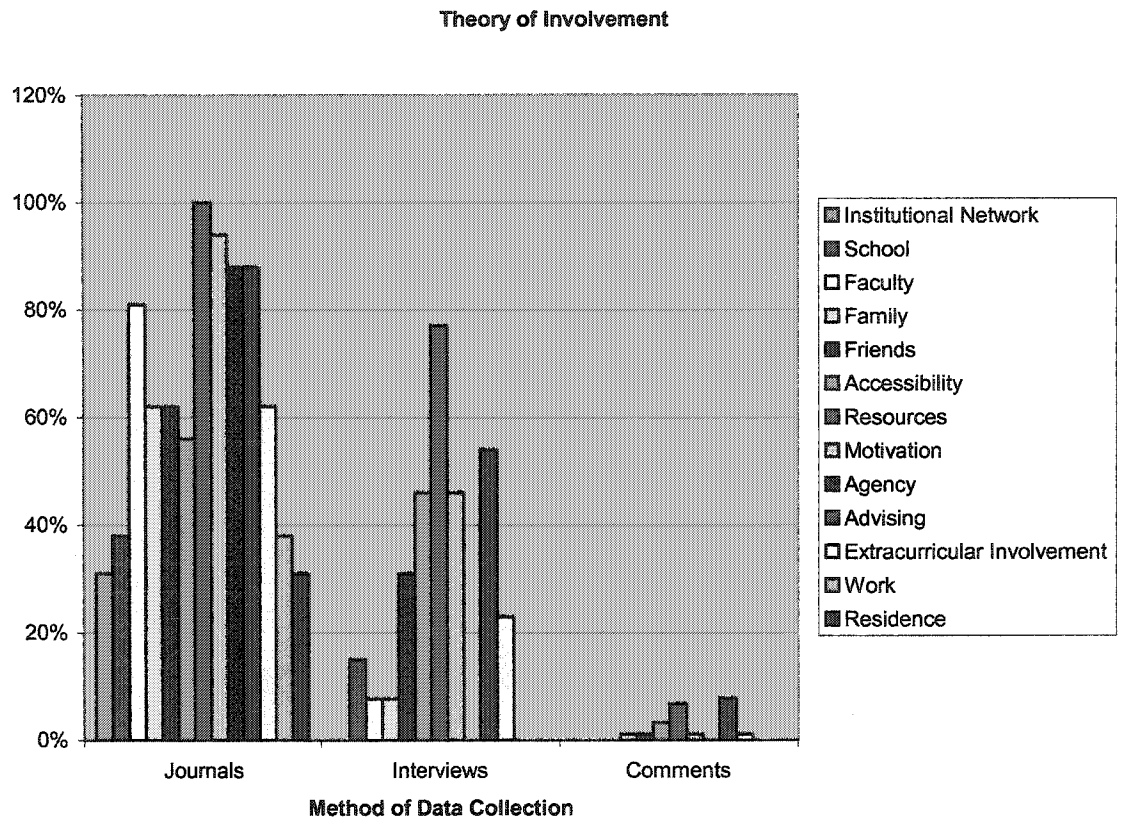
Astin (1977) contends in the Theory of Involvement that having a personal

connection to an educational institution and high degree of involvement in the education

process correlate positively with student retention. Many of the mentors reported that the

mentee's need to connect socially was very important. In fact, one of the mentors noted

that her mentee "Has been to Toronto to see campus and Toronto life. I think it's because

she feels she doesn't fit in at this school. She likes the Goth look [all black, dyed, furry]

and she feels she would fit socially better into Toronto" (Case 3_2002, 134-138). In this

case, the mentee was convinced to finish off the semester in Windsor by her mentor. The

mentor provided the mentee with strategies for involvement as prescribed in the program. The mentee successfully (academically in good standing) completed the year and registered for the next year.

Mentors asked the mentees to meet with all their professors to make that connection with the educational institution (faculty, 81%). As many noted in the journals, mentees were pleasantly surprised with their interaction. Their perception was that faculty members were not as approachable as they actually found them to be. "She has found her professors to be very friendly especially her chemistry professor" (Case 5, 124-125). Once they had met their professors one "had developed a better understanding due to an alteration of study methods and discussions with Profs" (Case 2, 97-98).

When it came to meeting with their academic advisors, most found it extremely beneficial in keeping on track (advisor, Figure 9, 88%). One mentee stated after a meeting, she "has clarified with her [professor] what is expected and she is on track" (Case 8_2002, 125). There were however, some complications as noted by the mentors. One mentor was quite distraught and sent a letter to the Dean of Education on behalf of the mentees affected by this advisor. In the letter the student noted, "Rather than receive the warm and understanding support ... interviews and meetings with the Academic Advisor were uninviting"

This did not happen with other Academic Advisors and because of the maturity level of the mentors (graduates of other baccalaureates or higher degrees), these students were able to circumvent the situation to accommodate their mentees. One mentee noted that "[her mentor]... is an awesome mentor. She's helped with any questions I've had, if she didn't know the answer she'd find out for me" (Mentor 1, 18).

Students in residence had a different set of concerns. Some were "homesick". Others found difficulties with roommates (residence, 31%) bringing in friends, having different schedules, and organizational skills. One mentee stated that she "has a hard time studying with roommate b/c roommate likes music and [she]... likes it quiet" (Case 3_2002, 120-121). To maintain the mentee involvement with residence, the mentor advised the mentee with the following recommendation; "We discussed conflict resolution – [she] has a situation at her residence where there was some disagreement involving miscommunication and visiting boyfriends. It has caused some friction in her relationship with the young woman she lives with. She is confident they can work things out. They will be moving to an off campus house May 1st so will be set up for next year. This should ease a lot of the tension of being cooped up in a small residence quarter" (Case 9, 325-331).

Many mentees had part time employment outside the university (work, 38%). There were mixed reactions and recommendations by the mentors. One mentor found "[her mentee] is not having financial problems but wanted her to do a financial plan to see where she was and what she requires so she can be flexible in regard to her summer employment" (Case 8_2002, 380-382), while another mentor found "too much time for work [suggesting cutting] hours of work" (Case 1_2002, 205). Those in financial need were reminded of the Work Study Employment (an opportunity for students to work with faculty and departments during the school year). The employment offers students the opportunity to develop skills, become socially and professionally connected with the institution and ease their financial burden. Two Education faculty members hired one student each as summer research assistants. Based on this experience the Faculty of Law Administration Office decided to hire one of the students. This particular mentee is in the

second year of an Arts program. Entering the university with less than a 60% average, the mentee has gained academic and personal success. Long-term goals have been established with plans to apply to Law School and there is continued correspondence with the mentor and coordinator of the program. Currently, the mentee has volunteered to teach English in a third world country (member check).

All mentees and mentors identified access to resources as an important aspect of the mentoring program. From a mentor's perspective "There are many programs and workshops for 1st year students to help them out. I was never aware of this when I started university" (Question4_InterQsMentor, 2). A mentee found that the program and the mentor were extremely helpful in directing them. "I probably would not have known when to sign up for classes or what classes I need for my major. Having things explained to me one on one really helped" (Question6_InterQs, 6). During the focus group videotaped interview, a mentee stated "There [are] a lot of people who have no idea where they're going with academic advice right now. I think it's a great program. It kept me on track" (Case1, 7).

Mentees who appeared adjusted (not having concerns) and were persistent with the program found that they had developed a friendship with their mentor and their peers (friends, 62%). One mentee stated "we're friends now. Sometimes she calls just to see how I'm doing and if I want to come out with her and her friends" (Case 2 video). Another affirmed, "My mentor was my friend. At first she was like the big sister who got to high school before you did and showed you the ropes, letting you know what courses and profs to look out for then as you became more comfortable told you about the best clubs and events to attend" (memberchecks 3, 3 - 8).

With regards to family influences (family, 62%), one mentor revealed a situation that required assistance from Psychological Services. The mentee asked the mentor for accompaniment to the appointment and that she not tell his parents. The mentor noted, "He seems to be fitting in better and is more comfortable with his classes and living arrangements. He has an appointment with psychological services in a couple of weeks and is still attending sessions at the student-counseling center" (Case 1, 112-115). "I have told [my mentee] to be open minded when he goes to his session, that he has nothing to be ashamed of and it may be a medical condition that can be fixed. I also offered to accompany him if he wanted some moral support. He seemed pretty capable of opening up without any qualms, which is a good start" (Case 1, 45 – 49).

Others found a motivational link with the program/mentor (motivation, journals, 94%, interviews, 46%). One mentor noticed that his mentee's motivation was short-lived. He sensed the frustration when the mentee "Stated that [the] problem is staying that way and says he gets overloaded and gives up" (Case 4_2002, 27-28). With one mentee, the mentor found it best to provide wake up calls and incentives to get the mentee to morning classes for the first few weeks.

One of the mentees had a huge commitment to athletics and found it very challenging to balance it with academics; in fact, "she's trying to keep up with her schoolwork, reading etc. It seems like the varsity hockey she participates in is taking a lot of her time" (Case 9, 113-114). "I mentioned St. Clair College also has this program but she could stick with U of W for now and see where she gets. St. Clair is a viable option and I will keep it in mind for [her] in case marks become an issue" (Case 9, 189-194). This led the mentee to decide to remain at the University the next semester. In

maintaining the relationship, the mentee chose to stay the next year (extracurricular involvement, journals, 62%; interviews, 23%).

From Figure 6, reference to what constitutes the theory of involvement was noted in the journals and interviews. All (100% of mentor journal entries) noted the importance of being knowledgeable about the available resources. Many of the mentors found that keeping the mentee's motivation (94%) was key to building learning skills. Getting to know their professors and academic advisors was also found to be helpful (81%, 88%). The mentors addressed all of the issues concerning involvement striving to improve the mentee's situation and provide appropriate recommendations for involvement leading to positive academic and personal outcomes.

Mentoring function is clearly related to the theory of involvement. In particular, the participants (mentors/mentees) perceived the program to be highly effective in connecting mentees to resources (100%), faculty (81%) and advisors (81%). Also, strongly linked to the theory is the motivation (encouragement) derived from the relationship. Involvement in extracurricular activity, with friend and with family was equally perceived to be linked factors by the mentors (journals).

Theory of Social Learning

Bandura's Social Learning Theory (1965) focused on cognitive concepts, the way children and adults operate on their social experiences and how these cognitions then influence behavior and development. In 1986 the theory was redefined to include human behavior as a triadic, dynamic, and reciprocal interaction of personal factors, behaviour, and the environment (1986). Simply, how an individual learns is strongly influenced cognitively by how they feel about themselves (self-efficacy, anxiety), how they compare

themselves to others (social comparison and introducing modelling) and how external

forces, family, friends, faculty and institution (environment) reinforce the positive that

results in academic and personal outcomes. The introduction of mentoring adds to the

environmental forces, but it also impacts the personal and the behavioural factors as well.

Figure 10. Comparative frequency of responses related to the theory of social learning.
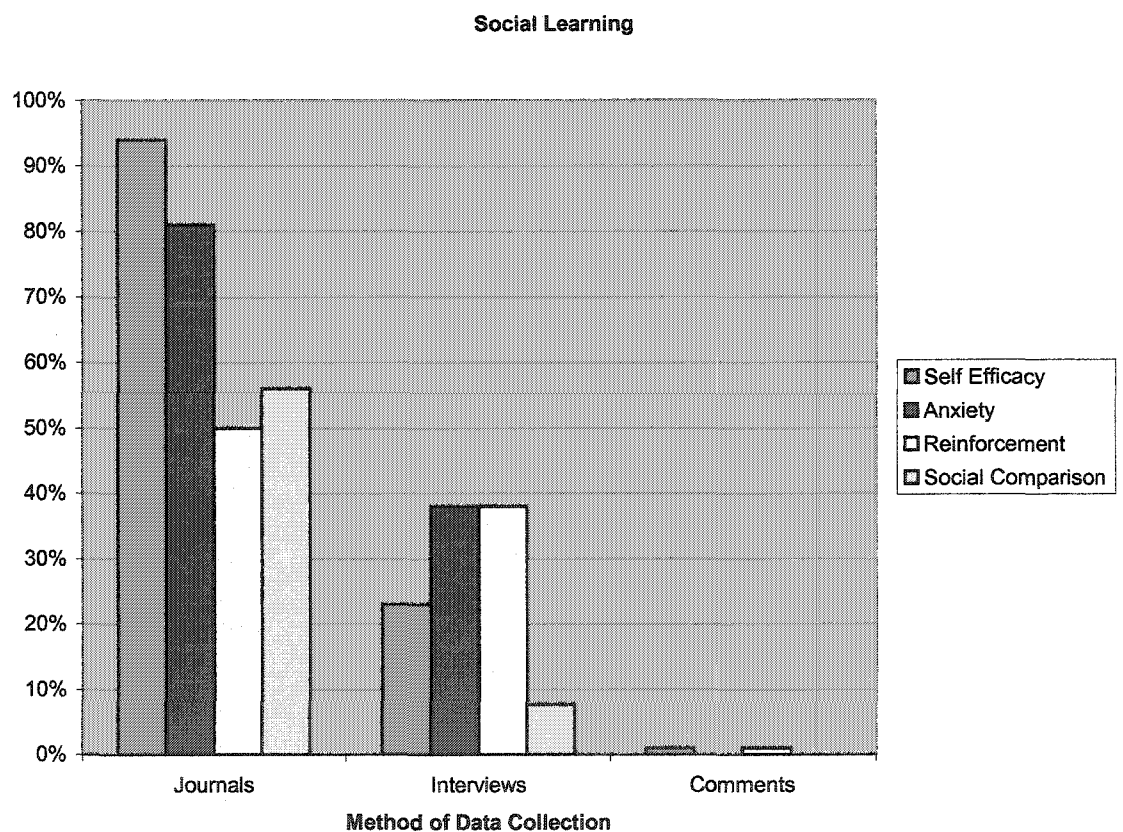
Social Learning

From the data, the researcher explored the themes of self-efficacy and anxiety

(personal factors), social comparison (behavioral factor), and reinforcement

(environmental factor) as they relate to Social Learning Theory. As seen in Figure 10,

self-efficacy was noted in at least 94% of the journal entries. As an expectation of the

mentors, their goal was to provide feedback in attempting to address the issue of self-efficacy. Therefore, many would note the strategies and outcomes of their strategies when reflecting on their sessions in the journals. Reflections on the concept of self-efficacy included:

"[Her] final marks improved from her midterms. She feels that she is ready to move forward and will find greater success this semester" (Case4_2002, 275 – 276).

"I would say that my mentor was a significant contributor to my confidence. I was very far from home and anyone I knew. When at your first year of university, the feeling of being alone can overwhelm you. Not many people seem interested in truly helping you through your problem, even when you ask. You have the very distinct impression they would rather shuffle you along like the nameless number you are to them." (memberchecks 2, 12 - 24).

These quotes illustrate as Bandura (1997) suggested, that ability attributions affect performance indirectly through perceived self-efficacy. If the mentees perceive that they can perform their performance may increase.

In the interviews **self-efficacy** understood as a situation specific form of self-confidence was often interchanged with self-confidence which is a more global stable personality characteristic. It appears that the students addressed self-efficacy 23% of the time often considering it self-concept. The focus of the interviews was on assessing the program and a few noted the importance of self-efficacy in the success of the program. One mentee stated, "It gives you a sense of confidence and allows the transition for [us] to

be a little easier" (Question4_InterQs, 3). Another mentee noted "My mentor was [a] very big help in many ways and with my confidence in a way because I wasn't always lost for it being my first year and all. It made it a very good year and I had lots of confidence around the school, getting around and figuring out certain things like how to get an SIS card or changing my program and etc., made it really easy" (memberchecks).

In tying social comparison to self-efficacy two mentees noted,

"It was a great help because it let me know that the things I was dealing

with and feeling were not something limited to me. I could take some comfort in t

he fact that others have felt as I did and they made it" (memberchecks2, 8 - 10)

"I truly believe that my mentor helped me gain confidence. The reasons for this

decision is that she always would show me first and never leave me on my own to

complete a particular task until I felt comfortable. Moreover, my confidence level

increased because I was able to show my friends how to do something that they

were unsure or answer some of their questions because my mentor would help me

out. Many of my friends who were not in the program wished that they were

because many opportunities were missed due to their questions not begin answered

or simply because they just did not know." (Memberchecks, 23 - 31)

Anxiety arises from misconceptions of the transition to first-year University. Not knowing what to expect, worrying about succeeding academically, worrying about finances and balancing their responsibility and even, worrying about how to find things and where to go appeared repeatedly in the transcripts. Bandura (1986) maintained that stress and anxiety primarily arise when we believe we can't handle the approaching problem. Obviously, this involves assessing the nature and seriousness of the threat *in*

comparison to the individual's perceived ability to handle the situation (self-efficacy).

Anxiety results from becoming overwhelmed and not focusing on a solution.

At the onset, mentors noticed anxiety as one of the factors for their mentees

volunteering for the program (journals, 81%; interviews, 38%). Examples were noted in

the journals and interviews.

Comments and recommendations included:

"He has confided in me that he has anxiety attacks, which he used to

mediate with help of his guidance counselor. He has not confided in

his parents about his, and wishes it remain confidential, but want

someone to talk to." (Case 1, 22 – 25)

"He has made a schedule for studying also learned from past two sets

and choosing more relevant information. As well the anxiety before

tests has diminished some, I think its just 1st year jitters more than

anything you have to realize that everyone gets them because it's a

new setting just like starting Grade 9 or Kindergarten." (Case3_2002,

357 – 361)

"It's helpful, and makes first year more relaxed."

(Question6_InterQs, 10)

"I thought that it would be beneficial to help a first year student

get through first year hardships and anxiety."

(Question1_InterQsMentor, 16)

"Call me ANYTIME if he requires meeting more than once a week,

than we can. Talking seems to be essential to [him] in dealing with

his anxiety, Sometimes it seems all he needs is some reassurance."

(Case 1, 90 – 92)

In addressing issues of anxiety including not knowing what to expect in university,

family pressure, incongruence in expectations, mentors assess the situation and direct their

mentees to the appropriate support services. If the mentor notices test anxiety, the mentee

is directed to student services for accommodations. If the student is concerned

academically, the mentee is directed to specialized workshops (STEPS). And more

importantly, the mentor provides reassurance as a role model, sharing his or her own

experiences.

Students' (mentees') expectation of **reinforcement (feedback)** (journals, 50%;

interviews, 38%) influences cognitive processes that promote learning (Rutledge, 2000).

Therefore, attention plays a critical role in learning that is influenced by the expectation of

reinforcement. Positive reinforcement from the mentor or from the faculty/advisors or

agencies will lead to improved academic outcomes. One mentor found that "at first [she]

was a little shaky on what [they] were supposed to do. When [her] mentee considered

dropping school by the end of the first semester, [her] role became clear and everything

fell into place" (Question2_InterQsMentor, 28). From another mentor's perspective,

I'm trying to gently persuade [her] to finish the year here since she's not thinking of

college until September anyway. This way she'll have more courses she can use as

credits towards her college degree if she goes. She may drop varsity hockey,

which might be a good idea so she can see how her next semester will go without

the hockey. Also, I'm worried that if she takes next semester off to go to work, she may not go back to school at all which would be a shame."

(Case9, 224 – 230)

Although academic achievement has been positively related to perceived academic competence, this relation may be influenced by the performance of close friends (Guay et al., 1999). Mentors noted in their reflections that their mentee's would often make reference to their friends through social comparison. One in particular found that her mentee was "feeling confused, hard to keep up, and feels others know more and have more foundation ... feels that she may not be at the same level as some other students in the class" (Case 3, 35 – 36). The mentor recommended that he "find study buddy - someone who is also serious about school to encourage each other" (Case 3, 49-50).

As noted in Figure 10 the mentors noted self-efficacy (journals, 94%) anxiety (81%), reinforcement (50%) and social comparison (56%) in terms of personal and academic satisfaction. In the interviews, although less frequent than that found in the journal reflections, anxiety (personal factor affecting learning) (interviews, 38%) and reinforcement (environmental factors) (38%) were equally important. Social comparison (behavioral factors) was more obvious to the mentors (journals, 58%) than to the mentees (interviews, 8%). If these factors (personal, behavioral and environmental) are addressed and seen to be a positive impact, then the mentor or sometimes mentee may find that the mentee has achieved positive personal and academic outcomes. One mentee reflected, "It was a great help because it let me know that the things I was dealing with and feeling were not something limited to me. I could take some comfort in the fact that others have felt as I did and they made it" (memberchecks 2, 8 – 10).

However, the opposite is also true. Low self-efficacy, negative reinforcement and negative social comparison can lead to negative personal and academic outcomes. One very discouraged mentor found that her "[mentee] was very disappointed and said 'if we try to make our mentees go see the counselors shouldn't it be a positive experience' … I said yes, and that I write these comments in our books so maybe if you want to look into this b/c now she really doesn't want help from no one" (Case3_2002, 172 – 182).

Self-efficacy and anxiety were perceived by the mentors to be linked to the mentor function, thus linking mentor effectiveness to social learning theory. Reinforcement and social comparison were secondary to self-efficacy and anxiety. The link was weaker when comparing the interviews and the journals. There was less than 50% of the interviewed participants expressed anxiety and reinforcement to be a recognized mentor function.

The Theory of Social Capital

It's not what you know, it's who you know, is the common aphorism that sums up

the conventional wisdom surrounding social capital (Woolcock & Narayen, 2002). It is the

wisdom of experience and when people fall on hard times, they count on their friends

(mentors) and family who constitute the safety net attached to self-efficacy. The basic idea

of social capital is that a person's family, friends (mentors) and associations (the university

community) constitute an important asset, called on in a crisis, enjoyed for its own sake

and leveraged for performance or material outcomes. Further, communities (e.g.,

universities) endowed with a varied stock of social networks and civic associations are in a

stronger position to take advantage of new opportunities (2002).

Figure 11. Comparative frequency of responses related to the theory of social capital.
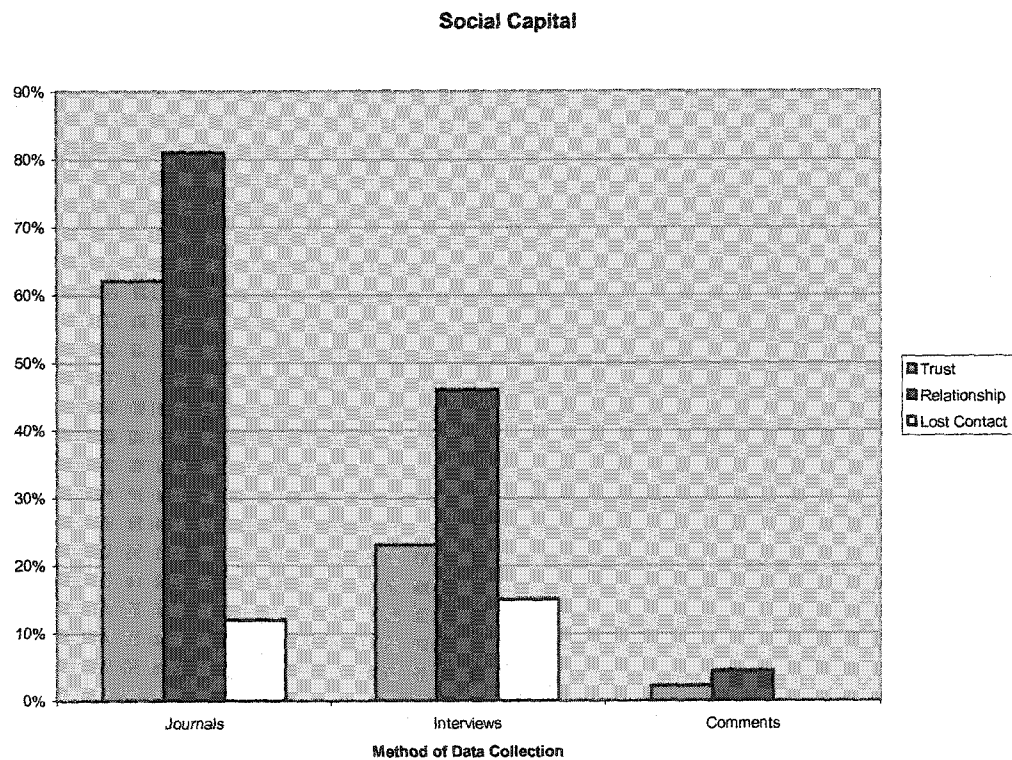
Social Capital

Social capital is the theoretical umbrella that is held overhead the other theories while the program provides the magnetic force that links the theories and the institutional programs to a central focus, which are academic and personal outcomes for economic and societal gains. And it appears that satisfaction with the program was related somewhat to the relationships developed between the mentors and mentees. To illustrate, trust and friendship were important in mentor and program effectiveness (Figure 10, journals, trust, 62%; relationship, 81%, interviews, 23%, 46%). According to Sweeny (2002) mentoring requires a safe, confidential environment for professional growth. Few people will risk exposing their problems or looking foolish in front of others until a safe, trusting context for that risk-taking is established.

Testimonials included:

"First years usually need guidance. Sometimes they're afraid to ask

but once they trust you, you will hear all their fears and dreams at

once" (Question4_InterQsMentor, 32).

"I think our relationship is professional and my mentee feels able

to trust me and divulge things he wouldn't be comfortable discussing

with his peers" (Question6_InterQsMentor, 24).

From a mentee my, "[mentor] was very interesting. He was very friendly and always seemed interested in me. We communicated more than just about the program. We communicated to each other some more personal things. We traded jokes, talked about girls and so on. He was still on my back about going to class, organizing my self

and getting my work done. He showed me around, academic writing center, the library and other places. In general this has been a great experience. I liked [him] and I found my self-being honest to him sometimes when I would have had less grief if I had lied to him. I find I have really benefited from this program and hope others have too." (Mentor 1, 30).

Developing a relationship with trust was expressed by to at least 81% of the group. One mentor stated, "All in all, I think we both - or I know I- enjoyed our year at the university meeting new friends, and some good profs. I think she made a good choice of coming back to Windsor and not going to Toronto, now there I think you could get lost through the cracks if you are not on the ball" (Case3_2002, 504 – 510). Further another mentor stated that she was "glad to see that she [was] comfortable with her environment now-more trusting, and open. Good for her and us. Mentorship and friendship - hand in hand" (Case4_2002, 399 – 401). In a follow-up interview, a third mentor confirmed "I would say our relationship was one of mutual understanding. He had gone through what I was going through. I could feel he was respectful of my situation and eager to help" (memberchecks2, 4 - 6). During the focus interviews, two of the three developed a friendship that is still continuing while the 3 noted "Yeah, we talk, we're like buddies only during our meetings" (Case focus 3, 5). Interestingly one mentor kept in contact with her mentee since the first year of the program. They emailed each other about school and often personal things.

With those that did not have a trusting relationship, the mentee often dropped the program. One mentor was concerned with her relationship. She wrote, "[my mentee] is rather reluctant to talk to me. Before she used to come to our meetings and talk for an hour. Now she brings a friend - who waits in the lobby and says she has to rush. She is always polite and co-operative, but I got the feeling she considers our meetings to be an

obligation rather than a 'pleasure'" (Case8_2002, 467 – 471). This mentor lost contact after 4 weeks. Another mentor stormed into the coordinator's office making demands toward consequences on the part of the mentee. The coordinator found the mentor to be rigid and authoritarian in her approach and suggested that she drop the program. The mentee was contacted so that she could be matched with another mentor however she was no longer interested. One relationship was perceived by the mentee to have affected her academically. She wrote:

"I was in the mentor program the first semester of my first year, and afterwards chose to discontinue meeting with my mentor. It was strange that I was paired up with her because when I was little I used to go over to her house a lot and play with her and her sister each time I had gone to visit my uncle. These visits soon ended when I got older and stopped tagging along with my parents. Surprisingly, the fact that I knew my mentor later became a bad thing because as time progressed I found that I was unable to be speak as candidly with her about my marks and my struggles as I would have with a mentor that I had never known (someone who didn't have any preconceptions of me).

At first I enjoyed meeting with [her] I found having to meet with her on a regular basis forced me to focus on my job as a student to do well and survive my first semester. While some of my friends in biochemistry were left to resolve any problems that they had had with their program on their own, I had someone whom I could turn to. At the time, I had an older sister whom I could turn to if I had any questions about my studies, but I still found it comforting to also have someone to turn to if I had any questions specifically concerning the concurrent program. I found first year very frustrating and overwhelming, and it was nice to talk to

someone who had been through what I was [had] just begun. I also liked having been briefly introduced to a few of the other mentors. I got a sense of what these people had to go through and it made the concurrent program more real to me.......I had known a lot of this stuff from head start and having read the passport to graduation (I don't recall if I was given the passport from my mentor or the Science office, but in either case I found this book to be very helpful), but I didn't actually attempt to manage my time until having met with [my mentor].....I saw the need to follow the schedule, but I was unable to stick to it. I felt like a failure each time she would ask me how my studying was going, or how I had done on my mid term. When I had told her I wasn't able to keep up, her words at first were encouraging, but after a while they became nagging-like, and a constant reminder of how poorly I was doing. I clearly could not keep up with the time table and no suggestions were given to me on how I could make it work. I had soon felt that the goals that we had set were unattainable, I quickly became discouraged....The second semester I saw no reason to continue seeing [my mentor] because I couldn't talk to her about my failures" (Commentary1, 2-82).

It started as a positive trusting relationship and ended as a negative trust relationship. This mentee never contacted the coordinator even though they were all asked in confidence to express any concerns as soon as they arise. Apparently, the coordinator needed to elicit more communications with the mentees.

In Figure11, the concept of a relationship between mentor and mentee was discussed in 81% of the journals and 46% of the interviews with mentees and mentors. Mentors in particular were expected to create a relationship that was respectful, professional and mutually empowering (81%). Mentees' expectations, however, were

more focused on their own personal and academic outcome. For example, one mentee stated, "My goal is to enter med school. My mentor showed me that not everything is perfect in life and one will feel tired and lazy sometimes but we have to get over it and keep on trucking" (Question3_InterQs, 2 – 13).

The dynamics of the relationship as a factor of social capital was strongly linked to mentoring effectiveness. This relationship was also closely associated with trust by the participants. With trust and a positive relationship the links to the other theories and the progress of the program prevails. The resulting links between social capital levels, micro-, meso-, and macro- encompassing factors related to the theories of departure, involvement and social learning are realized in the academic outcome and personal satisfaction of the participants in the program identified in the following sections: (1) Academic Outcomes, (2) Personal Outcomes and (3) Program Assessment.

Academic Outcomes

Another goal of the program was to provide strategies for students to develop the tools or skills they need to succeed academically and personally in a university community. The effect of the program on academic success and retention was the focus of the quantitative phase of the study. This was reinforced by many of the journal entries and interviews.

Figure 12. Comparative frequency of responses related to academic outcomes.
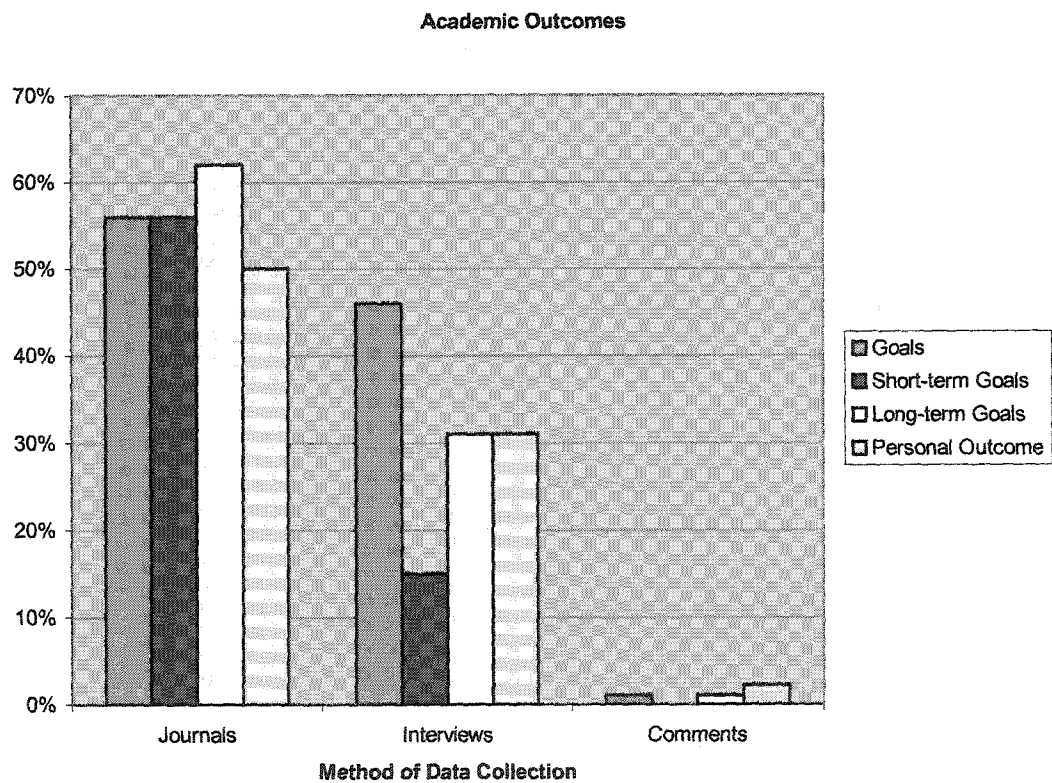
Academic Outcomes

Goal setting, both short and long term, was found to be important in the program from the onset as it relates to the theories (journals, 56%, interviews 46%) identified in the analysis. Examples that focused on academic outcomes included recommendations on goal setting such as:

[mentee] has established a study schedule for final exams and seems to have

established a definite under grad goal. She's enjoying her courses this term.

(Case 3, 302 – 304)

Long and short term goals /difficult for her to develop alone.

(Case4_2002, 88 – 88)

[she] filled out goals and schedule sheets and her goals are a bit vague; schedule is

very busy, only 1 hour spare therefore does not appear very realistic or flexible.

(Case6_2002, 88 – 90)

She's still excited about becoming a teacher - feels positive about her future.

(Case7_2002, 172 – 173)

Had a very good session. [mentee] is, as usual receptive to my suggestions. She

thinks now she would like to work one on one with children in a hospital perhaps

as a counselor … [mentee] had meeting with [academic advisor] - went well, talked

to [advisor] about changing her major to social work.

(Case8_2002, 101 – 103, 118 – 119)

Getting a bachelors degree in Criminology and going into the Navy. [mentor]

helped me change programs and gave me lots of support during the change.

(Question3_InterQs, 7)

Often by setting long and short term goals students become motivated and focused.

They see the relevance in what they are doing and how it links to what they are hoping to

accomplish (social learning). As Cohen (1993) suggested mentors stimulate students'

critical thinking in relation to developing their personal and professional goals.

Goal setting, both short and long term have been strongly linked in the research to

the theories of involvement (Astin, 1993; Blimling, 1989) and social learning (Schunk &

Rice, 1989; Schunk & Swartz, 1993). Clearly, goal setting was positively linked to mentor effectiveness.

Personal Outcomes

Many participants also wrote about personal outcomes. These were prevalent for both the mentor and mentee reinforcing the expectations of mutual empowerment for developing skills through the program. One mentor noted that the program "teaches student teachers to be organized and how to be positive role models. Moreover, it encourages student teachers to be dependable and accountable. And self satisfaction in knowing that you have changed someone's life for the better" (Question3_InterQsMentor, 38). A second mentor said, "There was a great sense of reward in helping a student who may have had a really hard time without me" (Question7_InterQsMentor, 10).

Program Assessment

Both mentors and mentees were asked to comment on the effectiveness of the program. Here are a few of the positive reflections:

One of the best things for me in University. I needed someone to guide me. I lost a lot in my high school and when I came to University I had no clue of my life. I knew I was a good fighter but I need a way to guide me and give me hope for the best. Thanks [mentor], you made a difference in my life. Get well soon. (Mentor1, 10)

Excellent program! I have a sister that will be entering first year at the University of Windsor, and she is already excited about joining the mentorship program. (Timeme1, 4)

I really didn't know what to expect, how can you know what your mentee will be like? But I found it met all my needs. If I had a question or concern, it was easily answered. It worked well and getting help was easy. (Question2_InterQsMentor, 30)

The mentor program was a direct contradiction to the people who had made me so discouraged. My mentor offered perspective on life at university and explained what was really important in my program and what not to worry so much about. In short it was only source of positive reinforcement and straight answers I had from the university. It was instrumental to my present success. (memberchecks2, 12 – 24)

With any program, suggestions for program improvement are crucial to its sustainability. The following suggestions should be noted and applied to improve the future of the program.

It is different than what I thought it would be. Some of the questionnaires

that were filled out seemed condescending and made a person feel dumb.

(Question2_InterQs, 12)

In teaching a student you get to know them a lot better. The weekly

meetings were good but not enough to really be able to independently

access strengths and weaknesses so generally could only be reactive to

what my mentee offered. Under the circumstances, however, I believe the

program is valuable. (Question2_InterQsMentor, 36)

Not to meet with the student every week 2nd semester as the 'timeline'

suggests, students should be more comfortable doing things by themselves.

Too hard to meet with mentor at your own placement.

(Question5_InterQsMentor, 2)

Allow other Faculties to participate in the program - expand program. Have

a website where mentors and protégés can get information. Reduce overlap

between this program and relationship with program advisor.

(Question5_InterQsMentor, 38)

Perhaps making the mentees more aware of their responsibility and

commitment to the program. Giving them mentees more information

upfront making it mandatory. (Question5_InterQsMentor, 42)

Overall, the responses on the mentor surveys and from the interviews of both

mentors and mentees provided evidence that the program was effective and that it should

continue and expand to include more students. The effectiveness is clearly seen as a

product of the program links to the theoretical principles address throughout the study.

Program effectiveness shows links to all the theories. Particularly, there are strong links between effectiveness and relationship with mentors and mentees (human capital, social capital). Without a trusting relationship, mentees would often drop out of the program. While having a trusting relationship mentees noted that they were able to discuss personal issues, family and friends with mentors (theory of involvement).

Also perceived as an effective mentoring function was the ease of transition (adjustment, theory of involvement). Developing strategies for long and short term goals (social learning) was repeatedly seen as a positive outcome of the program.

Mentors relate the effectiveness directly to their learning expectations (social learning). Their expectations are to become effective teacher advisors implementing the strategies attained through the program. Mentees looked to mentors as guides, reinforcing the positive (social learning) and providing the motivation to persist (theory of involvement.

Most compelling is the strength of social capital in taking human capital (relationships and trust) and networking through social learning and the theory of involvement and to a lesser degree the theory of departure employing mentoring functions.

Chapter 6

Discussion, Conclusion, and Recommendations

Introduction:

The findings of this research study provide both quantitative and qualitative evidence for a successful formal mentoring program for first-year at-risk students. Primarily, there was statistically significant evidence for the mentoring program boosting the overall GPA as well as the major GPA. Mentored students failed fewer courses in the first semester and their academic status was dramatically better than that of students enrolled in the University 101 transition course who proved to have an advantage over comparable students not enrolled in formal intervention programs. Overall the achievement levels of mentored students were higher than those enrolled in University 101 which were higher than comparable students not receiving intervention. This lends empirical support to the research linking mentoring and overall academic success (Kerka, 1998; Grissom, 1998, Pascarella & Terenzini, 1991). Further analyses of the data, both quantitative and qualitative confirm the success of the program in terms of mentee and mentor satisfaction with the outcomes of the program. As Flaxman (1988) noted, mentors helped their mentees through motivation and facilitation in acquiring skills for success. As well, the results indicate the importance of involvement with the institution, faculty, and peers as postulated in Astin's (1993) theory of involvement. In effect, mentoring can be viewed from the perspective of theories of involvement, departure, and social learning all of which are aspects of social capital, albeit the theory of involvement seems to be the most compelling. The following discussion is an explanation of the contributions to the theories that impact on mentoring and retention as they relate to post-secondary education. The implications, applications and limitations are also discussed.

Theory of Departure:

Tinto's Theory of Student Departure (1975) is the most commonly cited theory of student persistence. In summary, Tinto (1987) attributed an individual's decision to continue attending an institution to pre-entry attributes, the student's goals and commitments, academic and social institutional experiences, and academic and social integration. Primarily, he focused on three important aspects: 1) an educational career in higher education is a longitudinal process of failure and success; 2) the structure of the institute of higher education influences students in their decision making; and 3) social and intellectual integration of students in the new system stimulate students during their educational career.

Tinto (1987) further distinguished individual roots (personal factors) of student departure from education (i.e., intention and commitment) from interactional roots (external factors) of institutional departure (i.e., adjustment, difficulty, incongruence and isolation). In terms of intention and commitment, Tinto referred to important personal dispositions with which individuals enter institutions of higher education. They set the boundaries of individual attainment and paint the character of individual experiences within the institution following entry (Tinto, 1987). Further, Tinto described the four forms (adjustment, academic difficulty, incongruence and isolation) on the institutional level as interactional outcomes arising from individual experiences with the institution as well as mirroring the attributes, skills, and dispositions of individuals prior to entry. In terms of the importance of mentoring, Tinto found that external forces (interactional roots) on individual participation played a significant role.

Evidence from this study emerged with only one of the three aspects of student persistence being supported, that of the social and intellectual integration of students in the

new system (the transition from high school to university). Qualitative evidence directed toward Tinto's interactional (social) roots of institutional departure was found to focus on: (1) adjustment, (2) time management, and (3) skills. The program proved to have a positive impact on issues of adjustment, strategies for time management (when to socialize, when to study) and the development of skills for academic success. As part of the formal mentoring program, mentors followed a timeline and a set of objectives that emphasized all of the interactional roots. Apparently, mentors' strategies, particularly that of encouraging their mentees to attend available workshops designed to address the three issues noted, were significant in the mentees' awareness of the impact of these roots on personal and academic success. Incongruence appeared to be more of a concern for the mentors than the mentees. Further there was little evidence of financial difficulty emerging from the journals, interviews and comments. Issues of home sickness and isolation (adjustment) were addressed and appeared less frequently as time passed and as a mentor relationship developed. Since the mentees were a relatively homogenous group, entering out of high school and between the ages of 17 to 19, many of the factors that affect incongruence, financial issues and isolation were not prevalent. Thus it appears that the program linked the social, mechanisms of adjustment, strategies for managing time to include and balance academics, extracurricular and social activities with the academic (strategies for skills development) aspects of the theory of departure. With this in mind, the ties to the other social theories begin to take shape. Social integration which may have slightly different interpretation depending on the theory remains the common thread or key to the success of the program.

Theory of Social Learning

The theoretical foundations of mentoring also link to the 1986 definition of Bandura's Social Learning Theory.   To summarize, learning is strongly influenced cognitively by how individuals feel about themselves (personal factors, e.g., self-efficacy, anxiety), how they compare themselves to others (behavioural factors, e.g., social comparison) and how external forces, family, friends, faculty, and institution (environmental factors) reinforce the positive that results in academic and personal outcomes.

The mentors markedly linked mentor effectiveness to social learning theory. As teacher candidates they realized their role in facilitating learning by providing reinforcement, motivation and skills to improve learning. Accordingly, their goal was to help their mentees by promoting self-efficacy and finding ways for their mentees to reduce anxiety. In the journals, mentors persistently noted strategies to provide positive reinforcement and encourage interaction with faculty and advisory staff. Moreover, through the Mentor Effectiveness Survey, 68% of the mentees found the mentors to be very effective in this area. It is important to note that the mentors volunteered to take this course as an option. Although most mentors were extremely effective, overall there is a range of effectiveness depending on the mentor and their commitment to the program. Inherent factors including personality, comfort and experience may also affect these findings. Mentoring is like teaching, some appear to be natural and others have to work very hard to relate to students and understand the learning process. Further research in this area would prove beneficial to teacher education. Because of the complexity it would be interesting to note which skills of mentoring are learned and which are inherent.

Mentors also noted the importance of social comparison in reducing anxiety and improving efficacy. There was apparent comfort in sharing similar personal stories and in realizing that they (mentees) were not alone in the struggle with transition. In fact, mentees noted that mentors were very effective role models in sharing their own experiences to address mentee issues related to social learning. Most importantly, mentors were reflective (noted strategies for motivation) in their role in motivating their mentees to succeed academically as is empirically evident in both the GPA and major GPA. Statistical analysis indicated that the students in the mentee group performed (GPA) significantly better than the students in the control groups, including those that were involved in the University 101 course in the first semester of school. However, there was not a significant impact of mentoring over the University 101 course in the second semester. Enrolment in the University 101 course, however does lack the one-to-one mentoring affecting personal and behavioural as well as environmental factors leading to improved academic achievement. As well, during the second semester, the frequency of meetings was reduced to biweekly and often phone meetings which may have negatively influenced the impact of the program. These findings further point to the importance of social involvement in the learning process linking positive outcomes to the theory of involvement.

Theory of Involvement

The evidence relating to both the theory of departure and the theory of social learning overlaps with the evidence relating to the theory of involvement making this link to the formal mentoring program most compelling. The basic principle of Astin's (1984) Theory of Involvement is that students learn more the more they are involved in both the academic and the social aspect of the university experience. Astin (1984) contends that having a personal connection to an educational institution and a high degree of involvement in the

education process correlate positively with student retention. Thus the overlap occurs with

the interactional roots (adjustment and time management) of the Theory of Departure, and

the behavioural factors (reinforcement and social comparison) involved in the Theory of

Social Learning.

Mentoring function is clearly related to the theory of involvement. Most compelling

is the mentor's effectiveness in connecting mentees to resources, faculty and advisors.

Mentors further noted that mentees involved in extracurricular activities, in study groups

and having connected with their professors showed less anxiety and were very satisfied

with the outcomes of the program and their involvement with their mentors. Further there

is empirical evidence that the mentor functions related to the theory of involvement impact

positively on GPA and retention to a level that is significantly higher than that found with

the intervention program, University 101.

The journals and interviews further confirmed the positive value of mentoring from

both the mentee and mentor perspective. Mentees that developed a bond or relationship

with the mentors appeared to be the most satisfied with the outcomes of the program.

Further details revealed that Astin's theory of involvement was most closely linked to

social capital and positive academic and personal outcomes. The relationship becomes

more evident in the configuration of the model viewing the theory of involvement in terms

of insititutional capital and human capital form the theory of social capital as represented in

Figure 13.

Figure 13. Social capital theory link to the theory of involvement and institutional

initiatives.
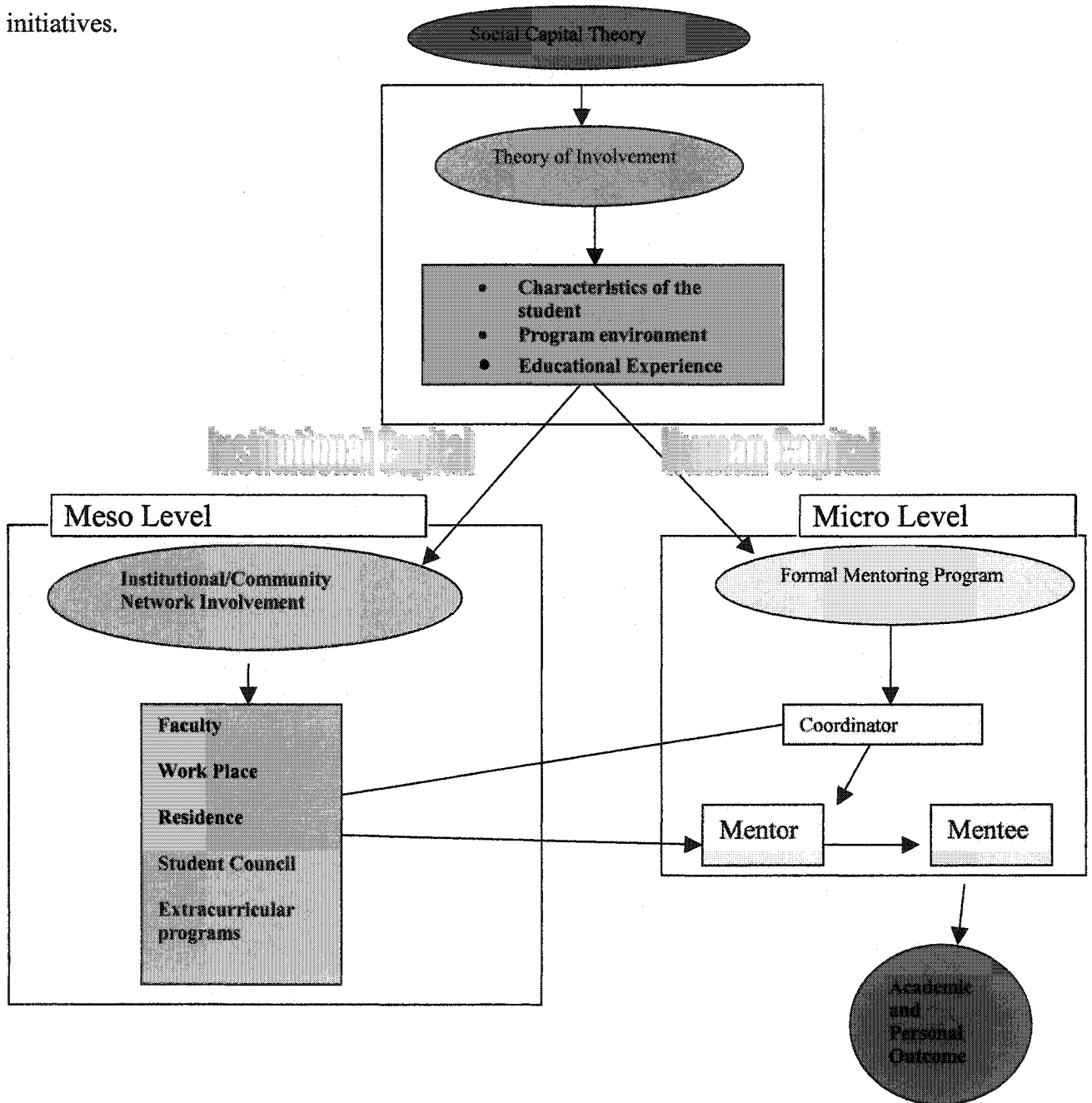
From this perspective, the evidence clearly links to all the theoretical configurations developed with respect to social capital. By tying the theory of departure, the theory of social learning and the theory of involvement together they can be viewed as something like puppets on a rod controlled mechanism, that represented by theory of social capital.

Figure 14. Viewing social capital theory as the mechanism that controls the relationships among the theory of departure, theory of involvement and the social learning theory as it relates to formal mentoring and outcomes.
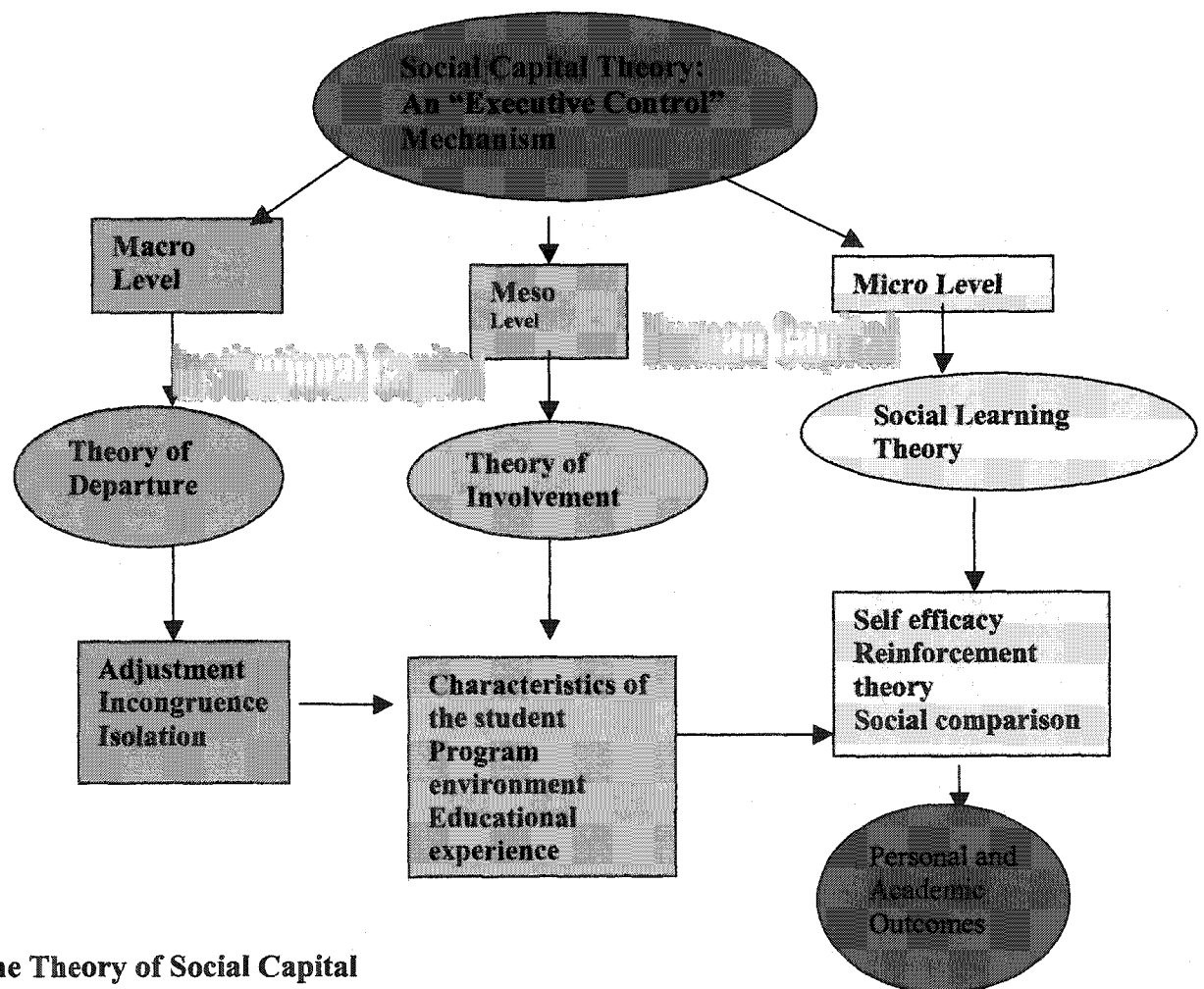
The Theory of Social Capital

Strategies for increasing student retention are among the most important issues facing universities today. Universal recognition of higher education as a prerequisite to success means that there is an increasing demand for a university education for everyone (Paul,

2001). Thus the investment in human capital is crucial to the improvement in social capital to meet the demands of the 21st century. The formal mentor program, T.I.M.E., was founded on the importance of the institution's investment in human capital in the crucial freshman year to improve retention leading to graduation and ultimately improved social capital.

Many retention programs work in isolation in an university institution analogous to the structural segregation of departments or faculties in their own building. Institutionally, due to the distributional system of general education of 90 percent of the universities, there has been little direct impact on student development (Astin, 1993). T.I.M.E. is structured to create a trusting relationship between mentor and mentee that leads to a network of resources actually creating an individualized roadmap for the retention programs (structural capital) that would help each mentee. This program is unique in strategically in-servicing teacher candidates who philosophically understand the importance of role-modeling and mentoring on student development.

The program resulted in positive personal and academic outcomes. In fact, statistical analysis indicated that the students in the mentee group performed (GPA) significantly better than the students in the control groups, including those that were involved in the University 101 course, that provides intervention based on retention research at the institutional level. As students entered the second semester, the mentee group continued to perform better than the control groups in 2001. However, the impact was not sufficient to differentiate between the mentee group and the 2002 control group involved in University 101. Recent restructuring of the University 101 course may have contributed to student improvement. In addition the diminished frequency of mentor/mentee meetings in 2002 compared to 2001 (a recommendation of the 2001

mentors) may have negatively impacted the mentee group. Early intervention by the mentors appears to be one of the significant attributes of this program.

In the analysis of the major GPA, the mentee group performed better than both control groups in each of the years of the program in the first semester. As with the final GPA, the major GPA for semester 2 showed a statistically significant difference in the 2001 year with the mentees outperforming (mean = 6.7) both control groups (control mean = 4.65 & new control mean = 4.73). This was not evident in the 2002 year as expected which may have been due to: (1) the impact of the University 101 course, (2) academic services flagging failures and (3) the reduced frequency of meetings between mentees and mentors in the second year of the program.

In terms of failing courses in the first semester, there was a statistically significant difference between the mentee group and the control groups. In fact only 19.2 % of the 2002 mentored group and 25.7% of the 2001-mentored group failed courses in the first semester compared to 42.9% of the 2002 control group, 55.6% of the 2001 control group and 50 % of the new control group (students with no intervention).

A complex pattern arises in the second semester where there is a reversal between the two groups, mentored and control. In the 2002 control group (University 101) there were fewer failures (9.5%) than in the mentored group (15.4%), which still had fewer than the new control (no intervention) group with a failure rate of 19.2%. Overall, only 35% of the mentee group experienced failure compared to 65% of the control groups. Ultimately the early intervention of the mentoring program reduces the overall number of failures experienced by students. Because students begin the program within the first two weeks of classes, the mentored students become aware of the drop out dates earlier than the non-mentored students and they seek academic counseling earlier as well. By the time both

groups enter 2nd semester, they will have been equally aware of the affect of failing a course. Academic advisors (not mentors) eventually target students who have failed. With the intervention of mentoring in the first semester, many students avoid failing grades on their transcript, which may impact on self-efficacy and satisfaction as they continue their academic pursuits.

More importantly, the mentoring program has a dramatic positive effect with respect to retention. Of those in "good standing" we see rates of 88.5% in the 2002 mentored group and 71.4% in the 2001 mentored group while the control groups' rates ranged from 57.1% in the 2002 Control group to 23.1% in the New Control group (no intervention). This supports Tinto's (1993) belief that academic and social involvement plays a central role in current theories of student retention. Even though the University 101 course does impact on academic status there is definitely a value added by the mentoring program. This suggests that mentored students will be entering second year with improved self-efficacy along with an improved proficiency level.

This positive experience linking the mentored students to other intervention programs and providing regular and consistent feedback, offers the personalized and systematic socialization of the student in the university culture. This strategically improves the learning environment and eventually social capital.

Just as Astin (1993) found cognitive, affective, psychological and behavioural development was affected by peer group characteristics, similar influences were observed on mentees by mentors in the program. Having students intentionally meet through this program nearly always resulted in positive effects. One-on-one mentoring has a more direct impact on retention. Thus learning, academic performance, and retention are positively associated with creating a trusting relationship that leads to a network promoting

academic involvement, involvement with faculty, and involvement with student peer groups. The mentor program through human capital emphasizes the importance of listening to the mentee, developing a trusting relationship and linking them to the institutional network that leads to positive personal and academic outcomes.

Overall Effectiveness of the Program

Similar to Kerka's (1997) and Galbraith and Cohen's (1995) findings, the mentees from this study found that they particularly benefited from the mentor's knowledge, contacts, support, and guidance. Evidence of relational learning (Kerka, 1998) was revealed in the journals and interviews with mentees. Moreover, since the program was designed to be collaborative and not hierarchical, mentees and mentors developed "internal value" (as coined by Galbraith & Cohen, 1995) from the ongoing dialogue and feedback. Mentors were Faculty of Education students earning a credit while experiencing the role of mentoring as it relates to teaching. There was no power struggle often found with faculty mentoring students yet there was a professional distance that is not found with peer mentors.

Mentoring is both a learning process and a teaching process. The mentor/mentee relationship is one of mutual empowerment. Mentor is synonymous with socialization and relational learning. It is suggested that matching pre-service teachers through a credit course with these at risk first year students provides a unique formula for formal mentoring programs. It implies a cost effective system for retention. It ensures academic success without a financial burden on the institution. Students appear to remain in the relationship for mutual and exclusive benefits. The mentee benefits extrinsically with improved GPA whereas the mentor benefits through an experiential learning course credit.

More importantly, according to the mentor journals and interviews, mentees have developed the confidence to connect with their professors and with the resource agencies that can continue to help them through their academic pursuits. Those that have developed a strong link with their mentors and the resources appeared to be confident in fulfilling their short and long term goals. Through the interviews, it became apparent that many of the mentees realized the importance of time management and connecting with their professors.

Considering the relatively low level of intimacy or intensity in mentoring as identified by Shapiro et al., (1978) the mentoring relationship, nonetheless, resulted in positive outcomes without being a paternalistic relationship that is that found between a mentor and protégé. Further, Kram and Isabella (1985) recommended examining differences in self-concepts and attitudes toward the relationship to shape the nature of the mentoring relationship. This study revealed that the mentor effectiveness was important to the mentee's perception of the success of the program and outcomes. Overall, as noted in the Mentor Effectiveness Survey (Appendix E), 80% of the mentees found the mentors to be very effective in the areas of skills development, facilitation, providing resources, and in providing strategies for academic improvement.

The mentors benefited from a practicum experience in counselling (teaching), the satisfaction of helping others, and in gaining confidence in themselves as teachers. They needed to work collegially with their peers in realizing the complexity of the "student" and in learning to develop skills in networking and in teaching strategies. The shared knowledge that the mentor provides eases the way for the mentee. Both get some intrinsic value from the experience.

Limitations of the Study:

The students (mentors and mentees) involved in this study and in the mentoring program were recruited to participate voluntarily. In the case of the mentees, it may suggest that these students have taken the steps toward persistence by self-nominating for mentoring. Thus, they may be fundamentally different from the control groups. Self-nominating students were not divided into two groups, a mentored group and a non-mentored control group. Instead, the control groups were identified as either, non-mentored, non-profile students, or, non-mentored profiled students enrolled in University 101. (University 101 is a one-credit course that includes topics and skills useful for successful students. Topics may include goal setting, time management, diversity, stress, and dealing with the demands of university). Therefore, these students also sought help although it was not a one-to-one strategy nor were they mentored to the same degree as those in the T.I.M.E. program.

Consistency of meeting times was an issue during the practice teaching blocks of the mentors. These consisted of four three-week blocks for field experience. Many of the mentors had to switch the time of their meetings to accommodate their schedule. This conflicts with Bandura's (1989) call for sustained involvement in activities to develop cognitive competencies. A one-year program that has structural incongruence would appear to have some limitations in sustaining a relationship to improve self-efficacy.

There were more female participants (mentors) than males and mentors and mentees were more often matched by program of study rather than gender, so gender in terms of mentor effectiveness was not examined. However, a mentor group presented a study (sample size 20) that indicated age and gender did not reflect on the relationship.

Further studies in this area would enhance our understanding of mentor program effectiveness.

Because of the complexity of factors that affect relationships, it would be a massive endeavour to consider all the factors within this dissertation. Some of the factors may include the effect of living in residence, the effect of commuting, and the effect of personal issues on academic outcomes. Further research in each of these areas would enhance the understanding of factors that affect retention.

The complexity of the interactions, the demographics, the dedication of the mentors and mentees, the matching of the group all play a role in the impact of the success of the program. With any decision-making process there is no ideal solution. Matching the mentee and mentor is not an easy task nor does it provide a predictable outcome. Some matches are close to perfect, others are lukewarm, while still others may meet in the acceptable to mediocre ground. The probable range is wide, unpredictable and may vary from year to year.

In year 2 (2002) there were far more surveys conducted that created some concern for the program on the part of the mentees and mentors. This may have left some of the mentees partially unsatisfied believing that the program was a just a research project rather than a program designed to help them.

Further Studies:

Further studies conducted to follow up with the experimental group and control group through to graduation could be valuable. A comparative study should be designed to assess various mentoring programs and their impact on academic and personal

outcomes. Others may focus on the mentor effectiveness and its implication for teachers as they enter the profession. Teacher mentoring programs have currently received attention from government granting agencies to address the concern with teacher turnaround.   Thus the practical applications of this study may impact on teacher induction programs.

In fact, the T.I.M.E. program was designed to provide experiential learning for secondary school pre-service teachers in preparation for Teacher Advisory Programs mandated by the Ontario Ministry of Education. Thus, a study should be conducted to determine the impact of a pre-service mentoring program on teachers involved in Teacher Advisory Program.

Conclusion:

Based on the statistical analysis and interpretation of the data collected for this study, it can be concluded that participation in the formal mentoring program T.I.M.E., a program unique to the University of Windsor, has a positive impact on academic outcomes. There was dramatic quantitative evidence of the impact of mentoring on GPA, number of courses failed, and retention. Qualitatively, the mentees found the mentors to be effective in all areas of mentor function. More than 80% reported mentors to be effective in areas of skills development, facilitation, providing resources, and in providing strategies for academic improvement. In fact, it can be considered a value-added program to intervention programs like the University 101 course.

Ultimately, by investing in human capital (at risk students) through a mutually beneficial program like T.I.M.E. (a course designed for preservice teachers) that capital may be enhanced. Improving retention rates as has been demonstrated by this program

may also have benefits with respect to institutional capital. This confirms one of Light's (2001) findings from years of research with sixty faculty members from more than twenty colleges and universities. When asked what they (undergraduate students) found most rewarding about student life, and what experiences had made them more motivated, more understanding, 'better' students; the answer was often: mentoring.

The program T.I.M.E. is a unique formal program that employs course credit, experiential learning and a human link to a new and often overwhelming institutional environment. When there is an investment of time on students by all the participants (faculty, advisors, mentors, administration) the result is almost always positive.

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Appendix A

June 18, 2002

Dear Student:

Welcome to the University of Windsor. You have an opportunity to participate in a mentoring program for first year students. As a professor and PhD student within the Faculty of Education, University of Windsor, I am piloting a mentorship program for students starting the University of Windsor. As a first year student, participation in this mentorship program should assist you in having a successful year at university. You will be mentored by a Faculty of Education student who will help you acquire successful study skills, establish practical strategies in attaining your academic and career goals, and connect you with an appropriate faculty advisor.

You will meet with your mentor at a convenient time at least once per week. Participation is voluntary and you may withdraw at any time. Similarly if circumstances warrant, we could ask you to withdraw.

This program is **limited** to a maximum of 50 students therefore it will be necessary to interview candidates before they are accepted into the program. Each candidate will receive a letter advising him or her whether or not they have been accepted into the program.

Confidentiality is an important factor in the success of this project. Any information collected by this project will not include names of any of the participants. Volunteers will remain anonymous throughout the study.

I am available to answer questions before, during and or after the study by phone at 253 3000 ext. 3961 or by email at sgeri@uwindsor.ca. If there are any concerns of an ethical nature they can be directed to the Office of Research Services by phone at 253 3000 ext. 3916.

If you are interested in participating, please sign the attached consent form and return the form to me in the envelope provided or fax to 971-3694 or email your response and form information to sgeri@uwindsor as soon as possible.

Sincerely

Geri Salinitri, B.Sc., B. Ed., M. Ed.
Faculty of Education

Appendix A2

CONSENT TO PARTICIPATE IN RESEARCH

I understand the information provided for the study on *The Effects of Interfaculty Mentorship on Retention of First Year Students* as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Student Name (please Print)

_____   Date:_____

Signature

_____

Areas of Discipline

_____

Phone #   email address

_____

Student Number

Appendix A3

CONSENT TO PARTICIPATE IN RESEARCH
SURVEY

THE TEACHER INTERFACULTY MENTORSHIP EFFORTS PROJECT

T. I. M. E.

You are invited to participate in a research study conducted by Prof. Geri Salinitri, from the Faculty of Education. This is a research project designed to study the effects of mentorship in supporting first year students through their transition from high school to university. The results of the study will be used as part of her doctoral research under the supervision of her advisor, Dr. Larry Morton, Coordinator of the Graduate Program for the Faculty of Education. This project is in agreement with the Faculty of Arts and Social Sciences and the Faculty of Science.

In phase I of the study, Prof. Salinitri is asking that first year students voluntarily complete the following survey. Prof. Salinitri also requests permission to access your grades following first year. Any information that is obtained in connection with this study and that can be identified with you will remain confidential. The data collected will remain in a safe, in the office of the Faculty of Education and will be destroyed by shredding following publication of the research for educational purposes. Names and student numbers will remain anonymous in the publication. Results will be made available to participants in an Executive Summary linked to Prof. Salinitri's homepage at uwindsor.ca

If you have any questions or concerns about the research, please fell free to contact Prof. Salinitri at 253 3000 ext. 3961 or by email at sgeri@uwindsor.ca.

Participation is voluntary and you may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and has received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding you rights as a research subject, contact:

Research Ethics Coordinator   Telephone: 519 253 3000, x3916
University of Windsor
Windsor, Ontario N9B 3P4

Thank you

Prof. Geri Salinitri
Faculty of Education

Appendix A4

T.I.M.E. SURVEY

Please complete the following survey and return it to Prof. Salinitri.

1. Student number: _____

2. Age: _____

3. Gender: M _____ F _____

4. OAC average on best 6: _____

5. Program of Study: _____

6. Number of siblings: _____

7. Do you give us permission to attain your final grades after 1st and 2nd semester of this school year? Yes_____ no_____

8. Number of siblings presently in or who have graduated from university: _____

9. Did your parents attend university? Mother: yes_____ no_____
    Father: yes_____ no_____

10. Where were you born? _____ (Country/City/Town)

11. If you were born in Canada, are you the first generation? yes_____ no_____

12. Are you interested in the mentoring program? Yes_____ no_____

13. Are you interested in a weekly tutoring program? Yes_____ no____

_____   _____
Signature   date

Appendix A5

June 4, 2002

Dear Intermediate/Senior Faculty of Education Student:

As a professor within the Faculty of Education, University of Windsor, I am piloting a Teacher Advisor / Mentorship Program to address two needs in education. The first is the ongoing concern regarding student retention faced by Universities across the nation including the University of Windsor. The second addresses the need to train Faculty of Education students in the Teacher Advisor Program mandated by the Ministry of Education. The guidelines in accordance to the University of Windsor Ethics Committee will be met. Research from the project may produce publishable findings.

As Faculty of Education students in the Intermediate/Senior division, you are invited to apply for one of the twenty seats in this component of the Integrated 80-303 course. As a participant in the course, you will receive training as a Teacher Advisor/Mentor and will be required to meet with first year students entering the Faculties of Arts and Social Sciences or Science. Your goals will be to help develop successful study skills, establish practical strategies in attaining their academic and career goals, and connect them with the appropriate faculty advisor. Further course requirements will be provided in the syllabus. Risks involved from participation include but are not limited to student withdrawal within the project.

Confidentiality is an important factor in the success of this project when discussing participants in class, Faculty of Education students will not use the student participant names. Any information coming from this project will not include names of any of the participants. No discussion of student participants may take place outside the class or the committee. Confidentiality must be agreed to prior to participation.

I am available to answer any questions before, during and or after the study by phone at 253 3000 ext. 3961 or by email at sgeri@uwindsor.ca.

Although participation in this study is voluntary, once selected, Faculty of Education students must adhere to the procedures of course requirements. If there are any concerns of an ethical nature they can be directed to the Office of Research Services by phone at 253 3000 ext 3916.

Sincerely

Geri Salinitri, B.Sc., B.Ed., M.Ed.
Faculty of Education

Appendix A6

CONSENT TO PARTICIPATE IN RESEARCH –TIME

I understand the information provided in the letter regarding my participation in the study on The Effects of a Mentorship Program. Any questions or concerns I had have been addressed to my satisfaction, and I agree to participate in this study if accepted. I agree to participate fully and completely by following the guidelines and attending all scheduled meetings and completing my portfolio including assessment of the program. Because this is a voluntary program, I may withdraw at any time and I may be asked to withdraw if I fail to comply with the requirements of the program.

_____

Student's Name (please print)

_____

Complete Mailing Address Including Postal Code

Email:_____

_____

Home Phone Number

My teachable participants are: _____and _____

_____

Signature

Date:_____

Appendix A7

Timelines for Mentor/Mentee Meetings

MENTOR WILL:
- ☐   provide a positive student role model for other students to emulate
- ☐   assist new students in becoming more knowledgeable of academic policies, rules and procedures within the Faculty of Arts and Social Sciences, support services, university services, campus organizations and university activities
- ☐   refer students to proper faculty or staff when necessary

<u>Weekly Schedule for Mentors:</u>

Week 1
- ☐   provide the Passport to Graduation and the Workbook –
- ☐   explain the S.I.S. and ensure the student is attending the courses registered in
- ☐   review final exam schedule for conflicts
- ☐   explain how to make course changes within the first 10 days of classes
- ☐   discuss any questions or concerns the mentee has

Week 2
- ☐   remind student of last day, Sept. 19, 2001, for course changes and late course adds
- ☐   explain STEPS and encourage to take all seminars, NOW
- ☐   walk student over to my office, Room 110 CHT, explain about bulletin board and brochures
- ☐   explain importance of going to all classes, keeping up with readings and reviewing constantly
- ☐   have student for next week's appointment have the yellow workbook completed with goals and time schedule
- ☐   discuss any questions or concerns the mentee has

Week 3
- ☐   inform student of the 2 writing centres and their differences, 478 Sunset is the Academic Writing Centre and Room 2126 CHN is the Writing Development Centre
- ☐   work on student's yellow workbook - - goals and time schedule
- ☐   make sure the student meets with each professor
- ☐   discuss any questions or concerns the mentee has

Week 4
- ☐   discuss and possibly walk the student to the library
- ☐   let the student know of free services available on campus - - use the Passport to Graduation (i.e., medical services, psychological services, resume writing; etc.)
- ☐   remind student of work study program - - applications and information available in the Awards Office
- ☐   go briefly through the University of Windsor Undergraduate Calendar with the student

Week 5
- ☐   prepare mentees for mid-terms and writing papers
- ☐   review section 1 of the Passport to Graduation
- ☐   have student meet with their program counsellor yet, if not, the mentee needs to do so this week (for undecided and Liberal and Professional Studies they would see me for program counselling)
- ☐   discuss any questions or concerns the mentee has

Week 6
- ☐   review section 2 of the Passport to Graduation
- ☐   go over how the mentee felt the meeting with the program counsellor went
- ☐   remind the mentee of preparation tips for midterms
- ☐   remind the mentee if he/she has any problems, questions or concerns about anything, he/she needs to deal with it ASAP regardless of how small or big it may seem (i.e., stress over mid terms)

☐ discuss any questions or concerns the mentee has

Week 7

☐ review section 3 of the Passport to Graduation
☐ remind mentee when mid-term grade returned if grade lower than expected have mentee talk to professor about test (review test with professor)
☐ remind mentee if not taken any of the STEPS, to do so
☐ is the mentee comfortable with using the library and other resources available on campus
☐ discuss any questions or concerns the mentee has

Week 8

☐ review section 4 of the Passport to Graduation
☐ remind mentee last day to withdraw from a course
☐ if they failed a mid-term have them see me immediately before the drop date deadline (☐
discuss any questions or concerns the mentee has

Week 9

☐ explain the DARS and how to read it (if mentee needs help, have them see their counsellor)
☐ make sure the mentee knows how to check on the S.I.S. for registration date and time for Winter registration
☐ discuss any questions or concerns the mentee has

Week 10

☐ registration for Winter term will be starting shortly, if not already,
☐ see if mentee needs help with reading the timetable
☐ make sure mentee makes an appointment to see program counsellor before selecting courses and registering for the Winter term (for undecided and LAPS it would be me)
☐ discuss any questions or concerns the mentee has

Week 11

☐ prepare mentees for registration for Winter term - remind mentee to check registration date and time on the S.I.S.
☐ discuss preparation for finals - taking STEPS if not already done so, talking to professors or T.A. if needs help in classes
☐ discuss any questions or concerns the mentee has

Week 12

☐ remind mentee only 2 weeks left of classes - has the mentee picked up the exam schedule from the Registrar's Office (the schedule tells where the exams are)
☐ remind mentee to register on time as classes will fill up
☐ if mentee has forgotten P.I.N. - will need to go to Registrar's Office
☐ discuss any questions or concerns the mentee has

Week 13

☐ last day of classes and exam strategies
☐ wish mentees good luck
☐ last meeting of the semester, set up date and time for week 1 of Winter term
☐ discuss any questions or concerns the mentee has

Appendix B

First Year Experience Survey
Adapted from the UCLA/ YFCY Experience Survey:
http://www.gseis.ucla.edu/heri/yfcy/survey_instrument.html

Thank you for taking the time to complete the following survey to help us understand and enhance the first year experience for students. Answer the questions in the space provided or circle the appropriate number for each question where applicable.

1. Age _____

2. Gender: M   F

3. What year did you first enter:_____

4. Please indicate your current enrollment status: Full time_____ Part-time_____

5. Are you:

   white   □   black   □   asian   □   native Indian   □   other   □

6. Is English your native language? Yes . □   no   □

7. Since entering this university how often have you interacted with the following people (e.g., by phone, e-mail or in person)

	daily	2-3x/week	1/week	1-2/month	1-2/term	never
Faculty during office hours	□	□	□	□	□	□
Faculty outside of class or office hours	□	□	□	□	□	□
Teaching assistants	□	□	□	□	□	□
Academic advisors/counselors	□	□	□	□	□	□
Other university personnel	□	□	□	□	□	□
Close friends at this institution	□	□	□	□	□	□
Close friends not at this institution	□	□	□	□	□	□
Your family	□	□	□	□	□	□

8. Since entering university how successful have you felt at:

	very successful	fairly successful	somewhat successful	unsuccessful
Understanding what your professors expect of you academically	☐	☐	☐	☐
Developing effective study skills	☐	☐	☐	☐
Adjusting to the academic demands of university	☐	☐	☐	☐
Managing your time effectively	☐	☐	☐	☐
Getting to know faculty	☐	☐	☐	☐
Developing close friendships	☐	☐	☐	☐

9. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself

	top 10%	Above average	average	below average
Academic ability	☐	☐	☐	☐
Artistic ability	☐	☐	☐	☐
Computer skills	☐	☐	☐	☐
Emotional health	☐	☐	☐	☐
Leadership ability	☐	☐	☐	☐
Mathematical ability	☐	☐	☐	☐
Physical health	☐	☐	☐	☐
Public speaking ability	☐	☐	☐	☐
Self-confidence (intellectual)	☐	☐	☐	☐
Self-confidence (social)	☐	☐	☐	☐
Self-understanding	☐	☐	☐	☐
Writing ability	☐	☐	☐	☐

10. Since entering this university, how often have you felt:

	frequently	occasionally	rarely	not at all
Lonely or homesick	☐	☐	☐	☐
Worried about meeting new people	☐	☐	☐	☐
Isolated from campus life	☐	☐	☐	☐
A need to break away from you family in order to succeed in university	☐	☐	☐	☐
Bored in class	☐	☐	☐	☐
That your courses inspired you to think in new ways	☐	☐	☐	☐
That your job responsibilities interfered with your schoolwork	☐	☐	☐	☐
That your family responsibilities interfered with your schoolwork	☐	☐	☐	☐
That your social life interfered with Your schoolwork	☐	☐	☐	☐

11. Since entering this university have you: (mark those which apply to you)

changed your career plans................☐

decided to pursue a different major......☐

declared your major.......................☐

joined a social fraternity or sorority......☐

enrolled in a remedial course.............☐

taken a course or seminar
specifically designed to help
first year students adjust to
university...................................☐

joined a mentorship program............☐

12.   Since entering this university indicates how often you:

	frequently	occasionally	rarely	not at all
turned in course assignments late	☐	☐	☐	☐
discussed course content with students outside of class	☐	☐	☐	☐
studied with other students	☐	☐	☐	☐
skipped classes	☐	☐	☐	☐
came late to class	☐	☐	☐	☐
received tutoring	☐	☐	☐	☐
worked with a professor on a project	☐	☐	☐	☐
sought personal counseling	☐	☐	☐	☐

13. Compared with when you entered this university, how would you now describe your:

	much stronger	stronger	no change	weaker
general knowledge	☐	☐	☐	☐
analytical and problem-solving skills	☐	☐	☐	☐
critical thinking skills	☐	☐	☐	☐
ability to get along with others	☐	☐	☐	☐
library/research skills	☐	☐	☐	☐
ability to work as part of a team	☐	☐	☐	☐

14. Since entering this university, how much time have you spent during a typical week doing the following activities? In hours per week

	none	<1	1-2	3-5	6-10	11-15	16-20	21-30	>30
attending classes/labs	☐	☐	☐	☐	☐	☐	☐	☐	☐
studying/homework	☐	☐	☐	☐	☐	☐	☐	☐	☐
socializing with friends	☐	☐	☐	☐	☐	☐	☐	☐	☐
exercising/sports	☐	☐	☐	☐	☐	☐	☐	☐	☐
partying	☐	☐	☐	☐	☐	☐	☐	☐	☐
working (for pay)	☐	☐	☐	☐	☐	☐	☐	☐	☐
participating in student clubs/groups	☐	☐	☐	☐	☐	☐	☐	☐	☐

watching TV	□	□	□	□	□	□	□	□	□
volunteering in the community	□	□	□	□	□	□	□	□	□
communicating via e-mail/phone	□	□	□	□	□	□	□	□	□

15. Please rate your satisfaction with this university on each of the aspects of campus life listed below:

	very satisfied	satisfied	neutral	dissatisfied
amount of contact with faculty	□	□	□	□
opportunities for community service	□	□	□	□
academic and social support	□	□	□	□
overall sense of community among students	□	□	□	□
overall university experience	□	□	□	□

Thank you!!

Appendix C

Academic/work Self-Concept Scale – Tennessee Self- Concept Scale
(Fitts & Warren, 1996)

Instructions:

On this page there are some statements that will let you say how you feel about yourself. There is no right or wrong answer, so just pick the answer that says how you feel. Read each sentence and decide how well it fits you. Then circle lone of the responses that shows your answer using this scale:

1=Always False 2= mostly false   3= Partly false and partly true   4= mostly true   5 = always true

1. Math is hard for me   1 2 3 4 5

2. I am not as smart as the people
   around me   1 2 3 4 5

3. It is easy for me to learn new things   1 2 3 4 5

4. I do well at math   1 2 3 4 5

5. Other people think I am smart   1 2 3 4 5

6. I am not good at the work I do   1 2 3 4 5

7. I'll never be as smart as other people   1 2 3 4 5

8. I like to work with numbers.   1 2 3 4 5

9. I can't read very well.   1 2 3 4 5

10. I do as well as I want to at almost any job.   1 2 3 4 5

11. I do not know how to work well.   1 2 3 4 5

12. It's hard for me to understand what I read.   1 2 3 4 5
Are you in the mentoring program? _____yes   _____no

Are you male_____ or female_____?

Are you in:
The Faculty of Arts and Social Sciences_____
The Faculty of Science_____
Other_____

Appendix D

Academic Self Efficacy Questionnaire

Student Name: _____   Student Number:_____

ASE Questionnaire

Read this page carefully.
Do not turn over the page until you are instructed to do so.

The questions in this booklet ask about your perceptions of your ability to perform various academic tasks, such as reading, note taking and memorization. For each of the tasks you are asked to make two judgements about your ability to perform at varying levels of difficulty.

(1) Could you perform the task at the level of difficulty described if you wanted to? If your answer to this question is yes, then you enter a "Y" in the CAN DO column. If it is no, enter an "N" in that column.

(2) How confident are you about your ability to perform at that task level? If in the next few days you were given a test of your ability to perform the task, how confident are you that you could perform at the level described?

Indicate your degree of confidence by entering 0 to 10 in the CONFIDENCE column, based on the following confidence scale.

Level of Confidence

0 1	2	3	4	5	6	7	8	9	10
Totally Unconfident				Moderately Confident					Totally Confident

SAMPLE ITEMS

Now consider some sample items. The first asks about assigned reading in the main text for this course. For this item we have filled in a hypothetical student's answers for you to illustrate the use of the scale.

READINGS ASSIGNED PAGES IN TEXTBOOK

	CAN DO	CONFIDENCE
1. Read at least ½ of assigned material	Y	10
2. Read all of assigned material once	Y	10
3. Read all of assigned material twice	Y	7
4. Read all of assigned material five times	N	0

Note that this student is sure s/he can read all the material at least once, but is less confident s/he can read it twice (7 vs. 10). S/he does not think s/he could read it five times (no time? boredom?).

Now answer the next item on your own.

LIFTING – ability to lift weights from a floor

	CAN DO	CONFIDENCE
1. Lift a 5 lb box		
2. Lift a 20 lb box		
3. Lift an 80 lb box		
4. Lift a 300 lb box		

REMEMBER THE COURSE IN WHICH THIS QUESTIONNAIRE IS BEING ADMINISTERED IS THE ONE YOU SHOULD THINK OF WHEN ANSWERING THE FOLLOWING QUESTIONS.

Level of Confidence

0	1	2	3	4	5	6	7	8	9	10
Totally					Moderately					Totally
Unconfident					Confident					Confident

CLASS CONCENTRATION

The proportion of class periods for which you feel you are able to concentrate and stay fully focused on the materials being presented.

	CAN DO	CONFIDENCE
1. Concentrate for at least 50% of a class period	_____	_____
2. Concentrate for at least 70% of a class period	_____	_____
3. Concentrate for at least 90% of a class period	_____	_____
4. Concentrate for 100% of a class period	_____	_____

MEMORIZATION

The proportion of facts and concepts covered in the course that you feel you are able to memorize and recall on demand (e.g., exam time, in response to questions).

	CAN DO	CONFIDENCE
1. Memorize 60% of the facts and concepts	_____	_____
2. Memorize 70% of the facts and concepts	_____	_____
3. Memorize 80% of the facts and concepts	_____	_____
4. Memorize 90% of the facts and concepts	_____	_____
5. Memorize 100% of the facts and concepts	_____	_____

Level of Confidence

0	1	2	3	4	5	6	7	8	9	10

Totally   Moderately   Totally
Unconfident   Confident   Confident

EXAM CONCENTRATION

The proportion of time during exams for which you feel you are able to focus exclusively on understanding and answering questions and avoid breaks in your concentration.

	CAN DO	CONFIDENCE
1. Stay focused on the exam for 50% of the time	_____	_____
2. Stay focused on the exam for 70% of the time	_____	_____
3. Stay focused on the exam for 90% of the time	_____	_____
4. Stay focused on the exam for 100% of the time	_____	_____

UNDERSTANDING

The proportion of facts, concepts and arguments covered in the course that you feel you understand as they are presented in lectures, tutorials or course materials (e.g., textbooks, assigned articles).

	CAN DO	CONFIDENCE
1. Understand 50% of concepts as presented	_____	_____
2. Understand 70% of concepts as presented	_____	_____
3. Understand 90% of concepts as presented	_____	_____
4. Understand 100% of concepts as presented	_____	_____

Level of Confidence

0	1	2	3	4	5	6	7	8	9	10

Totally   Moderately   Totally
Unconfident   Confident   Confident

EXPLAINING CONCEPTS

The proportion of facts, concepts and arguments covered in the course (i.e., in lectures, tutorials or course materials) that you feel you are able to explain clearly to others in your own words.

	CAN DO	CONFIDENCE
1. Explain 40% of the concepts, etc. in my own words	_____	_____
2. Explain 60% of the concepts, etc. in my own words	_____	_____
3. Explain 80% of the concepts, etc. in my own words	_____	_____
4. Explain 100% of the concepts, etc. in my own words	_____	_____

DISCRIMINATING BETWEEN CONCEPTS

The degree to which you feel you are able to discriminate between the more important and less important facts, concepts and arguments covered in the course (i.e., in lectures, tutorials and course materials).

	CAN DO	CONFIDENCE
1. Able to identify the most important concepts, points, etc. 50% of the time	_____	_____
2. Able to identify the most important concepts, points, etc. 70% of the time	_____	_____
3. Able to identify the most important concepts, points, etc. 90% of the time	_____	_____
4. Able to identify the most important concepts, points, etc. 100% of the time	_____	_____

Level of Confidence

0	1	2	3	4	5	6	7	8	9	10

Totally   Moderately   Totally
Unconfident   Confident   Confident

NOTE-TAKING

The proportion of the time that you feel you are able to make understandable course notes which emphasize, clarify and relate key facts, concepts and arguments as they are presented in lectures, tutorials or course materials.

	CAN DO	CONFIDENCE
1. Make understandable notes for 50% of the material	_____	_____
2. Make understandable notes for 70% of the material	_____	_____
3. Make understandable notes for 90% of the material	_____	_____
4. Make understandable notes for 100% of the material	_____	_____

GRADES

The degree to which you feel you have the necessary skills to get various grades in this course, assuming that you try.

	CAN DO	CONFIDENCE
1. Get an A in this course	_____	_____
2. Get at least a high B in this course	_____	_____
3. Get at least a low B in this course	_____	_____
4. Get at least a C in this course	_____	_____

Appendix E

Principles of Adult Mentoring

Name: _____   Student Number: _____

TOOL 4 – B MENTORING SCALE

PRINCIPLES OF ADULT MENTORING SCALE[3]

From Norman H. Cohen's Principles of Adult Mentoring Scale: Postsecondary Education. Adaptation to the organizational context by Marie-Helene Douville c.o., Universite du Quebec a Montreal, May 1998.

If you already have experienced the role of a mentor, your answers should reflect your past experience. However, if you only limited experience as a mentor or none, your answers will translate the way in which you believe you would react. You must answer all the questions or statements (55) according to the choices that best reflect your present (or expected) behaviour.

	1 Never	2 Rarely	3 Some-times	4 Often	5 Always
1. I encourage the mentee to express his real feelings, whether positive or negative, about his work experience.	□	□	□	□	□
2. When he is discouraged by certain problems, I discuss with the mentee, using examples, the importance of setting realistic expectations that allow for both successes and failures.	□	□	□	□	□
3. During each meeting, I get a detailed account of the mentee's progress at work.	□	□	□	□	□
4. I refer the mentee to other people in the organization, so that he gets the information he needs.	□	□	□	□	□
5. I try to provide verbal support when the mentee seems to be emotionally upset.	□	□	□	□	□
6. I suggest that the mentee establish a schedule of regular meetings.	□	□	□	□	□

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[3] Diane Doyon, INTERDEPARTMENTAL MENTORING PROGRAM FOR MIDDLE MANAGERS, Module 2: Initiating a Mentoring Relationship, Middle Managers Network and Human Resources Development Canada, Quebec

	1 Never	2 Rarely	3 Some- times	4 Often	5 Always
7. I focus on visual contact during my discussions with the mentee.	☐	☐	☐	☐	☐
8. When the mentee informs men of serious emotional or psychological problems, I suggest that he consult a professional.	☐	☐	☐	☐	☐
9. I explore in detail the mentee's reasons for his career choice.	☐	☐	☐	☐	☐
10. I encourage the mentee to give me information about his educational background, his successes and the problems he has encountered.	☐	☐	☐	☐	☐
11. I get a detailed account of the strategies used by the mentee and, if necessary, I offer suggestions or I refer him so that he can get assistance in improving his performance at work.	☐	☐	☐	☐	☐
12. I emphasize to the mentee the importance of being aware of his main motivation, in order to counsel him effectively.	☐	☐	☐	☐	☐
13. When I plan meeting with the mentee, I make sure that we are not interrupted by telephones or visitors.	☐	☐	☐	☐	☐
14. If the mentee does not seem adequately informed, I stress to him the importance of exploring different career options.	☐	☐	☐	☐	☐
15. I encourage the mentee to explore less traditional options as well as new alternatives so that he can discuss new interests.	☐	☐	☐	☐	☐
16. I point out to the mentee the inconsistency of his thinking when he tries to rationalize a failure, especially if I feel that my intervention may promote the development of new strategies.	☐	☐	☐	☐	☐
17. I try to instil in the mentee a critical attitude toward the consequences of his professional choice on his life plans.	☐	☐	☐	☐	☐
18. I explain to the mentee the importance of discussing problems that he encounters, even if he has made up his mind not to solve them immediately.	☐	☐	☐	☐	☐
19. I offer solutions to the mentee's specific needs based on the information disclosed.	☐	☐	☐	☐	☐

	1 Never	2 Rarely	3 Some- times	4 Often	5 Always
20. At a subsequent meeting, I follow up on the mentee's previous decisions by questioning him on his progress.	☐	☐	☐	☐	☐
21. I tell the mentee what I think of his carer ideas when I see that they are based on inadequate or incomplete information.	☐	☐	☐	☐	☐
22. I guide the mentee as he explores his career commitment, suggesting other alternatives to consider.	☐	☐	☐	☐	☐
23. I describe to the mentee the negative things I see in his non-verbal behaviour, such as visual contact, facial expression, tone of voice etc.	☐	☐	☐	☐	☐
24. To help the mentee achieve his objective, I discuss with him the reasons that usually surround his career choice. I help him identify concrete development objectives (training, participation in committees, task forces, conferences, etc.)	☐	☐	☐	☐	☐
25. I act somewhat as a guide in my discussions with the mentee, so that he can explore realistic options to achieve his career objective.	☐	☐	☐	☐	☐
26. I encourage the mentee to review his strategies in order to allow him to adapt to changes in the pursuit of his objective.	☐	☐	☐	☐	☐
27. I question the mentee in order to assess the importance he gives to his values and beliefs and I verify whether they are based on adequate personal experience.	☐	☐	☐	☐	☐
28. I discuss my own work experience in order to help the mentee explore different carer options.	☐	☐	☐	☐	☐
29. I share with the mentee certain experiences where I encountered personal difficulties during my professional development, if I feel that this can help him find solutions.	☐	☐	☐	☐	☐
30. I get the mentee to discuss new skills that he will need in order to achieve his objectives.	☐	☐	☐	☐	☐
31. I emphasize, using personal examples, that success is built on certain investments, when the mentee appears to be unrealistic about the amount of energy and discipline he needs to devote to his work.	☐	☐	☐	☐	☐

	1 Never	2 Rarely	3 Some- times	4 Often	5 Always
32. I express my confidence in the mentee's ability to succeed if he continues to pursue his objective.	☐	☐	☐	☐	☐
33. I have the ability to confront the mentee directly regarding the negative consequences of his continuing reluctance to solve serious problems.	☐	☐	☐	☐	☐
34. I encourage the mentee to explain his vision so that we can explore his ambitions, ideas, feelings and plans.	☐	☐	☐	☐	☐
35. I initiate discussions that are intended to instil in the mentee a positive vision of his skills and his ability to function independently.	☐	☐	☐	☐	☐
36. I use my personal and professional experience as my references in order to encourage the mentee to get involved in activities that may seem boring to him but may, just the same, provide him with valuable experience.	☐	☐	☐	☐	☐
37. I offer constructive criticism when I see that the mentee is avoiding problems and decisions and thereby reducing his opportunities for learning and growing.	☐	☐	☐	☐	☐
38. I encourage the mentee to make well-founded personal choices when planning his career.	☐	☐	☐	☐	☐
39. With a mentee who lacks self-confidence, I encourage him to draw on his own life experience to find a strategy that he can use in his environment.	☐	☐	☐	☐	☐
40. With the use of facts, I help the mentee define the steps in strategies that allow him to achieve his objectives.	☐	☐	☐	☐	☐
41. I share my vision and my feelings with the mentee when the situation warrants.	☐	☐	☐	☐	☐
42. I listen to the mentee's criticisms of organizational policies, job requirements, regulations, or relations with his colleagues without giving immediate justifications.	☐	☐	☐	☐	☐
43. I comment on inappropriate work behaviour, if I feel that the mentee is prepared to make a change or would benefit from one.	☐	☐	☐	☐	☐
44. I inform the mentee that he can also express negative emotions such as anxiety, doubt, fear, or anger during our meetings.	☐	☐	☐	☐	☐

	1 Never	2 Rarely	3 Some- times	4 Often	5 Always
45. I express my confidence in the mentee's abilities, especially when he experiences difficulties carrying out responsibilities with which he has been entrusted due to outside pressures (family, work, interpersonal relations).	☐	☐	☐	☐	☐
46. I question the mentee's decisions and actions concerning problems related to the organization, when the solutions envisaged seem inappropriate.	☐	☐	☐	☐	☐
47. I discuss with the mentee his confidence in his abilities to succeed both as a member of the organization and as a learning adult.	☐	☐	☐	☐	☐
48. I offer well-measured criticism in order to help the mentee understand the link between his defeatist behaviour and his inability to solve a problem.	☐	☐	☐	☐	☐
49. I formulate open-ended questions, that warrant more than a yes or no answer, so that the mentee can express his vision of his plans and projects if he wants to.	☐	☐	☐	☐	☐
50. I explore the extent of the mentee's investment (desire to invest time and energy) as a learning adult in the pursuit of his career objectives.	☐	☐	☐	☐	☐
51. I try to choose moments of confrontation (comments and questions) based on my perception of the mentee's receptiveness (often in relation to the phase of the mentoring relationship), in order to have productive discussions.	☐	☐	☐	☐	☐
52. I discuss my mentor role openly with the mentee so that his expectations are appropriate and realistic.	☐	☐	☐	☐	☐
53. I try to clarify my understanding of the mentee's problems and my perception of his feelings, by asking him if my view of things is accurate.	☐	☐	☐	☐	☐
54. I ask the mentee to reflect on the resources available to him (e.g., in his family, his community) in order to help him organize his life so that he can pursue his career objective.	☐	☐	☐	☐	☐
55. If a mentee seems unsure about the purpose of our meetings, I explain that my main goal is to help him formulate his own decisions and his personal and professional objectives.	☐	☐	☐	☐	☐

Score Sheet:

*Enter the points that correspond to the answers given to the question numbers indicated.

Factor #1: Mentoring relationship with relationship emphasis.

Items: 1   5   7   12   13   23   42   44   47   53
Points: ___   ___   ___   ___   ___   ___   ___   ___   ___   ___

Total: _____

Factor #2: Mentoring relationship with information emphasis.

Items: 3   4   6   9   10   11   19   24   40   52
Points: ___   ___   ___   ___   ___   ___   ___   ___   ___   ___

Total: _____

Factor #3: Mentoring relationship with facilitative focus.

Items: 15   22   25   34   39   49
Points: ___   ___   ___   ___   ___   ___

Total: _____

Factor #4: Mentoring relationship with confrontive focus.

Items: 8   16   18   21   27   31   33   37   43   46   48   51
Points: ___   ___   ___   ___   ___   ___   ___   ___   ___   ___   ___   ___

Total: _____

Factor #5: Mentoring relationship with mentor model.

Items: 2   28   29   32   36   41
Points: ___   ___   ___   ___   ___   ___

Total: _____

Factor #6: Mentoring relationship with mentee vision.

Items: 14   17   20   26   30   35   38   45   50   54   55
Points: ___   ___   ___   ___   ___   ___   ___   ___   ___   ___   ___

Total: _____

Score: _____

Results of Scale:

Overall Score:

The skills associated with the mentor role are reflected in a behaviour that is:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
55-190	191-205	206-219	220-234	235-275

It is a behaviour with:

Relationship emphasis:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
10-35	36-38	9-41	42-44	45-50

Information emphasis:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
10-33	34-36	37-39	40-42	43-50

Facilitative focus:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
6-18	19-20	21-22	23-24	25-30

Confrontive focus:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
12-39	40-43	44-46	47-50	51-60

Mentor model:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
6-18	19-21	22-23	24-25	26-30

Mentee vision:

Inadequate	somewhat adequate	adequate	very adequate	extremely adequate
11-37	38-41	42-44	45-47	48-50

Appendix E2

Principles of Adult Mentoring

Frequencies

Factor #1: Mentoring relationship with relationship emphasis.

		Frequency	Percent
Valid	Inadequate	5	15.2
	Somewhat Adequate	4	12.1
	Adequate	6	18.2
	Very Adequate	7	21.2
	Extremely Adequate	3	9.1
	Total	25	75.8
Missing	System	8	24.2
Total		33	100.0

Factor #2: Mentoring relationship with information emphasis.

		Frequency	Percent
Valid	Inadequate	1	3.0
	Somewhat Adequate	2	6.1
	Adequate	11	33.3
	Very Adequate	4	12.1
	Extremely Adequate	6	18.2
	Total	24	72.7
Missing	System	9	27.3
Total		33	100.0

Factor #3: Mentoring relationship with facilitative focus.

		Frequency	Percent
Valid	Inadequate	3	9.1
	Somewhat Adequate	1	3.0
	Adequate	4	12.1
	Very Adequate	6	18.2
	Extremely Adequate	11	33.3
	Total	25	75.8
Missing	System	8	24.2
Total		33	100.0

Factor #4: Mentoring relationship with confrontive focus.

		Frequency	Percent
Valid	Inadequate	5	15.2
	Somewhat Adequate	6	15.2
	Adequate	7	21.2
	Very Adequate	3	9.1
	Extremely Adequate	5	15.2
	Total	25	75.8
Missing	System	8	24.2
Total		33	100.0

Factor #5: Mentoring relationship with mentor model.

		Frequency	Percent
Valid	Somewhat Adequate	2	6.1
	Adequate	4	12.1
	Very Adequate	3	9.1
	Extremely Adequate	16	48.5
	Total	25	75.8
Missing	System	8	24.2
Total		33	100.0

Factor #6: Mentoring relationship with mentee vision.

		Frequency	Percent
Valid	Inadequate	2	6.1
	Somewhat Adequate	4	12.1
	Adequate	9	27.3
	Very Adequate	3	9.1
	Extremely Adequate	3	9.1
	Total	21	63.6
Missing	System	12	36.4
Total		33	100.0

Total Score:

		Frequency	Percent
Valid	Inadequate	5	9.1
	Somewhat Adequate	5	15.2
	Adequate	6	18.2
	Very Adequate	5	15.2
	Extremely Adequate	6	18.2
	Total	25	75.8
Missing	System	8	24.2
Total		33	100.0

Appendix E3

T.I.M.E. Mentorship Program

Mentor Assessment Survey

Directions:

Circle one of the following choices for each of the following statements. Select the response which is most representative of your mentoring relationship.

1=Never	2=Infrequently	3=Sometimes 5=Always	4=Frequently

1. My mentor encourages me to express my honest feelings (positive and negative) about my academic and social experiences as an adult learner in college.

    1   2   3   4   5

2. My mentor asks me for detailed information about my academic progress.

    1   2   3   4   5

3. My mentor refers me to other staff members and departments to obtain information I need about academic and career paths.

    1   2   3   4   5

4. My mentor attempts to be verbally supportive when I am emotionally upset.

    1   2   3   4   5

5. My mentor suggests to me that we establish a regular schedule of meeting times.

    1   2   3   4   5

6. My mentor asks me to explain (in some detail) the reasons for my college plans and career choices.

    1   2   3   4   5

7. My mentor encourages me to provide a good deal of background information about my academic preparation, success, and problems in college.

1	2	3	4	5

8. My mentor inquires in some depth about my study strategies and (if necessary) offers practical suggestions and/or refers me for help to improve my academic performance.

1	2	3	4	5

9. My mentor explains to me that he/she really wants to know what I think about issues (such as balancing college commitments and outside responsibilities) so that he/she can offer advice specific to me.

1	2	3	4	5

10. My mentor arranges meetings (when possible) with me at times when he/she will not be interrupted very much by telephone calls or other people.

1	2	3	4	5

11. My mentor offers recommendations to me about my personal academic learning needs based on specific information provided by me during our meetings.

1	2	3	4	5

12. My mentor attempts to guide me in exploring my own personal commitment to career or academic interests by posing alternative views for me to consider.

1	2	3	4	5

13. My mentor verbally communicates his/her concerns to me when my negative attitudes and emotions are expressed to him/her though such nonverbal behaviors as eye contact, facial expression, and voice tone.

1	2	3	4	5

14. My mentor discusses my general reasons for attending college and then focuses on helping me identify concrete educational objectives, degrees, curricula and courses.

1	2	3	4	5

15. My mentor provides reasonable guidance in our discussions so that I will explore realistic options and attainable academic and career objectives.

1	2	3	4	5

16. My mentor discusses his/her own work-related experiences as a way of helping me think about and carefully examine my career options.

1   2   3   4   5

17. My mentor shares with me personal examples of difficulties he/she has overcome in his/her own individual and professional growth if he/she believes these experiences might provide insights for me.

1   2   3   4   5

18. My mentor expresses his/her personal confidence in my ability to succeed if I persevere in the pursuit of my academic goals.

1   2   3   4   5

19. My mentor encourages me to use him/her as a sounding board to explore my hopes, ideas, feelings, and plans.

1   2   3   4   5

20. My mentor uses his/her own experiences to explain how college courses or activities I believe will be boring, too demanding, or not relevant could be valuable learning experience for me.

1   2   3   4   5

21. My mentor explores with me, when I express a lack of confidence in myself, the ways in which my own life experience might be a valuable resource to help me devise strategies to succeed within the college environment.

1   2   3   4   5

22. My mentor assists me in using facts to carefully map out realistic step by step strategies to achieve my academic and career goals.

1   2   3   4   5

23. My mentor shares his/her own views and feelings when they are relevant to the college-related situation and issues we are discussing.

1   2   3   4   5

24. My mentor listens to criticism from me about college policies, regulations, requirements, and even his/her colleagues without immediately attempting to offer justifications.

1   2   3   4   5

25. My mentor informs me that I can discuss 'negative' emotions such as anxiety, self-doubt, and anger in our meetings.

1   2   3   4   5

26. My mentor discusses the positive and negative feelings I have about my abilities to succeed as an adult
learner.

1   2

                              3   4   5

27. My mentor asks probing questions that require more than a yes or no answer, so that I will explain my views regarding my academic progress and plans.

          1   2   3   4   5

28. My mentor tries to clarify the problems I explain to him/her by verbally expressing his/her understanding of my feelings and then asking me if his/her views are accurate.

          1   2   3   4   5

Appendix E4

Frequencies

Q1 – My mentor encourages me to express my honest feelings about my academic and social experiences s an adult learner in college.

	Frequency	Percent
4	6	37.5
5	10	62.5
Total	16	100

Q2 – My mentor asks me for detailed information about my academic progress.

	Frequency	Percent
3	1	6.3
4	5	31.3
5	10	62.5
Total	16	100

Q3 – My mentor refers me to other staff members and departments to obtain information I need about academic and career plans.

	Frequency	Percent
2	1	6.3
4	4	25.0
5	11	68.8
Total	16	100

Q4 – My mentor attempts to be verbally supportive when I am emotionally upset.

	Frequency	Percent
4	6	37.5
5	10	62.5
Total	16	100

Q5 – My mentor suggests to me that we establish a regular schedule of meeting times.

	Frequency	Percent
1	1	6.3
3	1	6.3
4	6	37.5
5	8	50.0
Total	16	100

Q6 – My mentor asks me to explain the reasons for my college plans and career choices.

	Frequency	Percent
2	1	6.3
3	5	31.3
4	5	31.3
5	5	31.3
Total	16	100

Q7 – My mentor encourages me to provide a good deal of background information about my academic preparation, success, and problems in college.

	Frequency	Percent
3	5	31.3
4	5	31.3
5	6	37.5
Total	16	100

Q8 – My mentor inquires in some depth about my study strategies and offers practical suggestions and/or refers me for help to improve my academic performance.

	Frequency	Percent
4	5	31.3
5	11	68.8
Total	16	100

Q9 – My mentor explains to me that he/she really wants to know what I think about issues so that he/she can offer advice specific to me.

	Frequency	Percent
2	1	6.3
3	5	31.3

4	5	31.3
5	5	31.3
Total	16	100

Q10 – My mentor arranges meetings with me at times when he/she will not be interrupted very much by telephone calls or other people.

	Frequency	Percent
4	1	6.3
5	15	93.8
Total	16	100

Q11 – My mentor offers recommendations to me about my personal academic learning needs based on specific information provided by me during our meetings.

	Frequency	Percent
2	1	6.3
3	3	18.8
4	3	18.8
5	9	56.3
Total	16	100

Q12 – My mentor attempts to guide me in exploring my own personal commitment to career or academic interests by posting alternative views for me to consider.

	Frequency	Percent
3	3	18.8
4	5	31.3
5	8	50.0
Total	16	100

Q13 – My mentor verbally communicates his/her concerns to me when my negative attitudes and emotions are expressed to him/her through such nonverbal behaviours as eye contact, facial expression and voice tone.

	Frequency	Percent
3	4	25.0
4	6	37.5
5	6	37.5
Total	16	100

Q14 – My mentor discusses my general reasons for attending college and then focuses on helping me identify concrete educational objectives, degrees, curricula and courses.

	Frequency	Percent
3	3	18.8
4	5	31.3
5	8	50.0
Total	16	100

Q15 – My mentor provides reasonable guidance in our discussions so that I will explore realistic options and attainable academic and career objectives.

	Frequency	Percent
4	6	37.5
5	10	62.5
Total	16	100

Q16 – My mentor discusses his/her own work-related experiences as a way of helping me think about and carefully examine my career options.

	Frequency	Percent
3	1	6.3
4	7	43.8
5	8	50.0
Total	16	100

Q17 – My mentor shares with me personal examples of difficulties he/she has overcome in his/her own individual and professional growth if he/she believes these experiences might provide insights for me.

	Frequency	Percent
3	1	6.3
4	5	31.3
5	10	62.5
Total	16	100

Q18 – My mentor expresses his/her personal confidence in my ability to succeed if I persevere in the pursuit of my academic goals.

	Frequency	Percent
3	1	6.3
4	4	25.0
5	11	68.8
Total	16	100

Q19 – My mentor encourages me to use him/her as a sounding board to explore my hopes, ideas, feelings, and plans.

	Frequency	Percent
2	3	18.8
3	2	12.5
4	5	31.3
5	6	37.5
Total	16	100

Q20 – My mentor uses his/her own experiences to explain how college courses or activities I believe will be boring, too demanding, or not relevant could be valuable learning experience for me.

	Frequency	Percent
2	1	6.3
3	4	25.0
4	4	25.0
5	7	43.8
Total	16	100

Q21 – My mentor explores with me, when I express a alack of confidence in myself, the ways in which my own life experience might be a valuable resource to help me devise strategies to succeed within the college environment.

	Frequency	Percent
3	3	18.8
4	6	37.5
5	7	43.8
Total	16	100

Q22 – My mentor assists me in using facts to carefully map out realistic step by step strategies to achieve my academic and career goals.

	Frequency	Percent
3	3	18.8
4	4	25.0
5	9	56.3
Total	16	100

Q23 – My mentor shares his/her own views and feelings when they are relevant to the college-related situation and issues we are discussing.

	Frequency	Percent
4	6	37.5
5	10	62.5
Total	16	100

Q24 – My mentor listens to criticism from me about college policies, regulations, requirements and even his/her colleagues without immediately attempting to offer justification.

	Frequency	Percent
4	7	43.8
5	9	56.3
Total	16	100

Q25 – My mentor informs me that I can discuss 'negative' emotions such as anxiety, self-doubt, and anger in our meetings.

	Frequency	Percent
1	1	6.3
3	2	12.5
4	6	37.5
5	7	43.8
Total	16	100

Q26 – My mentor discusses the positive and negative feelings I have about my abilities to succeed as an adult learner.

	Frequency	Percent
2	2	12.5
3	3	18.8
4	6	37.5
5	5	31.3
Total	16	100

Q27 – My mentor asks probing questions that require more than a yes or no answer, so that I will explain my views regarding my academic progress and plans.

	Frequency	Percent
3	4	25.0
4	4	25.0
5	8	50.0
Total	16	100

Q28 – My mentor tries to clarify the problems I explain to him/her by verbally expressing his/her understanding of my feelings and then asking me if his/her views are accurate.

	Frequency	Percent
3	1	6.3
4	7	43.8
5	8	50.0
Total	16	100

Appendix F

T.I.M.E. Mentor Assessment Survey

1. Are you male_____ or female_____?

2. Circle your age category: 20-25   25-30   30-35   35-40 over 40

3. Identify your area of discipline: Arts and Social Sciences_____
   Science_____
   Other_____Specify_____

To each of the following questions rate your response on a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree.

1. The mentorship program was personally beneficial.   1 2 3 4 5

2. The program was beneficial for my mentee.   1 2 3 4 5

3. The coordinator was accessible for consultation.   1 2 3 4 5

4. The program proved to be effective in preparation for
   a teaching career.   1 2 3 4 5

5. My mentee and I were a compatible match.   1 2 3 4 5

6. The program should span the entire school year.   1 2 3 4 5

7. The meetings should be maintained on (1) a consistent
   weekly basis   1 2 3 4 5
   (2) face to face   1 2 3 4 5

8. I contributed significantly to the academic efficacy of
   my mentee   1 2 3 4 5

9. The sessions with my mentee were productive   1 2 3 4 5

10. My mentee followed through on goals   1 2 3 4 5

11. My mentee participated fully in the program   1 2 3 4 5

12. A sense of mutual trust was established   1 2 3 4 5

13. I was an effective mentor   1 2 3 4 5

14. I would recommend this program to future education students   1 2 3 4 5

Suggestions and Comments:

Appendix G

T.I.M.E. Mentorship Program
Mentor Evaluation Form

Date:_____

Please evaluate your Mentor on the following items using the provided scale to indicate how well the Mentor performed over the course of this first semester. This is anonymous and used for research purposes.

(1) Strongly Disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly agree

1. *Comes prepared for mentoring meetings*   1 2 3 4 5

2. *Prompt for mentoring meetings*   1 2 3 4 5

3. *Manner is courteous and professional*   1 2 3 4 5

4. *Communicates effectively*   1 2 3 4 5

5. *Suggests ideas for discussion*   1 2 3 4 5

6. *Helps plan strategies for short term goals*   1 2 3 4 5

7. *Helps plan strategies for long term goals*   1 2 3 4 5

8. *Guides you toward academic success*   1 2 3 4 5

9. *Listens effectively*   1 2 3 4 5

10. *Contacts you at appropriate times for meeting*   1 2 3 4 5

11. *Your sessions are always face-to-face*   1 2 3 4 5

12. *Has made himself/ herself available by phone or*   *1 2 3 4 5*
email regarding any concerns

13. *Shows a genuine concern to help you*   *1 2 3 4 5*
in becoming a successful student

14. *Has provided you with alternative*   *1 2 3 4 5*
choices to approach a problem

15. *Helps you self-evaluate your progress*   *1 2 3 4 5*

16. *Provides positive support and encouragement*   *1 2 3 4 5*

Overall:

Please write any additional comment on the back of this form. Thank you. Prof. Salinitri

Appendix H

T.I.M.E. Mentorship Program

Mentor Evaluation Form

Directions:

Circle one of the following choices for each of the following statements. Select the response which is most representative of your mentoring relationship.

1=Never   2=Infrequently   3=Sometimes   4=Frequently   5=Always

---

1. My mentor encourages me to express my honest feelings (positive and negative) about my academic and social experiences as an adult learner in college.

    1   2   3   4   5

2. My mentor asks me for detailed information about my academic progress.

    1   2   3   4   5

3. My mentor refers me to other staff members and departments to obtain information I need about academic and career paths.

    1   2   3   4   5

4. My mentor attempts to be verbally supportive when I am emotionally upset.

    1   2   3   4   5

5. My mentor suggests to me that we establish a regular schedule of meeting times.

    1   2   3   4   5

6. My mentor asks me to explain (in some detail) the reasons for my college plans and career choices.

    1   2   3   4   5

7. My mentor encourages me to provide a good deal of background information about my academic preparation, success, and problems in college.

    1   2   3   4   5

8. My mentor inquires in some depth about my study strategies and (if necessary) offers practical suggestions and/or refers me for help to improve my academic performance.

1   2   3   4   5

9. My mentor explains to me that he/she really wants to know what I think about issues (such as balancing college commitments and outside responsibilities) so that he/she can offer advice specific to me.

1   2   3   4   5

10. My mentor arranges meetings (when possible) with me at times when he/she will not be interrupted very much by telephone calls or other people.

1   2   3   4   5

11. My mentor offers recommendations to me about my personal academic learning needs based on specific information provided by me during our meetings.

1   2   3   4   5

12. My mentor attempts to guide me in exploring my own personal commitment to career or academic interests by posing alternative views for me to consider.

1   2   3   4   5

13. My mentor verbally communicates his/her concerns to me when my negative attitudes and emotions are expressed to him/her though such nonverbal behaviors as eye contact, facial expression, and voice tone.

1   2   3   4   5

14. My mentor discusses my general reasons for attending college and then focuses on helping me identify concrete educational objectives, degrees, curricula and courses.

1   2   3   4   5

15. My mentor provides reasonable guidance in our discussions so that I will explore realistic options and attainable academic and career objectives.

1   2   3   4   5

16. My mentor discusses his/her own work-related experiences as a way of helping me think about and carefully examine my career options.

1   2   3   4   5

17. My mentor shares with me personal examples of difficulties he/she has overcome in his/her own individual and professional growth if he/she believes these experiences might provide insights for me.

1   2   3   4   5

18. My mentor expresses his/her personal confidence in my ability to succeed if I persevere in the pursuit of my academic goals.

              1   2   3   4   5

19. My mentor encourages me to use him/her as a sounding board to explore my hopes, ideas, feelings, and plans.

              1   2   3   4   5

20. My mentor uses his/her own experiences to explain how college courses or activities I believe will be boring, too demanding, or not relevant could be valuable learning experience for me.

              1   2   3   4   5

21. My mentor explores with me, when I express a lack of confidence in myself, the ways in which my own life experience might be a valuable resource to help me devise strategies to succeed within the college environment.

              1   2   3   4   5

22. My mentor assists me in using facts to carefully map out realistic step by step strategies to achieve my academic and career goals.

              1   2   3   4   5

23. My mentor shares his/her own views and feelings when they are relevant to the college-related situation and issues we are discussing.

              1   2   3   4   5

24. My mentor listens to criticism from me about college policies, regulations, requirements, and even his/her colleagues without immediately attempting to offer justifications.

              1   2   3   4   5

25. My mentor informs me that I can discuss 'negative' emotions such as anxiety, self-doubt, and anger in our meetings.

              1   2   3   4   5

26. My mentor discusses the positive and negative feelings I have about my abilities to succeed as an adult learner.

              1   2   3   4   5

Appendix I

T.I.M.E.

THE TEACHERS' INTERFACULTY MENTORSHIP EFFORTS PROJECT

The Effects of Interfaculty Mentorship
ON FIRST YEAR STUDENTS

COURSE REQUIREMENTS – 80 –303
INTERMEDIATE/SENIOR MENTORS

Mentorship Coordinator/Instructor

Prof. Geri Salinitri, Faculty of Education, University of Windsor

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Advisors:

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Effective advisory systems support the development and success of individuals as
learners by understanding and working with the specific social, emotional,
intellectual, and physical dimensions and learning requirements.
The Learner's Edge, Toronto District School Board, 2001

Purpose:

This is a research study examining the effects of Interfaculty Mentorship on first year students in
the Faculty of Arts and Social Sciences and the Faculty of Science. Using the expectations of the
Ministry of Education document, 'Choices into Action '(1999), a pilot program will be developed to
train teacher candidates as mentors for students in their first year of university. This project is
intended to complement existing retention programs offered through the Faculty of Arts and Social
Sciences and the Faculty of Science. The interfaculty approach will build collaboration and
strengthen the goals of retention by the independent faculties.

Background:

>   *The future now belongs to societies that organize themselves for learning. What we know and can do holds the key to economic progress, just as command of natural resources once did.... More than ever before, nations that want high incomes and full employment must develop policies that emphasize the acquisition of knowledge and skills by everyone, not just a select few. The prize will go to those countries that are organized as national learning systems and where all institutions are organized to learn and to act on what they learn. -- From Thinking for a Living; Education & the Wealth of Nations, 1996*

>   *Universal recognition of higher education as a prerequisite to success in the knowledge society and the proliferation of new kinds of institutions and technologies means that the increased demand for a university education is matched by greatly enhanced competition among institutions for students. We lag behind some of our competitors on scales measuring the extent to which the campus environment is seen as supportive, responsive and caring, all variables directly under our control.--- from Dr. Ross Paul's State of the University Address ,2001*

Dr. Paul speaks to the question **"Do we provide an environment most conducive to student learning and personal development?"** by acknowledging the innovative programmes of Student Developmental Services. He notes the need for better "academic advising and institutional research which help us improve student retention and better inform the critical debate about entrance stands and requirements'". Citing an article by William Massey, Dr Paul remarks on the descriptors for successful Universities as those considered either a. Platinum Card (highly esteemed research Universities) or b. Entrepreneurial Universities that cater to student needs. A successful mentorship program would strengthen the University of Windsor on the latter category.

This research project is an innovative approach to enhancing an interfaculty commitment to first year students using mentorship and the Ministry of Education's Teacher Advisory Program. Many mentorship programs match senior level students with first year students in a volunteer program. What will be innovative about this program is that it will use trained teacher candidates in the Faculty of Education who will be involved in mentoring through a credit class program where their achievement as mentor is evaluated formally.

As mandated by the Ministry of Education and Training, The Teacher Advisory Program is part of the new Ontario Secondary School Program and Diploma requirements (1999) and therefore will become a key link to transition into postsecondary education. Teacher advisers are responsible for assisting students in making informed choices at key transition points in their education by reviewing their annual education plan, monitoring their academic progress and communicating with their counsellors about their needs. In using this document as the foundation for preparing teacher candidates, the undergraduate students will benefit from the guidance and support of their mentors in seeking academic and career counselling through scheduled opportunities for purposeful interactions.

Program Goals:

- ❑ To help students' develop the knowledge, skills, and attitudes necessary for successful completion of their academic goals

- ❑ To encourage students' development of supportive relationships with other students, faculty, and staff.

- ❑ To advance students' knowledge about campus services

- ❑ To promote students' self confidence

- ❑ To develop students' leadership skills which will enable them to succeed academically

Overall Expectations of Mentors:

- ❑ Serve as role models and direct students to academic and personal campus advisors

- ❑ Help students understand and adjust to the demands of university life

- ❑ Inform students about campus resources

- ❑ Meet with protégés on a weekly basis

- ❑ Help students assess their learning skills and create a plan to improve those skills

- ❑ Inform students about tutoring opportunities

- ❑ Direct them to training workshops to improve their problem-solving skills and techniques

- ❑ Participate in organizing events for students

- ❑ Complete a contact report after each meeting

❏   Meet with their advisor biweekly to submit logs and discuss progress

Specific Expectations:

❏   Keep a journal logging every meeting with the student
❏   Meet with the student weekly at a convenient time in the Faculty of Education building
❏   Contact them by email or by phone
❏   Establish a safe, nurturing environment
❏   Promote confidentiality with ethical guidelines
❏   Apply practical strategies to assist students in enhancing their learning
❏   Motivate students to set realistic education goals – short term and long term
❏   Create timelines
❏   Assist students to evaluate their learning skills and create a plan of action to improve their skills using the appropriate resources offered by the University
❏   Maintain professional ethics throughout the program
❏   Maintain a journal assessing the program providing feedback for the student and the instructor
❏   Prepare a final report in place of a theme project for 80 –303

Evaluation:

50% ongoing through conference with Prof. Salinitri
50% final report to the Integrated Class 80 303. Total value_____ of evaluation for 80 -303

Certificate of completion as a Teacher Advisor with accompanying letter of recommendation.

Appendix J

Mentor Interview Questions

As a mentor tell me:

1. Why did you choose to participate in the mentorship program?

2. How would you assess the program in meeting your initial expectations?

3. Describe the benefits of the program to student teachers.

4. What did you learn from this program?

5. What suggestions would you have in improving the program?

6. How would you describe your relationship with your Mentee?

7. Would you recommend this program to future candidates and/or first year students? Explain.

Appendix J2

Mentee Interview Questions

1. Why did you participate in the mentorship program?

2. How would you assess the program in meeting your expectations?

3. What are your goals? What role did the mentorship program play in your goal attainment?

4. Describe the benefits of the program to first-year students.

5. What suggestions would you have in improving the program?

6. Would you recommend this program? Why or why not?

Appendix K

Lessons Learned in T.I.M.E.

By ****

I remember the day clearly; it was one that couldn't decide what it wanted to be. It started out with late summer's last dying breaths making our long treks to classes uncomfortably hot and humid. Later, while we searched for our cars in football- field sized parking lots, the skies darkened and unleashed upon us a torrential storm of seemingly biblical proportions. This was my first day of University. If I had been more astute, I would have taken it as a sign of what was to come over the next three months of the semester.

****

I was quietly proud of my statistics- I had graduated from high school with a 93% average and given five scholarships to enrol in a program with only twenty seats. In my naiveté, I didn't think University would be much different for me than high school. However, my first semester at Windsor was my worst academic performance ever and the start of a rocky year of maladjustment. Even still, in my fourth and final year, I am still recovering academically from the year of my life that I'd much rather forget. When I started University, I felt that I was in a place who's inner workings I could not even begin to understand, and in a place where the least important person was me. I had no idea how to take notes, I was ignorant in realizing that night-before cramming didn't work, I was oblivious to the grading system and was literally devastated and torn apart the day I learned I had lost every scholarship I had worked so hard to earn. So when you ask me about the importance of mentorship, guidance, and support, I regretfully wish that I had been afforded such an opportunity. Personally, I know that I would have done better and

enjoyed first year had I met with an older student and shared in their past experiences; learning vicariously through their mistakes, and receiving some valuable and much needed support and guidance. Consequently, when the opportunity to act as a mentor arose, I was excited about the possibilities of showering my mentee with gems of wisdom mined from the depths of my very own roughs.

My mentee, ****, like myself, is a Concurrent Science and Education student. The mentorship started out smoothly in late September, a few weeks after classes had started. As we began to get to know each other, I learned that she had recently graduated from Massey Secondary School, spent her summer helping immigrants settle in to our country and had a keen interest in yoga. Initially, she complained about being overwhelmed by course work, falling behind in her readings, lack of sleep, and not having enough time to exercise. Brainstorming together, we made a tentative schedule of what she should be doing everyday in order to catch up and stay on top of her work while still having enough time to engage in activities important to her. Slowly, she began to follow a routine. As the semester wore on, ****told me that she was still trying to keep up with the demands of her courses and was doing "okay" in terms of marks - I was hard-pressed in finding out her actual grades and progress. Though I made every effort to make her feel comfortable and foster a relationship of trust and confidentiality, I respected her privacy, and did what I could with the information she was willing to provide to me. To make myself approachable, I gave her my email address and my phone number in case she ever had any questions or needed any advice. I also introduced ****to people willing to sell her old textbooks and find old labs she could use as references when writing her own.

Nevertheless, by mid-November, ****began to become increasingly annoyed over our weekly meetings. Being swamped with course work, she would rather have been in

the library studying than learning how to decipher her DARS with me.   At the beginning of second semester, I called ****to continue our weekly meetings. She was surprised that she still *had* to be mentored. Finally, after playing dentist and pulling some teeth, we arranged for a meeting.   Unfortunately, to my disappointment, she later cancelled it and said she did not want to be mentored anymore. I advised her that it wasn't a good idea but she continued on without pausing, growing increasingly hostile and belligerent with each passing word. In an effort to maintain my composure and my professionalism, I didn't argue, I simply listened.   She informed me that the professor in charge and myself couldn't force her to volunteer for a program she didn't want to be a part of and if she had any problems, she would make an appointment with the Dean of Science.

I recently learned that after her first semester at university, ****was placed on academic probation; a scenario which I had hoped to help her avoid. After graduating OAC with a 93% average, she received an A- in an arts course, a C- in biology, a D in chemistry and a D+ in Calculus at university. In my opinion, she had a poor start to the semester and never completely recovered, becoming overwhelmed and frustrated with the amount of work just as I once was. She didn't fully allow herself to experience the benefits of mentorship, support, and guidance I offered to her as she was too distracted by her more immediate problems. I understand the focused mindset that she currently is in with not wanting to be mentored, yet I can't help but wonder how the support of somebody who has experienced the same trials and tribulations can be denied. Once she relaxes and learns proper study habits and strategies, I am positive her grades will improve. In any case, I sincerely hope that she enjoys her four years as a Concurrent Science and Education student and I wish her the best of luck in all that she does.
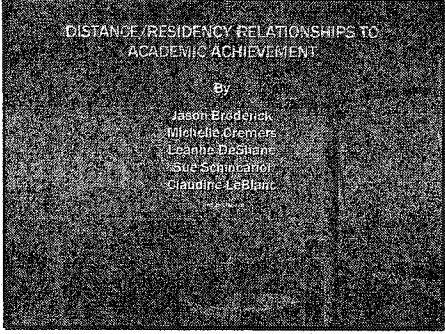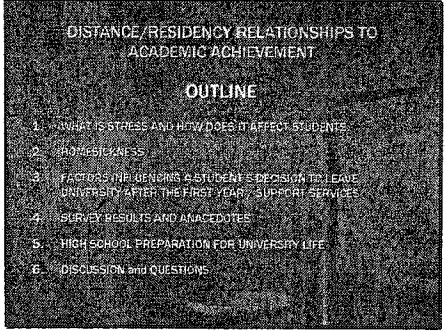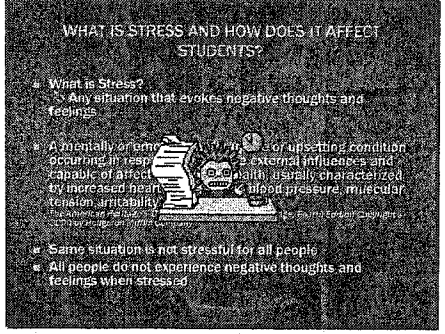
Overall, my participation in the Teachers' Interfaculty Mentorship Efforts Project was a rewarding experience. As a teacher in training, I have found that most of my education has been directed towards aiding students within a large classroom setting rather than in a one-on-one situation. This project has allowed me to learn how to deal with the needs of the individual as well further enhance my interpersonal skills. Truly, this was a practical experience in problem solving and counseling as well as discovering the important elements of being a positive role model. However, the greatest lesson I learned from my experience as a mentor was maintaining my professionalism when I was told my support was no longer needed. The question if I was an effective mentor remains to be seen. However, in my short time as an academic and personal campus advisor, I was an excellent role model; I related my experiences to my mentee, and gave her advice and suggestions of what she could do to avoid repeating my mistakes. I helped her with her time management skills, study strategies, and found her old labs and texts. At any time, I made it clear that she could contact me if she encountered any problems or had any questions. Had I mentored for a longer period of time, I am certain that the positive effects of my mentoring would have come to fruition. However, as a mentor and as a teacher, I can only reach those who are willing to accept my help.

My suggestions to make mentoring an even more enriching experience are:

1. Arrange for first year Concurrent Science and Education students to meet with the T.I.M.E. Project Coordinator and mentors at Orientation (the day before classes begin for the rest of the University). The main focus of this session would be to welcome new students to our program and introduce them to their mentors. This session should also explain the purpose, importance, and benefits of mentorship in the teaching profession as well as within the real world.

2. Provide incentive for first year students to meet with their mentors through establishing a long term of goal of having *only* those mentees who have been mentored for a full academic year become mentors in their final year.

3. Allow first year students to reflect upon their experiences as a mentee.

Appendix L

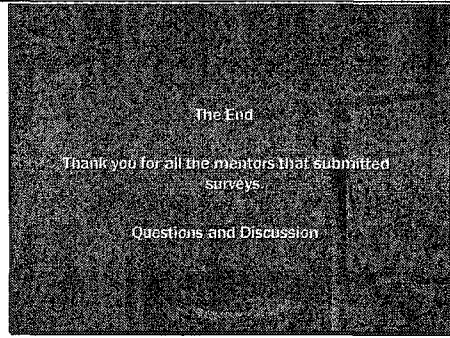| Slide 1 | | |
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