

THE CURRENT UNIVERSITY FOCUS: AN EMPHASIS ON PROVIDING
CUSTOMER SERVICES OVER ENGAGEMENT?

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy (PhD) in Human Studies

The Faculty of Graduate Studies
Laurentian University
Sudbury, Ontario, Canada

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THESIS DEFENCE COMMITTEE/COMITÉ DE SOUTENANCE DE THÈSE
Laurentian Université/Université Laurentienne
Faculty of Graduate Studies/Faculté des études supérieures

Title of Thesis Titre de la thèse	THE CURRENT UNIVERSITY FOCUS: AN EMPHASIS ON PROVIDING CUSTOMER SERVICES OVER ENGAGEMENT?		
Name of Candidate Nom du candidat	Wardley, Leslie		
Degree Diplôme	Doctor of Philosophy		
Department/Program Département/Programme	Human Studies	Date of Defence Date de la soutenance	November 19, 2014

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Abstract

Given the economic constraints placed on many higher education institutions, some universities have started to implement customer service orientation strategies in their marketing activities in order to solidify value exchange perceptions, differentiate themselves from their competitors and improve retention rates. However, the student as a 'customer' model can cause universities to start viewing students as sources of revenue, treat faculty as providers of a service and students can be cast in the role of consumer with students taking on many customer behaviours. If students are to get the most out of their academic experiences, they need to become meaningfully and psychologically involved in their studies.

Using multiple steps and different statistical techniques, this thesis investigated the dangers of institutions of higher education viewing students as "customers" and the importance of getting students more involved in the co-creation of their university experiences through the use of two phases of research. The findings from Phase One offered new insight into some key areas that are emerging as meaningful such as: college transfer students' problems with transitioning to university, the impact of helicopter parenting practices, students not finding their classes intellectually stimulating and issues created by not severing ties to prior support systems, among others. While the ensuing conceptual Student Engagement Work Design Model (SEWDM) and the empirical findings discovered as a result of the Phase Two testing provides a roadmap of how the engagement elements of autonomy, feedback, skill variety, task identity and customer services can be utilized by universities when attempting to predict institutional commitment and personal growth needs.

These findings are important as information about which factors help to predict post-secondary student institutional commitment and personal growth needs can assist with the development of targeted student recruitment strategies and the development of support systems. Being able to assess these outcomes could help to reduce funding outlays to lower impact areas so synergies can be encouraged and resources can be concentrated on critical factors.

Keywords

customer service, work design, co-creation of value, engagement, student satisfaction, institutional commitment, personal growth

Detailed Synopsis

Background: Many elements go into selecting a university, ranging from the area of study to the institute's reputation; just as many factors can also be part of the decision to leave. With governments using student retention rates as an indicator of how institutions are fulfilling student expectations vis-à-vis their satisfaction and success, it is important to know how universities are approaching the problem of student attrition. More and more research is being conducted focusing on individual groups so universities can develop intervention strategies that support students who are at risk of leaving and that best fulfil students' expressed needs and overall satisfaction. However, research is still needed to identify which variables actually influence students' commitment to their institution and promote their academic engagement. Attempting to address some of these issues lead to the two phases of research included in this thesis.

Purpose of Phase One: The purpose of the Phase One research was to find out: 1) how universities are approaching the problem of student attrition; 2) which variables influence students' commitment to their institution as it is a predictor of students' intention to persist; and 3) what differences exist between university students based on educational background prior to university entry (high school vs. college); students' age configurations (traditional vs. non-traditional); living on-campus in university residences vs. living off-campus and the distance between the university and the student's permanent home.

Methodology: In Phase One the analysis of the data consisted of multiple steps using different statistical techniques to evaluate the constructs, test the potential independent constructs against the dependent construct and assess specified groupings to determine if differences existed. Somewhat, similar methods were also employed in the second phase of research.

Phase One Results: The findings from the first stage of this dissertation's investigation into first-year students' institutional commitment offer new insight into some key areas that are emerging as meaningful such as: college transfer students' problems with transitioning to university, the impact of helicopter parenting practices, students not finding their classes intellectually stimulating and issues created by not severing ties to prior support systems, among others. What is also striking is the realization that this study's review of the literature and findings point to universities attempting to solve retention issues through a student customer service approach.

Given the economic constraints placed on many higher education institutions, universities have started to implement customer service orientation strategies in their marketing activities in order to solidify value exchange perceptions, differentiate themselves from their competitors and improve retention rates. However, the student as a 'customer' model can cause universities to start viewing students as sources of revenue, treat faculty as providers of a service and students can be cast in the role of consumer with students taking on many customer behaviours. If students are to get the most out of their

academic experiences, they need to become meaningfully and psychologically involved in their studies. Phase One of the research highlighted the importance of getting students more involved in the co-creation of their university experiences which lead to the second phase of research.

Purpose of Phase Two: The purpose of the second phase of research was to test the structure of the ‘work of students’ by utilizing job design theories and the National Survey of Student Engagement (NSSE) so university students’ academic studies could be more internally motivating.

Phase Two Results: The ensuing conceptual Student Engagement Work Design Model (SEWDM) and the empirical findings discovered as a result of the Phase Two testing helped to expand the current job design theory in a number of ways. The conceptual model provides a roadmap of how the engagement elements of autonomy, feedback, skill variety, task identity and customer services can be utilized by universities when attempting to predict institutional commitment and personal growth needs. In addition, although the Phase Two study explored the specific job context of university students within the higher education environment, its cross-section of participants from many different disciplines and combinations of major and minor degree programs provides a model which could be further refined at the departmental level.

Conclusions: Information about which factors help to predict post-secondary student institutional commitment and personal growth needs can assist with the development of targeted student recruitment strategies and the development of support systems. Being able to assess these outcomes could help to reduce funding outlays to lower impact areas so synergies can be encouraged and resources can be concentrated on critical factors.

Acknowledgments

The two research phases contained in this thesis would not have been possible without the encouragement of many people in the Human Studies Department of Laurentian University, the Institutional Planning and Quality Assurance Department of Nipissing University and also the Offices of the Registrar at both universities. I offer my heartfelt appreciation to all of those who supported me during the completion of my doctorate.

In particular, I am especially grateful to Dr. Charles Bélanger, my thesis advisor, who provided me with not only timely and thoughtful feedback but also endless encouragement and advice. His extensive knowledge in the fields of business and education were made available to me throughout my doctoral studies. I am appreciative of the depth and span of his expertise as it allowed me the freedom to explore new concepts and approaches knowing he would keep me on track. His dedication to research and teaching and his tremendous work ethic have inspired me as a researcher, an educator and as a person.

I would also like to thank my committee members: Dr. John Nadeau, for sharing his expertise in business at the developmental stage of my research and for continuing to challenge me to expand my research proficiencies and techniques; and Dr. Cynthia Whissell, for contributing her attentive guidance and expertise in psychology and statistics which enabled me to enhance my thesis. The feedback and comments from my committee members were not only beneficial in the construction of this dissertation; they have lead to many treasured and thought-provoking discussions. I came away for this experience determined to share the insights and skills I have gained from them.

Finally, I want to acknowledge my gratitude for the help of my friends and family and for their patience and understanding of my devotion to this pursuit. There are too many friends who have provided assistance to acknowledge individually. However, I am fortunate to have a kindhearted husband, David, and an enthusiastic son, Calvin, whom both share an admiration for intellectual endeavours. Beyond anything else, my family's love and unconditional support have made this doctoral journey possible.

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List of Acronyms

- ACAATO – Association of Colleges of Applied Arts and Technology of Ontario
- ACUDS – Atlantic Common University Data Set
- ANOVA – Analysis of variance
- AUCC - Association of Universities and Colleges of Canada
- CEP – College Entry Point is used to identify the students transferring to university after attending a vocational college
- CPS – Critical Psychological States
- CIRP – Cooperative Institutional Research Program (CIRP) Freshman Survey
- CUCC – College University Consortium Council
- CUDO – Common University Data Ontario
- EP – Entry Point is used to describe the route (high school or college) students used to enter university
- HRSDC – Human Resources and Skills Development Canada
- HS EP – High School Entry Point is used to identify students entering university directly from high school
- JCM – Job Characteristics Model
- MJDQ – Multi-method Job Design Questionnaire
- NSSE – National Survey of Student Engagement
- OCUFA - Ontario Confederation of University Faculty Associations
- OECD - Organization for Economic Co-operation and Development
- SEWDM – Student Engagement Work Design Model
- U1 – University 1 is used to identify a university used in the Phase One research
- U2 – University 2 is used to identify a university used in the Phase One and the Phase Two research
- VIF – Variance Inflation Factor
- WDQ – Work Design Questionnaire

1 Preamble: An Interdisciplinary Approach

1.1 My Experiential Journey

Identifying a research focus and approach is often the result of a process in which the researcher makes decisions based on his or her personal background or interests. My exploration into how student and institutional characteristics influence adaptation to university and institutional commitment began during my time as the Project Coordinator in a university's School of Business department. In this position, I was instrumental in the development and implementation of a College Partnership Degree Completion Program. The university was moving in this direction to meet the demand for innovative programs with a view to increasing student enrolment. While conducting research to support this new strategic initiative, I benefited from the work of Philip Kotler and Karen Fox (1995) and their book *Strategic Marketing for Educational Institutions*. After reading their work, my interest in the design, delivery and analysis of educational programs grew significantly. Kotler's writing intrigued and inspired me to keep researching this topic, a decision that led me to the research conducted by Tinto (1975), Bean (1981a, 1981b, 1981c, 1981d), Pascarella et al. (1994), Cabrera, Nora, Castaneda and Hengstler (1990) and Strauss and Volkwein (2004) amongst others. These studies illustrated that student characteristics and institutional commitment play a vital role in determining the persistence of university students. When I shifted from administration to a faculty role, my research interests expanded to include the study of how different institutional aspects, such as support services and work design, can impact students' adaptation to university.

Just as my background helped me determine my research area, it also influenced my approach to conducting my research. I wanted to move away from the narrow focus of my previous concentration in business because I found many of the questions I encountered in my research expanded beyond these borders. The inclusive approach of

interdisciplinary study encouraged a more thoughtful focus to acquiring and sharing knowledge. Thus, my choice of the Human Studies Ph.D. program was based on the need for an interdisciplinary approach to scholarship and analysis.

In the course of interdisciplinary Ph.D. studies, students are often asked to explore key terms and definitions. It has been an assumption that by learning terminology, students can begin to note the differences between disciplinary and interdisciplinary study and research. The disciplines by themselves, and through collaboration, provide the foundation for interdisciplinary research, through their methods, perspectives, depth of knowledge and theories. Thus, it would be best to explore the definitions of disciplinary, multidisciplinary and interdisciplinary research before discussing the format of this dissertation or the purposes of the two research phases included in this document.

1.1.1 Disciplinary

According to Salter and Hearn (1997), disciplines can be defined as “recognizable communities of scholars that develop conventions governing the conduct of research and its adjudication...[they] rely upon technical language and particular methods of analysis...[and] develop standards of evaluation specifically suited to their methodology and objects of analysis” (as cited in Shailer, 2005, p.2). This explanation is constructed based on being able to categorize scholars into groupings according to topic and from this grouping, methods and ways to approach analysis are developed. One sees that disciplinary study is viewed as a way to group members based on their specific pool of knowledge, idiosyncratic language and way of approaching problems. Interestingly, Newell (1992) did not define the word discipline; instead he chose to describe its participants when he stated, “members of a discipline are not so much characterized by the conclusions they arrive at, but by the way they approach the topic – the questions they ask, the concepts that come to mind and the theories behind them” (p. 216). Newell’s

focus is on the manner in which the topic is approached; it is not focused on the end result so the actions and activities of theorists within academic disciplines also become entrenched in the definition.

Power and politics are included in Weingart and Stehr's (2000) description of disciplines as "not only intellectual but also social structures, organizations made up of human beings with vested interests based on time investments, acquired reputations and established social networks" (p. xi). Moran (2010) stated, "a discipline is, like any 'field', an enclosed space with its own hierarchies determined by the struggle for academic capital appropriate to that discipline" (p. 67). Thus, positions of power and politics are also noted by Moran (2010) with the inclusion of hierarchies and academic capital and the reference to boundaries and constraints. Similarly, Benson (1998) uses words like contours, boundaries and guidance of internal standards of relevance in subject matter and method when describing the disciplines. Constraint and control are evidently part of defining this term based on the multiple references to enclosures.

In turn, Chandler (2009) described an academic discipline as, "involv[ing] styles of thought, that is, procedures for identifying and gathering evidence, ways of posing and sequencing questions, conventions for distinguishing productive and unproductive questions, and practices for establishing sound demonstrations, building arguments, citing authorities, or making cases' (p. 732). Unlike the previous references that related to the separation of scholars or solidified boundaries, Chandler's (2009) definition is more procedurally driven with little attention paid to the participants. In his definition, more connections are made to the collection of evidence and the formation of questions with less focus placed on the development of groupings of theorists.

To summarize, what is common amongst these different theorists' attempts to define the term discipline are phrases such as: a field of study, participants engaging in specified

processes of questioning and investigation, specialized training that molds or forms perceptions, and competencies or skills in research. Disciplines appear to be controlled by a prescribed pattern of behaviour that is enforced through departmental labels and budgeting constraints as well as attention to positions of power and political hierarchies. Also included is the overarching imagery of careful adherence to the approaches or processes for developing and reporting findings that have been established by scholars within a given field of study.

1.1.2 Interdisciplinary

In contrast to the consistency found in theorists' definition of disciplinary study, interdisciplinarity has been hard to define using commonalities and concise wording. That leaves us with the question of what is interdisciplinary research? Although similar wording is sometimes used and Aboelela et al. (2007) tried to gain a consensus in defining interdisciplinarity, there is no universally accepted definition. As there is some confusion about the definition of interdiscipline, the search could begin by using a commonly used source for defining terms, the online Merriam-Webster dictionary. This website takes the term interdiscipline to its simplest form of "involving two or more academic, scientific, or artistic disciplines" (<http://www.merriam-webster.com/dictionary>). This definition appears to be reasonable - interdisciplinary work does include more than one academic focus but this is where confusion sets in. This definition could also be used to describe multidisciplinary study and research; the definition would stop short of describing the integration of knowledge and resulting synthesis required to achieve interdisciplinary research. Maybe it is best to follow Repko's (2008) approach by starting to define what is interdisciplinary research by describing what it is **not**.

1.1.3 Multidisciplinary

Interdisciplinary study is **not** multidisciplinary in nature. Klein defines multidisciplinary as “essentially additive, not integrative...present[ing] different specialists in serial fashion...”(1990, p. 56). Thus, multidisciplinary research can be portrayed as a method or approach to research where a disciplinary theorist reviews the complex problem and then others follow in order - all of the theorists reviewing the problem at hand in a collaborative manner but the findings are not analyzed as a whole. The findings stay within the different disciplinary boundaries and are not integrated and reformed into a new form. It is a collaboration formed because the theorists are all looking at the same problem; however, it falls short of amalgamating the information each discipline has collected and evaluated because of differences in how the disciplinarians approach the problem, politics (retaining hierarchies based on academic capital) or a strict and unwavering adherence to their individual bases of knowledge. Multidiscipline research moves beyond the narrow focus of the disciplines, as more viewpoints are explored, but it stops short of the integration needed to become interdisciplinary. This lack of synergy restricts the integration of insights that would produce the advancement needed to see the problem from all sides, analyze it as a whole, identify the gap in knowledge or underlying issues with the problem and then develop a solution based on the expanded viewpoint which is the basis for achieving the integrative synthesis that is interdisciplinarity. Newell (1983) also looked at the process of integration as a key element when he states,

the strategy of the interdisciplinarian is to bring the relevant disciplines (or schools of thought) to bear upon the question, one at a time, letting each illuminate the aspects of the question which is amenable to treatment by the characteristics, concepts, theories, and methods of the respective disciplines. Out of the resulting disciplinary insights, the interdisciplinarian fashions a response to the question that would ideally be a complete answer but which at the least leads to a greater appreciation of the nature and complexity of the question (p.109 – 110).

Thus, interdisciplinarity involves disciplines but only as a resource for the reconstruction of the disciplinary findings into a new perspective. It is no wonder there are so many different definitions of the term. This need for the definition to include not only the expertise of the theorist but also the procedure for obtaining knowledge and the process of integration adds multiple layers to the explanation which can create confusion.

1.1.4 Explaining interdisciplinary research

Some of the key interdisciplinary theorists have attempted to include the aspect of integration into their definitions. Based on an analysis of the current research, Aboelela et al. (2007) incorporated many of the key points found in the literature in their formation of the definition as follows:

Interdisciplinary research is any student or group of studies undertaken by scholars from two or more distinct scientific disciplines. The research is based upon a conceptual model that links or integrates theoretical frameworks from those disciplines, using study design and methodology that are not limited to any one field, and requires the use of perspective and skills of the involved disciplines throughout multiple phases of the research process (p. 341).

In support of this definition, Klein defined interdisciplinary study as “a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession...and draws on disciplinary perspectives and integrates their insights through construction of a more comprehensive perspective” (Repko, 2008, p. 11). In addition, Newell (1983) pronounced that a combination of the information from the various disciplines is not enough; the interdisciplinarian must look at the assumptions that are based on the disciplinary views and evaluate each against the problem, determining how they bring to light the issues at hand.

To summarize, the definitions appear to agree that interdisciplinarity in the most basic sense involves: a process or method for approaching research based on an integration of disciplinary insights and has the desired outcome of obtaining a cognitive advancement through finding the answer to the complex question within the overlapping aspects of the different disciplines. Thus, when participating in developing answers to real-world problems an educated person is one who has surveyed the disciplines and attempted to form interdisciplinary synergy with the multiple perspectives (Shailer, 2005).

1.2 Application of my research and approach

As stated earlier, based on my career background, I became interested in what happened after the student was recruited; that is, how well these students adapted and became committed to their institution after they entered the university system. Was ongoing support (administrative, staff and faculty), fine-tuned on the basis of individual student characteristics, the best way to assist students or should the focus be shifted to explore the specific tasks and outcomes experienced by students in their role of being a university student? Current research in this area was lacking.

Further exploration was needed because researchers are still attempting to find which factors lead to student retention. The structure and content delivery methods of universities have radically changed in the past few decades and the background characteristics of students have broadened too. In some cases, previous retention recommendations no longer apply. The mold again needs to be broken; retention research is still entrenched in theories that were developed over three decades ago. This constant return to Tinto and Bean, among others, originates with many of the questions asked of students. The problems arise because of the use of national data, which are tied to

questions that relate to first-year experiences that can only be asked at the beginning of the student's studies but encompass key factors that hold importance later in the student's university experience. These surveys contain the same questions (The Cooperative Institutional Research Program (CIRP) Freshman Survey) we have been asking first-year students for over thirty years. Until more information about our first-year students throughout their university experience is analyzed using a new framework, we will not know what new questions should be incorporated to provide more up-to-date findings. This research may help to overcome this limitation. Consequently, this document's structure is outlined below.

1.2.1 The document's structure

Following the Preamble, Section Two outlines the background of the problem, the purpose of the studies and the structure of the remaining document. Then, the thesis *per se* consists of two phases: Phase One of the research is included in this document in Sections Three, Four and Five. This research explores how student characteristics, such as background, living arrangements, distance from support systems and entry point to university (high school versus college), impact students and their institutional commitment. The primary data for this first phase of the major research were collected through the coordination of multiple surveys spanning four years involving students from two universities with satellite departments in several geographic locations.

The second (and final) phase of the thesis research explores how institutional characteristics, i.e., in what way does the design of the "work" of a student, create barriers that influence students' commitment to their institution and their personal growth. This second phase builds on the first phase research findings through the use of three years of secondary data obtained from National Survey of Student Engagement (NSSE) participants. The second phase attempts to identify how this research contributes to a solution of the issues identified in the first phase of the research; a review of

literature, methodology, research findings and discussion are contained in Sections Six and Seven of this document with Section Eight providing an overall summary which brings all the findings and implications from the two research phases together. With the current discussion surrounding increased competition among educational institutions, the expansion of college and university accreditation channels and greater accountability through key performance indicators, this research is germane to today's post-secondary environment.

1.2.2 A problem-focused interdisciplinary approach

Thus, my dissertation's line of inquiry has taken on the problem-focused (instrumental) interdisciplinary approach described by Klein (1990), as the research has been "centered on a complex, problematic question that cannot be assigned to a given discipline or find its solution in a border area between two fields" (p.65). As demonstrated in the review of literature included in this dissertation, "it is [research which is] responsive to, and partly dependent upon, social needs...[residing] between the field of pure theoretical research, which emphasizes the pursuit of knowledge, and that of informed action, which emphasizes usefulness, efficiency, and practical results" (Klein, 1990, p. 122).

In the first research phase, I explored other disciplines and approaches similar to the models of student retention, beginning with Tinto and Cullen (1973) and Bean (1981a) that have their roots in sociology with Durkheim's theory of suicide, and psychology with Price and Mueller's model of employee turnover. These theorists' expanded research focus allowed me to realize that the most fruitful approach to student institutional commitment research was based on the knowledge obtained from a diversity of disciplines because the underlying theories are interconnected. I needed to look at the problem from many different viewpoints before the gap in the knowledge and ways to overcome this identified gap could be developed.

The crossing of disciplinary boundaries was also found in the second phase of research with the use of job design theory to answer the problem of engaging students. Using a business model, such as the Job Characteristics Model (JCM), formed from a theory developed in psychology to help answer a sociological problem arising in education requires an interdisciplinary approach. These two research phases fit with the integration of knowledge defined by Repko as “identifying and blending knowledge from relevant disciplines to produce an interdisciplinary understanding of a particular problem or intellectual question” (2008, p. 19). The complex problems were too intricate to be solved within the confines of one discipline as they involved behavioural aspects, curriculum review and program structure components. Thus, one had to move beyond the boundaries of a single discipline to establish the overarching interdisciplinary viewpoints that have been captured in the following sections.

2 The Focus of This Research

2.1 Background of the Problem

Currently, the Canadian university system is funded through a combination of government funding, private donations and student tuition. The relationship between university and society, in all its complexity, has been the subject of much scholarly literature and debate. Some of the debate has surrounded whether universities' mandates should include providing a benefit to the societies that are funding their activities. If one concedes that increasing the socioeconomic status of citizens and being able to compete in a global marketplace are important considerations or benefits to society, the success rates of post-secondary students are important. Research demonstrates that post-secondary graduates experience significant income advantages over high school graduates (35% higher for registered tradespersons or college graduates and 75% higher for university graduates) (AUCC, 2011a). There is evidence that in addition to making more money, individuals with post-secondary education also engage in healthier routines (exercise, diet and non-smoking), become more involved with societal concerns and contribute to national economic performance through increased productivity and innovation (The Conference Board of Canada, 2013). With empirical studies consistently linking future Gross Domestic Product (GDP) growth to the knowledge and aptitudes of the labour force (Riddell, 2008), within global markets, human capital is an important factor for both economic growth and social security. On the Association of Universities and Colleges of Canada (AUCC) website, globalization has been described as,

not only alter[ing] the way we do business and the way we produce and trade in goods and services, it is rapidly changing the very fabric of our society. Canada must continue building its capacity to operate effectively in this new global context. Our success will depend, in large measure, on the manner in which we educate our citizens.

In recent years, there has been a movement away from a manufacturing-based economy towards a knowledge economy where work demands require analytical and interpretive abilities that are normally obtained through post-secondary study. In Canada, 82% of adults with post-secondary education (aged 25 to 64 years of age) were employed in 2009 compared to only 55% of those in the same age grouping with less than a high school education (Statistics Canada, 2012). During the 2008 - 2010 recession, 430,000 jobs that did not necessitate post-secondary education were lost, and almost 70% were replaced by newly created jobs requiring an undergraduate university degree (AUCC, 2011a). There is an expectation this trend will continue, as recent reports predict that compared to 2010, an estimated 1.3 million more jobs will be created for university graduates by 2020 (Charbonneau, 2011). Thus, it appears that to support social and economic advancement Canada needs to be able to maintain a skilled workforce.

Canada has made advances in this area. In 2009, among Organization for Economic Cooperation and Development (OECD) member countries, Canada had the highest proportion of post-secondary/tertiary attainment (50% of the population versus the OECD average of 30%). However, when the post-secondary figures are broken down into categories Canada only achieved a B rating for its rank of 7th among 16 peer countries for university degree attainment (The Conference Board of Canada, 2013). Similarly, Ontario has made significant advances regarding post-secondary access with a 56% post-secondary attainment rate, but this global-leading performance is mostly connected to community/vocational college programs (28% college diploma holders in Ontario versus the 9% average for OECD members). Ontario universities are not experiencing the same dramatic differences in attainment rates over OECD countries. Although Ontario's university degree holder count of 28% is still ahead of OECD countries like Japan's 25% it is lower than the 31% reported in the United States (OCUFA, 2012). The Ontario government has continued its aggressive approach by proposing in its 2010 budget to raise Ontario's post-secondary attainment rate from 56% to 70% (OCUFA, 2012; Mullins, 2010; Shoukri, 2010). Two approaches are usually associated with increasing attainment rates of a country's citizens: the first is to increase the participation rates

among under-represented groups and the second is to improve the retention rates of existing students. The more efficient method for building human capital would be to retain those who have already met the needed entrance requirements and are enrolled in post-secondary study. Therefore, one could argue that Ontario universities play a role in Canada's global positioning and it is unlikely that governments and societies will continue to fund universities that are out of step with the needs of their student population.

There are many factors that could influence a student's success in post-secondary education. Attending university can bring about momentous challenges in a university student's life as he or she attempts to adapt to situational change while simultaneously attempting to better his or her socioeconomic status through higher education. For this reason, it is common for students to change programs or schools before they finish their initial four-year degree, and many drop out completely.

Table 2-1 Most recent percentages available of total graduates seven years after beginning an undergraduate degree in the Atlantic Provinces

Total Graduates in 2011, who were enrolled in full time year 1 undergraduate studies in Fall 2004	
University	Graduation Rate
Acadia University	62.00%
Cape Breton University	n/a
Dalhousie University	65.90%
Memorial University	n/a
Mount Allison University	75.30%
Mount Saint Vincent University	61.00%
Nova Scotia Agricultural College	n/a
NSCAD University	n/a
Saint Mary's University	53.00%
St. Francis Xavier University	n/a
St. Thomas University	59.00%
University of New Brunswick	78.20%
University of Prince Edward Island	58.30%
Université de Moncton	56.00%
Overall Average	63.19%
<i>Note: universities listed in this table that did not supply data for specific years were not included when averaging the results so the overall percentage would not be skewed by their blank entry.</i>	

Source: ACUDS (Atlantic Common University Data Set). (2013). Retrieved from <http://www.atlanticuniversities.ca/atlantic-common-university-data-set>

Nationally, the Youth in Transition Survey found that attrition is a major concern for post-secondary institutions with 16% of post-secondary students dropping out during the first year of their studies (Freeman, 2009). This data does not include students who drop out after the first year, so that national attrition figures are likely much higher. For example, the Atlantic Provinces' universities saw an average first-year dropout rate of 22.2% in their 2010 cohort and their graduation rates indicate a history of students continuing to leave after first year as on average, only 63.1% of the 2004 cohort finished their degree by 2011 (see Table 2.1).

Table 2-2 Most recent percentages available of total graduates seven years after beginning an undergraduate degree at an Ontario university

Total Graduates in 2009, who were enrolled in full time year 1 undergraduate studies in Fall 2002 (2010 and 2011 data were unavailable)	
University	Graduation Rate
Brock University	80.80%
Carleton University	n/a
University of Guelph	n/a
Lakehead University	81.50%
Laurentian University	70.90%
McMaster University	83.50%
Nipissing University	91.10%
OCAD University	65.50%
University of Ottawa	n/a
Ottawa » Saint Paul University	n/a
UOIT	n/a
Queen's University	90.80%
Ryerson University	n/a
Toronto » All Campuses	82.10%
Trent University	n/a
University of Waterloo	81.00%
Western » All Campuses	n/a
Wilfrid Laurier University	80.10%
University of Windsor	74.20%
York University	n/a
Overall Average	80.14%
<i>Note: universities listed in this table that did not supply data for specific years were not included when averaging the results so the overall percentage would not be skewed by their blank entry.</i>	

Source: CUDO (Common University Data Ontario). Council of Ontario Universities. Retrieved from <http://cudo.cou.on.ca/>.

The Common University Data Ontario (CUDO) website reported impressive overall graduation rates of 80.1% after seven years with their 2002 cohort (Table 2.2); however, institutional results ranging between 65.5% to 91% indicate some Ontario universities have room for improvement. In addition, Ontario's overall dropout rate of 11.7% for first-year undergraduates reported in 2004 crept up to over 13% by 2010 (Table 2.3).

Table 2-3 Key Performance Indicators, Degree Completion Rate for Undergraduate Cohort, Year1 Students Continuing to Year 2

University	2010 Retention Rate	2009 Retention Rate	2008 Retention Rate	2007 Retention Rate	2006 Retention Rate	2005 Retention Rate	2004 Retention Rate
Brock University	87.20%	87.50%	87.00%	85.50%	86.50%	88.00%	88.90%
Carleton University	87.40%	87.90%	88.00%	87.60%	86.70%	88.10%	88.10%
University of Guelph	91.70%	91.60%	87.40%	90.20%	91.00%	91.30%	91.10%
Lakehead University	85.30%	87.80%	86.00%	86.00%	86.70%	89.20%	88.80%
Laurentian University	86.00%	85.60%	86.30%	84.20%	83.30%	86.70%	85.00%
McMaster University	86.80%	87.30%	86.20%	87.20%	87.80%	89.50%	89.50%
Nipissing University	82.00%	82.90%	83.40%	84.30%	82.80%	85.20%	88.70%
OCAD University	88.70%	88.20%	86.80%	91.70%	92.00%	92.40%	85.60%
University of Ottawa	86.00%	86.10%	86.90%	86.80%	87.80%	87.60%	88.60%
Ottawa » Saint Paul University	n/a	n/a	n/a	n/a	n/a	n/a	n/a
UOIT	82.40%	81.00%	82.70%	80.20%	n/a	84.80%	n/a
Queen's University	94.00%	94.50%	93.60%	94.90%	94.70%	93.30%	94.40%
Ryerson University	85.70%	86.70%	83.10%	88.90%	87.40%	87.00%	89.60%
Toronto » All Campuses	91.30%	91.20%	90.90%	90.40%	90.00%	89.40%	90.00%
Trent University	83.90%	83.10%	81.90%	80.60%	81.50%	85.00%	82.00%
University of Waterloo	90.40%	89.40%	89.00%	87.90%	88.30%	88.40%	89.00%
Western » Main Campus	93.20%	93.60%	92.70%	91.90%	91.10%	92.50%	91.50%
Western » Brescia University College	80.50%	91.50%	91.50%	87.70%	88.60%	88.10%	89.40%
Western » Huron University College	85.10%	82.50%	88.70%	88.50%	88.50%	77.00%	87.10%
Western » King's University College	n/a	86.80%	88.00%	91.10%	87.70%	87.30%	n/a
Wilfrid Laurier University	88.40%	88.80%	89.20%	89.80%	88.90%	88.80%	89.00%
University of Windsor	84.40%	86.30%	86.90%	82.30%	82.30%	82.50%	81.50%
York University	85.60%	86.30%	86.80%	86.80%	87.90%	87.90%	88.40%
Overall Average of reporting universities	86.95%	87.57%	87.41%	87.48%	87.69%	87.73%	88.31%

Note: universities listed in this table that did not supply data for specific years were not included when averaging the results so the overall percentage would not be skewed by their blank entry.

Source: CUDO (Common University Data Ontario). Council of Ontario Universities. Retrieved from <http://cudo.cou.on.ca/>.

If this trend intensifies, it would be hard for Ontario to achieve the graduation success of the 2002 cohort in the future. Research indicates that students who dropout are heading in this direction during their first year because those who leave (leavers) were already demonstrating inadequate academic performance and study behaviour (Ishler and Upcraft, 2005; The Edmonton Journal, 2007). Therefore, finding out what helps students adapt to university life and eventually become committed to the university are important contributions to the student attrition and retention equation.

Institutions have come to realize they need to make a commitment to the students they admit by providing them with both intellectual challenge as well as overall support (Ishler and Upcraft, 2005). Governments use student retention rates as an indicator of how institutions are fulfilling student expectations vis-à-vis their satisfaction and success (OCUFA, 2006; Helgesen, and Nessel, 2007; Tinto, 2007). Although there are many internal and external factors that impact one's decision to attain higher education such as career, family expectations, self-improvement, and the personal goal of attaining a degree, one of students' main focuses while at university, which stays consistent across lower and upper year cohorts, is to obtain the skills needed for employment (Kennett, Reed, and Lam, 2011). Obtaining these skills requires hard work, a commitment to goals, a fulfillment of tasks and an appraisal of the results of the students' efforts. Yet, how students approach this work is also interconnected with their background, situation and personal characteristics. If the university, through branding, has created an institutional image that does not live up to expectations, students become dissatisfied (Terkla and Pagano, 1993) and become disconnected from their institution. Building student loyalty through developing meaningful relationships is based on the optimal student and university fit. When incongruity occurs, dissatisfaction increases and leads to a lack of institutional commitment and a subsequent increase in attrition. According to Henning-Thurau, Langer and Hansen (2001), "student loyalty contains an attitudinal component and a behavioural component, both of which are closely related to each other" (p.333). There is empirical support that students who feel more satisfied (attitude) with their post-secondary institution are more committed, thus, likely to persist (behavioural)

in their university studies (Okun, Goegan, and Mitric, 2009; Pascarella, Seifert, and Whitt, 2008; Yates, 2005; Rhodes and Nevill, 2004). Students who demonstrate more social and academic involvement during their university experiences and a better fit with the organization's culture have a greater chance of continuing on their educational path (Tinto, 1998).

Student profiling can be beneficial in identifying which characteristics or factors are common to the students who are satisfied with their university choice. Understanding the factors that influence satisfaction is important because, as stated earlier, satisfaction level can be an accurate gauge of the intention to withdraw from university, which is the precursor to actual attrition (Bean, 1981a, 1981b, 1981c, 1981d, 1979b; Eaton and Bean, 1993; Staats, Butler, Partlo, and Heaphey, 1991; Winterer, 1996). The intention to leave preceding actual withdrawal has been empirically tested by the “validated model of employee turnover in the industrial-organizational psychology literature in which the intention to quit an organization is the direct antecedent to turnover” (Lounsbury, Saudargas, and Gibson, 1999, p. 518). The industrial model of student attrition based on Price and Mueller's (1981) model of turnover in work organizations was empirically tested in Bean's 1981 research, which used measures from this model to explain student dropout behaviour. Although there are differences between the students' and employees' motivating factors that lead to attrition, parallels can be made between students' intention to withdraw and employees' intention to quit. Current research suggests the use of indicators of students' satisfaction with their institutional choice almost doubles the ability to predict retention (Schreiner, 2009). For this reason, being able to identify student satisfaction levels with their university (institutional commitment) early on can allow universities to either increase participation in effective initiatives or amend practices and procedures to avert the student's withdrawal, thus increasing student retention.

2.2 Purpose of the Two Research Phases

The purpose of the first phase of this research was to find out: 1) how universities are approaching the problem of student attrition; 2) which variables influence students' commitment to their institution as it is a predictor of students' intention to persist (Bean, 1981a); and 3) what differences exist between university students based on educational background prior to university entry (high school vs. college); students' age configurations (traditional vs. non-traditional); living on-campus in university residences vs. living off-campus and the distance between the university and the student's permanent home.

The findings from the first stage of the dissertation research topic helped to measure students' perceptions of their university and its services. This conventional attitude-based approach to consumer relationship building relies on assumptions that there is a link between students' evaluations of service quality and their subsequent behaviour. However, based on the findings from the first phase of research, there could be a different approach to increasing student satisfaction through internal motivation created by developing tasks and course content that inspire students to become more engaged in their university courses and commitment to their institution. Ishler and Upcraft (2005) defined student success as the development of intellectual and academic competence through obtaining the necessary skills to become an educated person: critical thinking, problem solving and reflective judgement. The hope is that the second phase of analysis will result in the design of the job of a student that will intrinsically motivate students. Obermiller, Fleenor and Raven (2005) stated that, "better learning occurs when students are actively involved in the process of acquiring new knowledge" (p.27). Thus, the purpose of the final stage of the research (Phase Two) was to develop a work design model that identifies the engagement characteristics that influence student outcomes such as institutional commitment and personal growth.

2.3 Structure of the Remaining Document

The dissertation is structured as follows. Phase One of the research is included in this document in Sections Three, Four and Five. The second research phase builds on the first phase research findings through the use of three years (2006, 2008, and 2011) of secondary data obtained from National Survey of Student Engagement (NSSE) participants from a small Northern Ontario university. How this second phase of research will contribute to a solution of the issues identified in the first phase of the research and the Phase Two research study is contained in Sections Six and Seven of this document with overall conclusions outlined in Section Eight.

3 Approaches to Increasing Student Retention (Phase One Research)

3.1 Mainstream Theoretical Student Retention Models

To date, seminal studies have differed in the student retention variables considered. This has led to a lack of certainty as to which situational influences are the most important. Research into student retention started in the late 1960s with Panos and Astin's (1967) study of university students who dropped out without completing their degree in four years. Panos and Astin were able to identify characteristics that were connected to retention; the authors found that students who completed their degrees in four years were more likely to form positive relationships with their peers, to engage in university activities and to benefit from better faculty support. In contrast, students who dropped out before completing their initial degree within a four-year period (leavers) had group differences caused by a lower socio-economic status, had no plans to continue their education at the graduate level and had lower high school academic grades when they entered university. These findings highlight that there are different factors that influence student attrition and retention. Thus, the attributes of "leavers" do not necessarily reflect the characteristics of those who are retained. Panos and Astin's findings supported their original hypothesis that educational outcomes were not only determined by student input characteristics but also by environmental influences. However, without a theoretical base, there were potential problems with using this research to interpret the causal relationships between the variables and extrapolating these findings to include other populations (Gassier, 2006). This was something that Tinto attempted to overcome by using aspects of theoretical models developed in other disciplines.

3.1.1 Tinto's student integration theory (1975)

One of the most referenced theories of student retention is Tinto's student integration theory (1975), in which he argued that a student's integration results from being positively matched with the university. For example, higher overall connection to the

institution would influence academic and social involvement resulting in commitment to the institution and higher retention. Tinto based his Student Integration Theory (1975) on Spady's (1970) explanatory sociological model of the dropout process and Emile Durkheim's 1951 model of suicide (Draper, 2003).

Spady (1970) had been searching for a way to attach a theoretical framework to the study of retention. Up to this point, the research surrounding student retention had been mainly based on simple individual correlation studies performed at individual universities that explored the relationships between variables, but there were no links to how or why these variables affected student retention (Bean, 1981a). For example, Panos and Astin (1967) had identified the relationship between students that came from lower socioeconomic backgrounds or had entered university with lower academic grades in high school and the propensity for dropping out from a specific university. However, researchers were just starting to form observations regarding reasons that influenced students' withdrawal. Any attempts to answer the question of why students left were determined only through the use of follow-up surveys at an individual institutional level (Bean, 1979b). The use of theoretical concepts to predict student attrition helped to bring a degree of cohesion to the disorganized collection of variables and to explain the variations in student attrition or retention, not only in the institution that was used in the study, but across institutions.

As stated earlier, there were two main aspects of Durkheim's work that fit with Tinto's theory of integration (1975). "Durkheim argued that the likelihood of complete withdrawal from society (suicide) increased when two kinds of integration are lacking: insufficient moral (value) integration and insufficient collective affiliation through person-person interactions (structural)" (Tinto and Cullen, 1973 p. 37). Tinto used these aspects of Durkheim's theory as a foundation for his work by suggesting that the same principle held true for student retention. First, students that experienced a connection to the values and systems embraced by their institution were less likely to withdraw from the institution - this commitment to the institution led to retention. Second, Tinto

suggested that when a student was integrated within the institution with social and academic support he or she was less likely to withdraw. Tinto's (1975) theory supposed that a student's integration resulted from being positively aligned with the university culture. The student felt an overall connection to the institution so he or she became involved academically and socially which resulted in an increase in retention. Some studies using this theory did find that students were reluctant to leave an institution where they had become an active member (Rivas, Sauer, Glynn, and Miller, 2007). However, Tinto's 1975 theory had some limitations because, although it did advance the current research, it did not consider the effect of external forces such as pre-university characteristics, finances, and the influence others can have on student retention (Gasser, 2006).

3.1.2 Bean's (1981) Student Attrition Model

Bean (1981a) based his industrial model of student attrition on Price and Mueller's (1981) model of turnover in work organizations. The intention to leave preceding actual withdrawal had been empirically tested using the "validated model of employee turnover in the industrial-organizational psychology literature in which the intention to quit an organization is the direct antecedent to turnover" (Lounsbury et al., 1999 p. 518). Bean reasoned that generalizations could be made between the process students used when deciding to withdraw from an institution and turnover within the work force. Both models used satisfaction as an intervening variable between background and environmental characteristics and the intention to leave (Bean, 1979b, 1981a). In the Price and Mueller's (1981) model, voluntary turnover was the by-product of job satisfaction and intent to stay. They proposed that when job satisfaction was low but the employee had high job mobility (advanced skill level combined with occupational socialization (networks) within the job market) the probability of voluntary turnover increased (Bean, 1981a).

Bean (1981a) linked the psychological components of an employee's dedication to the organization, which provided opportunities to build his or her occupational skills, with students who enrol at an institution because the institution provided the skills that lead to future employment. Bean amended Price and Mueller's theory to fit the education context by proposing that students built their professional connections within the institution. Therefore, students would be less likely to withdraw from an institution where they felt socially connected.

Bean's Student Attrition Model (1981c, 1981d) proved to be successful (explaining 42% to 53% of the variance in dropout) at addressing some of the weaknesses of previous theories (Sauer and O'Donnell, 2006). Bean's (1982) interaction effects of GPA model accounted for 62% of the variance in attrition. With these models the author considered certain external factors that influenced student retention such as pre-university characteristics, grade point average, the student's perception of the quality of education, the institution and institutional support services, factors that were missing from Tinto's theory (Sauer and O'Donnell, 2006). Unlike Tinto, Bean did not place a student's integration within an institution ahead of the behaviours the student displayed (Rivas et al., 2007). Bean (1981) stated that the behaviour students exhibited and the attitudes they held about the university, in addition to academic and social integration, led to institutional commitment (Sauer and O'Donnell, 2006). Satisfaction / contentment in turn decreased the likelihood that students would drop out.

This early work on student retention focused on involvement especially in the first year as this was deemed a critical timeframe for concern (Tinto, 2007). However, there were still limitations to these founding researchers' models (McClanahan, 2004). There were theories that had similarities and also differences, which led to inconsistency. Cabrera et al. (1990) attempted to overcome some of these issues by developing a model, through structural equation modeling, which included Bean and Tinto's variables of academic integration, intellectual development, encouragement from significant others, financial

aid, financial latitudes, and social integration, to which they added, pre-entrance academic performance and university grade-point average (Strauss and Volkwein, 2004). These factors focused on the fit between the students' needs and perceptions and the support systems offered within the university (Sorey and Duggan, 2008). As a result of this research, a plethora of services and a range of programs were developed to enrich first-year experiences such as student orientation and extracurricular programs in the hopes of increasing student retention (Tinto, 2007).

Another emphasis in the literature of this time involved students' successful adaptation to university based on behavioural pattern influences that were formed from students' prior environment. Many students gain satisfaction or self-efficacy from engaging in the safe and familiar customs of their prior communities. These rituals were tied to a student's personal identity or their developed ways to deal with difficult issues. According to Wardley and Bélanger (2013),

Tinto's 1982 interaction model was a progression of his earlier work on integration and commitment. He proposed that to reach an adequate degree of integration, students needed to sever their ties to prior values, principles and habits and embrace the university's belief systems. It was perceived it would be difficult to successfully transition to the university's culture without severing an attachment to prior patterns of behaviour, as deciding to attend university required more than just a physical undertaking but a psychological one too. This premise was based on work developed by Van Gennep (1960), an anthropologist theorist. In 1960, Van Gennep used three distinct phases of movement: separation, transition and incorporation to describe the separation from a prior environment and successful involvement in the new environment (Elkins, Braxton, and James, 2000). Tinto's 1988 work used this underlying theory to describe students' progression or "Rite of Passage" through these same three stages: separation (leaving home, family and friends behind), transition (to a new and different life at college) and incorporation (making new friends and becoming actively

involved in college life) (Kelley-Wallace, 2009). Van Gennepe and Tinto proposed that, in new situations, embracing the customs and values of the institution was important because the disassociation from previous support networks and communities (separation) allowed the individual to form bonds (transition) and lasting commitment (incorporation) to the new institution.

Building on Tinto's theory, Elkins et al.'s (2000) research validated the importance of the student's rejection of established attitudes and values, within the first semester's separation stage. Christie and Dinham (1991) similarly used Tinto's model of student departure and the rites of passage to examine student persistence decisions. They found that, if students did not sever ties to previous communities by leaving home or moving far enough away from their home community, this availability of prior networks conflicted with students' progression through the separation, transition and incorporation stages (p.3-4).

This research predominantly concentrated on traditional post-secondary students so there were questions regarding its validity concerning the wider student population. According to Wardley and Bélanger (2013),

Opposition to this theory arose when Tierney (1992) suggested that Tinto's model was invalid because it inappropriately borrowed Van Gennepe's (1960) rites of passage without consideration of the hierarchy of one's dominant culture (Elkins et al., 2000). Tierney questioned Tinto's model of integration based on the view that it did not explore, "who is to be integrated and how it is to be done [which] assume[d] an individualist stance of human nature and reject[ed] differences based on categories such as class, race and gender" (Tierney, 1992, p. 611). This assumption that students had to be assimilated to the host environment to be retained did not take into account student population diversity (Gilardi and Guglielmetti, 2011) (p.4).

3.1.3 Bean and Metzner's (1985) student attrition theory

Bean and Metzner's (1985) student attrition theory, which was a conceptual model that explained the attrition process of non-traditional students, was an attempt to overcome these omissions. Although similar to Tinto's interaction model, Bean and Metzner's (1985) model minimized the importance of social integration. Contrary to Tinto's earlier model, Bean and Metzner's model place more importance on environmental factors and their impact on the departure decisions of adult students than on academic variables. Tinto recognized the importance of this context when he amended his early research focus to include other student groups such as those from differing age groupings or academic levels (honours degree). Tinto's 1993 theory, that students enter a college or university with particular input characteristics which may impact both their commitment to their goal of obtaining a degree and to their institution, was consistent with Astin's (1993) theory that student success was a function of who the students were before entering university and their environmental experiences after they enrolled (Ishler and Upcraft, 2005). This shift in focus created retention models that combined student-institution fit and pre-enrolment characteristics. The commonality of these models included students' underlying background characteristics that shaped their commitment to their institution, their academic integration, their commitment to goals and their intention to persist. However, the combination of these theories still lacked consideration of how socialization affected learning and cognitive development.

3.1.4 Pascarella's (1985) causal campus and organizational model

Pascarella's 1985 causal campus and organizational model partly overcame this weakness. This model included variables such as pre-university qualities and the different members (faculty, peers, advising staff, among others) involved in the socialization of the student in an attempt to understand how they influenced cognitive development and increased retention (Gasser, 2006; Strauss and Volkwein, 2004). The introduction of classroom aspects was not new. Previous studies had linked student

perceptions of faculty behaviours in the classroom with an increase in the successful transfer of knowledge and cognitive growth (Braxton, Bray, and Berger, 2000). In 2008, Pascarella, et al. explored and refined these concepts further by hypothesizing that grades, educational satisfaction and degree ambitions would have a notably positive influence on persistence and that the effect of organized and clear instruction on persistence would be indirect. Thus, the clarity of instruction and classroom organization would indirectly influence social integration by allowing students to perceive they had more time to socialize and become integrated, because faculty member's style of teaching left the students more confident with their academic achievements. To test this hypothesis, Pascarella et al. (2008) used a longitudinal study of 1,353 students at a large public university. Contrary to the authors' expectations, their research found a direct link between students who experienced organized and clear instruction from faculty and students' increased persistence. These factors had not been mediated by the positive impact of grades, satisfaction or future degree ambitions. Classroom instruction had an independent effect on persistence. Pascarella et al.'s (2008) findings demonstrated the importance of organization and clarity of faculty's classroom expectations as these had a direct impact on student's perception of their abilities resulting in increased retention. This work was significant as it expanded Tinto's (1975, 1993) model of integration.

Building on these theories, later models proved to be somewhat successful at predicting retention rates. For example, the 12 variables in Sorey and Duggan's (2008) study (encouragement and support, social integration, degree utility, academic integration, institutional commitment, intent to leave, Fall GPA, finances, goal commitment, number of dependents, employment and high school performance) correctly predicted student persistence for 85% of the individuals in the sample and 79% of the cases were correctly classified when the model was assessed to determine how well the model could correctly predict student persistence in a new sample.

3.2 Student Satisfaction

While most of these institutional models were constructed to predict retention rates, as noted, researchers have also successfully used a combination of these models to explain other outcomes including satisfaction (Strauss and Volkwein, 2004). Student satisfaction results when actual performance meets or exceeds the student's expectations (Elliott and Healy, 2001). Thus, the students' positive perception of the quality of their educational experience created through the fulfillment of personal needs, results in student satisfaction (Athiyaman, 1997). According to Serenko (2010), existing research exploring satisfaction within the context of education has been based on seminal publications such as Feldman and Newcomb's 1969 comprehensive review, Ramsden and Entwistle's 1981 "Approaches to Studying" inventory, and more recently Pascarella and Terenzini's 1991 review which covered 20 years of research and about 2,600 studies. In the 1990s, empirical evidence shifted to not just the identification of factors that influence satisfaction levels but to include the potential outcomes of satisfaction. This focus was based on studies such as Bean's 1980 models of work turnover and student attrition, which used concepts from organizational studies of work turnover to examine how organizational attributes and reward structures influenced student satisfaction and persistence. Research during this time period clearly demonstrated that satisfied students had lower rates of attrition than discontented students. According to Bean and Metzner (1985), satisfaction has a positive correlation with persistence and is one of the most important aspects to consider when dealing with non-traditional students (Stahl and Pavel, 1992). Ishler and Upcraft (2005) noted that first-year students who were satisfied with their post-secondary experience were more likely to persist than those who were dissatisfied. Additionally, student satisfaction had a positive impact on and was highly correlated to student motivation so improving student satisfaction became a focal area for universities (Scott, Shah, Grebennikov and Singh, 2008; Wiers-Jenssen, Stensaker and Grøgaard, 2002).

3.2.1 Student satisfaction is driving university approaches

Students will certainly experience both highs and lows during their university experience but currently satisfaction ratings of students during and after their university experience have started to drive institutions' approach to student retention. Most North American universities engage in national student satisfaction surveys and student or graduate satisfaction scores are often employed in national university rankings (Serenko, 2010). Similar satisfaction surveys are also performed in other countries too, where competition among universities for students is also growing (Helgesen and Nettet 2007; Lomas, 2007; Woodall, Hiller, and Resnick, 2012). It has been noted that institutions that attain higher student satisfaction rates achieve higher graduation rates and consequently suffer fewer dropouts. In addition, such institutions produce graduates who obtain higher rates of employment and, therefore, are both less likely to default on student loans as well as offer ample alumni donations. Thus, within Canadian universities, student satisfaction has risen in importance to become a central issue that the general public should be concerned about because a substantial portion of Canadian students' educational expenses are subsidized by the government (Serenko, 2010).

3.2.2 Students' perceptions of the university

Helgesen and Nettet (2007) and Thomas (2011) proposed and validated models linking student satisfaction, reputation and loyalty. Helgesen and Nettet's model placed reputation of the institution as a mediating (indirect) variable between student satisfaction and loyalty (i.e. if students started off with a positive perception about the university they were more likely to be satisfied). Thomas (2011) duplicated this study using instruments developed and validated by Helgesen and Nettet's (2007). The objective of Thomas' research was to develop an empirical model linking student loyalty to student satisfaction and student perception of the reputation of the institution. The loyalty construct included three items; 1) the chance of recommending the university to friends/acquaintances, 2) attending the same university if starting from fresh, and 3) the chance of returning to the same university for new courses/further education. Student satisfaction was seen as a

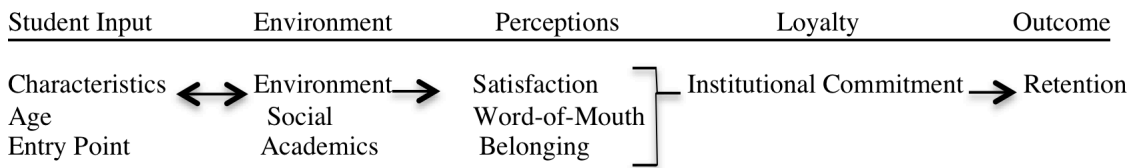
major driver of a student's loyalty with the structural model explaining 57.7% of the variance in the student loyalty. In addition, the reputation of the institution also had a positive impact on student loyalty but it was mediated through the student satisfaction variable. Thomas' (2011) work also highlighted faculty and social interactions and institutional facilities as important facets of student satisfaction. As student satisfaction was the main driver of student loyalty, these underlying factors also hold significance to the research.

Rummel, MacDonald and Cornelius (2011) used a random sample of students that crossed all academic disciplines at a small university to assess satisfaction with various service areas. They discovered, that three major factors drove student satisfaction: identifying with the university, professors' ability to build rapport, and staff's readiness to answer questions. Woodall et al. (2012) explored the relationships between satisfaction and recommendations, factors relating to results (i.e., are results all you wish them to be), attributes (i.e., are service attributes all you would like them to be), price (i.e., considering what you get from the school is the price fair) and net value (i.e., does the school represent good value). Net value had the strongest association with satisfaction and recommendation. In additional literature, a number of other factors have emerged as influencing student satisfaction that include providing support for students' needs through financial assistance, academic guidance, faculty interactions, orientations programs, in-class attention to different learning methods, extracurricular events and the provision of feedback provided to students and from students in the form of course evaluations (Andres and Carpenter, 1997; Astin, 2003; Bean and Metzner, 1985; Cabrera et al. 1990; Christie and Dinham, 1991; Glass and Harrington, 2002; Letcher and Neves, 2010; Pascarella et al. 2008; Rhodes and Nevill, 2004; Serenko, 2010; Scott et al. 2008; Tinto, 1993; Wiers-Jenssen et al. 2002; Yorke and Longden, 2007).

These factors roughly breakdown into student input (personal characteristics) factors and institutional environment influence factors, which fall under the control of universities

and relate to educational experiences (Figure 3.1). As outlined by Ishler and Upcraft (2005) and Thomas (2011), personal factors can include age and gender etc., while institutional factors include instructor teaching style, quality of instruction and promptness of feedback from instructor (Aldemir and Gülcan, 2004; Wiers-Jenssen et al. 2002; Veenstra, 2009), interaction with classmates (Tinto, 1986) and infrastructural facilities (Elliott and Healy, 2001). Institutions must focus on the experiences while at university. Moreover, they need to assess the individual characteristic of the student before they enter the university and determine how these variables interrelate in order to properly support students' success, as they indirectly influence retention.

Figure 3-1 Student input and environmental factors' influence on institutional commitment and retention



4 Emphasizing Customer Services

Identifying the areas that contribute to enhancing students' overall satisfaction is important. Rather, universities cannot stop there, as they must also determine which of these areas appear to have the biggest influence on students' commitment to their institution. Universities can then consider emphasizing the identified aspects of students' educational experience in their retention strategies.

By emphasizing and attempting to improve the aspects of the students' educational experience, universities are not dictating what services students receive. Universities are working together with the student to find out what services students expect which moves student satisfaction into the realm of a customer service model (Kamvounias, 1999; Lomas, 2007; Obermiller and Atwood, 2011; Obermiller et al., 2005; Pitman, 2000). The customer service model has been defined by Boyd (2012) as the considered development of support activities designed to increase satisfaction through customers' perceptions that services have met or exceeded their expectations. These expectations would be different depending on the student's background and personal characteristics.

The old adage "treat 'em right. They'll be back, and they'll tell others" (Spicuzza, 1992, p. 49) applies not only to businesses but also to universities. Being courteous and listening to students, who are a consumer of university services, while at the same time informing the students of what the university can do and then following through with what has been promised are basic and effective retention strategies to emphasize the principles of the customer service-marketing model, such as focusing on customer needs, expectations, and satisfaction (Spicuzza, 1992). Some researchers have stated that when universities do not treat their students as customers (who are entitled to efficient and high quality service) they lose their market advantage to universities that do (Kamvounias, 1999). Student recruitment and retention undertakings are interrelated so attention to

services also assists with student recruitment. “Student-customer satisfaction directly correlates to larger enrollments: Happy students stay in school, so retention rates remain high; happy students tell their high-school friends, so recruitment numbers are higher...” (Emery, Kramer, and Tian, 2001, para. 5). Students have become active collaborators (co-creators) in the value creation process by helping to form the perceived worth of attending the institution through word-of-mouth promotion. Retention strategies should focus on how to keep current students satisfied and returning year-after-year, with the added potential of attracting new students because the most effective and efficient means of recruiting students is through word-of-mouth promotion that comes from already enrolled satisfied students (Alves and Raposo, 2007; Elliott and Healy, 2001).

4.1 Student Input Variables

Although environmental factors are the more easily manipulated, fulfilling expectations based on student characteristics cannot be ignored. The sole measurement of satisfaction with the university’s environment is not enough to pinpoint if students were effectively transitioning towards the incorporation stage. In 1982, Tinto examined the relationship between students and their institutions by expanding on his previous research through the development of the student integration theory of persistence. In the 1982 theory, the combination of both the students’ goal and their institutional commitment influenced their persistence. Thus, students with different backgrounds and personal characteristics require specific retention policies and programs (McClanahan, 2004).

4.1.1 Student entry point (High School vs. College)

Differences in retention rates may be due in part to innovative programs such as the articulation and partnership agreements between colleges (tertiary vocational institutions that focus on the building of skills directly tied to specific occupations) and universities. Within Canada, post-secondary attrition rates were lowest in Prince Edward Island and highest in Quebec, Manitoba, Alberta, and British Columbia (BC) with research indicating that students who dropout are heading in this direction during their first year

(The Edmonton Journal, 2007). It is interesting to note that three of the four provinces identified as having higher attrition rates (Alberta, BC and Quebec) have also traditionally been beacons for encouraging student mobility. These provinces have developed sophisticated systems of articulation and credit transfer that recognize students' credits across post-secondary institutions (Kerr, McCloy, and Liu, 2010). These trends in attrition levels are of interest as the desire to increase student mobility between college and university has recently expanded to include other provinces. For example, in the 2010 Ontario Speech from the Throne, the provincial government announced the "Open Ontario" plan to improve navigation through Ontario's post-secondary system through better systems of credit transfer between college and university (Ministry of Finance, 2010). Promotion of these types of articulation agreements, including prior initiatives such as the Ontario College University Degree-Completion Accord (1999) and the Pan Canadian Consortium on Admissions and Transfer (2006) among others, have resulted in an increasing number of college graduates entering universities (Boggs and Trick, 2009; Kerr et al., 2010; CUCC, 2008). As a result, students are now entering university from two main entry points: high school or college.

The Graduate Satisfaction Survey (2003 – 2004) found that the number of Ontario college graduates attending university (within six months) has doubled since 2001 (ACAATO, 2005). Continuation of this trend is also noted in the 2007 College-University Consortium Council (CUCC) report on college-university transferability. Over a four-year period, the number of students who graduated from college to further their full-time education increased by 3.3 percentage points to 26.4 % (CUCC, 2007a). These statistics identify that more college graduates are entering university but our knowledge about how they are faring in relation to those entering directly from high school is nascent.

The current Canadian research into college and high school entry points (Bens, Polischuk, and Broda, 2004; Gawley and McGowan, 2006; CUCC, 2007b; McGowan

and Gawley, 2006; CUCC, 2008) has focused on the volume of college students entering university, transfer shock¹ experienced by college transfer students or the difference between the two groups' grade point averages and graduation rates. The literature is deficient in the consideration of entry points' influence on institutional commitment as a precursor to the eventual withdrawal from the institution prior to the second year of study.

In 2006, McGowan and Gawley conducted a case study on college transfer students' experiences within the university system. Although university faculty had reported that college transfer students seemed self-confident and were well prepared academically, many of the participants noted specific challenges in making the transition from college to university. McGowan and Gawley (2006) found college entry point students differed from their high school counterparts with regard to expectations about administrative procedures and assistance from support staff. The college entry point students also expressed a lack of self-efficacy regarding their capability to transition to university level work and an overall self-perception they did not belong within the university. All of these things were shaped by their college experiences and prior perceptions of their academic abilities. However, this research was conducted through interviews with support staff, faculty and college transfer students. The students entering the university directly from high school were not interviewed nor were their expectations or perceptions accessed or discussed. These students were only indirectly included in the analysis through statements of comparison deriving from support staff and faculty input.

In the United States (US), research has been conducted into transfer students who move from two-year to four-year post-secondary institutions (Laanan, 2007; Strauss and Volkwein, 2004). However, this research is also difficult to apply to the exploration of entry point because of the context. For instance, research such as Glass and Harrington's

¹ Transfer shock can be defined as the difficulties (drop in grade point average and/or problems with academic and social

(2002) study of transfer shock in the US, compared university students enrolling directly from high school to those transferring from two-year post-secondary community colleges. Traditionally, the Canadian university system differs from that in the US as the post-secondary education system in Canada is designed as a binary system. The Canadian system consists of separate college and university sectors (Kerr et al., 2010). This contrasts with the function of the US community colleges to provide foundational course work for direct transfer to four-year institutions with students being able to take honours level courses while attending the two-year institution.

Canadian studies have identified differing retention rates for university students who entered from the entry point of high school and those who entered from college (Bens et al., 2004; CUCC, 2007b; CUCC, 2008). A 2008 study from York University, found about 30% of college entry students dropped out during their first year while the high school entry point student population's attrition rate was 13.5% (CUCC, 2008). Better results were posted for York University in 2010 - 2011 with attrition rate at 23.9% for college transfer students. This figure was still higher than the 14.2% reported for students entering directly from secondary school (Trick, 2013). Therefore, to assist universities with retention strategies, one needs to move beyond simply identifying college entry point student's transfer shock, comparing grade point averages or attrition rates depending on entry points. A closer examination of these student groupings is needed.

4.1.2 Student age composition²

As mentioned earlier, the Ontario government in 2010 set the goal of achieving a 70% post-secondary attainment rate amongst Ontarians by 2020. This goal would mean increasing post-secondary attainment rates of Ontario's non-traditional 25-64 year-old

² A more detailed version of the review of literature in the section on non-traditional aged students has been published. Wardley, L. J., Bélanger, C. H., and Leonard, V. M. (2013) Institutional commitment of traditional and non-traditional-aged students: a potential brand measurement?, *Journal of Marketing for Higher Education*, 23:1, 90-112, DOI: 10.1080/08841241.2013.810691

student populations from 57% to 62% (OCUFA, 2012). As graduation rates have been identified as a key performance indicator by Ontario government (OCUFA, 2006, 2013), the loss of post-secondary students through attrition would cause movement in the wrong direction and a reduction in government funding.

In many cases, mature students can be marginalized in the mainstream of university institutional life (Ishler and Upcraft, 2005). There are exploratory studies into a multitude of factors which influence non-traditional student attrition (Gilardi and Guglielmetti, 2011; Kim, Sax, Lee, and Hagedorn, 2010; Taylor and House, 2010; Schofield and Dismore, 2010; Sorey and Duggan, 2008; Stahl and Pavel, 1992). However, the majority of the research regarding age differences among non-traditional students has been restricted to public two-year and community colleges. These post-secondary systems have previously held high proportions of mature people returning to upgrade skills and in response to job losses due to redundancies (Sorey and Duggan, 2008). There has been little current retention research that concentrates on possible differences found between the age compositions of the students entering university (Ishler and Upcraft, 2005). According to an AUCC report (2007), 18- to 21-year-olds accounted for 60 % of university students; however, older adults also represented a significant portion as 40 % of the university population was in the older age grouping. This report projected the older age cohort would be considerably larger by 2016. These figures are mirrored internationally with fewer than 60% of university enrolments in Britain being derived from students entering straight from secondary study (Taylor and House, 2010). As far back as 2001 it was noted that within the global context, adult students were starting to represent a high percentage of most countries' university student populations and in some countries they represented the majority (Rautopuro and Vaisanen, 2001).

Differences in characteristics have resulted in conflicting findings regarding the impact of age on attrition. Liu and Liu (2000) found that gender, age and ethnicity had no impact

on retention but according to the findings of Schofield and Dismore (2010), age is one of the predictors of retention. The more mature the cohort the more likely the person was to complete the course and obtain a higher grade. However, these findings have yet to be duplicated across institutions and geographic location. In fact, other studies demonstrate that non-traditional aged students are at higher risk of dropping out than traditional aged students (Finnie and Qiu, 2009; Gilardi and Guglielmetti, 2011; Kim et al., 2010). Older students are much more likely to have significant work or family responsibilities which constrain their involvement in the life of college (Ishler and Upcraft, 2005) which can negatively impact their success.

Due to the intricacies of human behaviour, scholars have been studying the conundrum of student attrition for a long time and are destined to continue doing so. Some of the lack of consistency among studies of older students has been the result of differences in the use of age categories and definitions of what constitutes traditional versus non-traditional age compositions. Some literature uses general categories spanning from 18 to 24 years of age for traditional students (Gilardi and Guglielmetti, 2011; Sorey and Duggan, 2008; Belcastro and Purslow, 2006; Kayla, Yi, and Howard, 1982) while others use between 18 to 21 years (Kim et al., 2010; Taylor and House, 2010; AUCC, 2007). The only consistency regarding traditional students appears to be their entrance from high school. Consequently, exploring students in their first year of university study by restricting the traditional category (students 17³ to 21 years old entering with a secondary school diploma) to students who could not have experienced more than an inconsequential gap between secondary study and university enrolment would be beneficial.

4.1.3 Support of significant others

Strauss and Volkwein (2004) found perceived support from family and peers to pursue a degree and continue in university was connected to student satisfaction and retention.

³ The inclusion of 17-year-olds in this category reflects the recent elimination of the fifth year of secondary school study in Ontario. Students are now entering post-secondary study earlier than in prior studies.

Ishler and Upcraft (2005) identified support and encouragement from significant others as of primary importance to both the adjustment of students to their social and academic environments and retention. Specifically, parents and their influence on students was noted as a factor in student persistence, starting with the encouragement to attend university (i.e. prior to enrolment) and as an on-going influence through continued support (Ishler and Upcraft, 2005). However, the right level of parental involvement is the key. There has been some recent discussion in the literature about some potentially negative aspects of intense parental support. Educators are starting to express concerns when parental involvement continues into adulthood (Segrin, Woszidlo, Givertz, and Montgomery, 2013; Galsky and Shotick, 2012; Vinson, 2013). Intrusive parents can impact emerging adults' higher education studies because, in some studies, as parental involvement increased students became less engaged in school (Padilla-Walker and Nelson, 2012).

According to Galsky and Shotick (2012) and Vinson (2013), the current landscape of family support looks different from that of previous generations, as parents have taken a more active role in their offsprings' university decisions. The term "helicopter parents" has begun to be used to describe parents who "hover" over the lives of their offspring (sheltering them from mistakes, disappointment, or risks by insulating them from the world around them) starting in preschool and continuing to post-secondary education and beyond. This greater parental involvement spans the range of helping students with course selection to disputing their child's grade to contacting their children's professors, university administrators and support staff to discuss their concerns (Padilla-Walker and Nelson, 2012). In the past, this type of interference was limited to rare occasions but it has shifted in some cases to become a more frequent occurrence and with the acceptance of the student. "While they may be a minority of parents, as Millennials⁴ continue to come up through the ranks to higher education this may be just the beginning" (Vinson, 2013, p. 28).

⁴ Millennials: the abbreviation used for the millennial generation also known as Generation Y (i.e. the population born between 1979 and 2000).

Potentially negative effects of helicopter parenting in higher education can include: students experiencing problems with gaining independence, an inability to effectively problem solve on their own and problems with social and academic integration, among others. However, an over attachment to one's child cannot be viewed as totally negative; some aspects of over-parenting are associated with positive outcomes for the child such as increased guidance and emotional support (Padilla-Walker and Nelson, 2012) and this parenting tendency can be associated with greater parental well-being (Ashton-James, Kushlev, and Dunn, 2013). "As parents' intervention in their child's higher education has increased in frequency, intensity, and minutiae" (Vinson, 2013, p. 5), this factor may be on the cusp of helping to identify a cultural shift.

4.1.4 Adapting to university

Dyson and Renk (2006) defined adaptation to a new university setting as the student's ability to cope with and manage problems, challenges, and demands in his or her daily life within the context of their surrounding environment. During the first-year experiences there is a period of adjustment. Adaptation to university is a successful adjustment to the new environment as evident by the presence of power (equilibrium among priorities), affiliation (with the institution) and intimacy (social relationships). Similar to Tinto (1993), this adaptation to university factor is an expansion of the concept of the transitional stage (already made good friends at university) to include other aspects of successful adaptation to university such as the ease of the transition to university and effective management of competing priorities. Expansion of this factor to include a time management component and a social focus implies a combination of academic and social integration aspects.

4.2 Environmental Variables

It is hard for universities to amend the personal characteristics of students, but universities are an aggregate of service encounters that are malleable depending on the focus taken. By examining all services offered by the university, a better understanding of what influences students' institutional commitment, and by extension retention, can be gained. Based on the literature, factors in need of further exploration are presented below.

4.2.1 On-campus vs. off-campus⁵

In Ontario universities, the percentage of first-year undergraduate students enrolled in full-time study living on-campus ranges from 85% to 13.8%, with an overall average of 41.2% (CUDO, 2011). Hence, living on-campus is not part of the transitional process to post-secondary study for 58.8% of these first-year university students. Similar results have been found in the United Kingdom (UK) with 2011 statistics demonstrating only 18% of fulltime and sandwich higher education students (students whose courses include a placement within a relevant industry) residing in institution-owned accommodations during the school term (HESA, 2012).

Due to economic constraints or other factors, many students are not able or willing to stay in university residences. Studies have found that living on-campus can predict academic outcomes and promote increased faculty interaction, participation in extracurricular activities and use of organizational features (Astin, 1984; Christie and Dinham, 1991; de Araujo and Murray, 2010; Pascarella et al. 1994; Tinto, 20007; Turley and Wodtke, 2010). According to Ishler and Upcraft (2005), Astin's 1977 study "found the most important environmental characteristic associated with finishing college was living in a residence hall during the first year" (p. 42). On-campus environments foster academic

⁵ More detailed versions of the review of literature for living arrangements and distance from permanent domicile have been published. Wardley, L. and Bélanger, C. (2013): Rites of Passage: Does adaptation to university mean severing connections?, Tertiary Education and Management, DOI:10.1080/13583883.2012.742557

and social integration leading to increased institutional commitment, with studies demonstrating a connection between students from these on-campus living arrangements and higher rates of retention (Bozick, 2007; Chong Ho, DiGangi, Jannasch-Pennell, and Kaprolet, 2010; Christie and Dinham, 1991; Moos and Lee, 1979; Pascarella and Terenzini, 2005; Tinto, 1993).

According to the literature, living on-campus enhanced student interactions with faculty and peers and improved overall satisfaction with the university choice and social competence (Moos and Lee, 1979). Studies have found that because events were promoted directly by residence halls or through extracurricular groups, students living on-campus were able to form friendships that diverged from those relationships formed by classmates within the lecture hall (Bozick, 2007; Christie and Dinham, 1991; Jacoby, 2000). Moreover, students who had lived on-campus at any point in their academic career, on average, have been reported to consume less alcohol and fewer drugs, study more with their classmates and with their roommates and are more inclined to participate in extracurricular activities than students who had only lived off-campus (de Araujo and Murray, 2010). It is interesting to note that de Araujo and Murray (2010) found there was a long-lasting positive benefit from living on-campus, as these traits persisted even if the student later moved into off-campus housing. However, there is a need for more clarity about the benefits of living on-campus as there are findings, which contradict aspects of this positive lifestyle picture. For instance, some studies (Bélanger, Leonard, and Lebrasseur, 2011; Kuo et al., 2002) found commuter students who live at home had a lower chance of becoming heavy drinkers.

Much of the retention research identifies commuter students who do not become integrated as an at-risk population (Gallais Black, 2009). Yet, it would be a mistake to pigeonhole students living off-campus by saying they also demonstrate a lack of educational ambition. For a number of reasons, such as transportation issues, multiple life roles, family responsibilities (Morrisey, 2012) or a lower sense of belonging to the

institution, they may not be as involved in the campus community but they are no less committed to their educational goals (Jacoby, 2000).

Although frequency of social interaction with others can be a lifestyle choice, students' socio-economic background could also impact their ability to participate in these activities. In contrast to on-campus students, many students who live off-campus spend less time engaging in the extracurricular activities and study habits that would improve their academic performance (de Araujo and Murray, 2010). In addition, working more than 20 hours per week and living at home increased the likelihood that first year students would leave school. In contrast, working 20 hours per week did not increase the attrition rates of first-year students who lived on-campus (Bozick, 2007). Identifying differences between these groups is a point of interest that could expand the current literature.

4.2.2 Proximity of permanent home to university

The geographic distance between the university and the student's permanent home can be the impetus behind a student's enrolment or departure decision. Machado, Brites, Magalhaes and Sa (2011) found that when asked to state the degree of importance students attributed to their satisfaction with specific aspects of the institution, being in close proximity to one's home was rated second in importance behind the institution providing a desired program and ahead of the considerations of the institution's reputation. Williams and Luo (2010) defined proximity as the closeness of a student's home city to the university campus as measured by driving distance. Students who decide to attend universities close to their family homes may have different attitudes towards the availability of family support and the prominence put on environmental variables such as university reputation, size and programs of study than their counterparts (students coming from distances which restrict easy access to their permanent home).

Tinto (2007) stated that based on previous research, “we now know that for some, if not many students, the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence”(p. 4). This is contrary to Tinto’s earlier “rite of passage” view that separation increased integration and commitment. Delucchi’s (1993) study examined a university town environment where most students who technically lived off-campus (commuter students) actually lived within walking distance to their classes and university resources and found no evidence that living in residence positively influenced student performance. This research was also supported by Luo, Vieweg, and Schreck (2006) among others, who found that the proximity of the student’s hometown had a significant positive impact on first-year retention. European research has moved even further by stating that proximity of a university to an individual’s hometown significantly influenced the initial decision to attend university (Spiess and Wrohlich, 2010). The identified advantages for students living close to their home city included: convenience, cost savings, accountability to family, and social integrity through retaining close relationships with family and friends. Conflicting with the mandatory separation position, being able to utilize established support systems decreased their feeling of isolation and their familiarity with the geographic location meant they did not need to make as many adjustments in their lifestyles. Williams and Luo’s study (2010) likewise found the proximity of the student’s permanent home to the university campus had a constructive influence on first-year student persistence. Students who came from the local area (within 50 miles) were more likely to persist than students from more than 50 miles. Thus, depending on the distance between students’ permanent home and the university campus some of the benefits of living on-campus could be mitigated; however, this is an area in need of further exploration.

4.2.3 Faculty interactions

Frequent contact with and positive perceptions about faculty are important during the transition to university, as this is the point where students are starting to form new relationships and support systems. Perceived positive formal and informal interactions with faculty contribute to increasing students’ satisfaction, which influences their commitment to obtaining a degree and their commitment to the institution and reduces

attrition (Cox, Schmitt, Bobrowski, and Graham, 2005; Elliott and Healy, 2001; Hennig-Thurau, Langer, and Hansen, 2001; Pascarella, Seifert, and Whitt, 2008; Serenko, 2010; Tinto, 2007, 2002, 1993; Wyatt, 2011). Examination of this factor is important because Aldemir and Gülcan (2004) also found that when administrators were performing poorly, students remained satisfied with their university when they had high performing faculty.

4.2.4 Academic environment and integration

Evidence suggests that first-year students' classroom experiences are related to persistence (Ishler and Upcraft, 2005). Pascarella et al.'s (2008) research found socialization within the classroom proved to be just as important in effecting retention as satisfaction with the institution, university grades and educational ambition. Tinto, (2007) and Ishler and Upcraft (2005) state that researchers have come to appreciate the importance of the classroom environment, especially for non-residential students such as commuters and adult learners. In these circumstances, "the classroom is for many students, the one place, perhaps only place, where they meet each other and the faculty. If involvement does not occur there, it is unlikely to occur elsewhere" (Tinto, 2007, p. 4).

Wiers-Jenssen et al.'s (2002) analysis of student satisfaction surveys revealed that the academic and the pedagogic quality of teaching were crucial determinants of satisfaction. Although, many notions of the role of students in academia exist, most foundational theorists (Tinto, Bean, Pascarella among others) judge student satisfaction with their educational experiences as a key factor. Research by Rapert, Villiquette, Smith, and Garretson (2004) and Heslop and Nadeau (2010) found students were uniquely qualified to assess their educational experiences based on process and outcome themes. In fact, determinations of quality directly influenced students' satisfaction with their program. Serenko (2010) found satisfaction strongly increased program loyalty and positive word-of-mouth. Interestingly, Serenko's results also indicated that customer satisfaction was affected by program quality and was slightly impacted by perceptions of value; by contrast it was not influenced by prior student expectations.

Academic integration includes the belief that lecturing faculty are personally committed to teaching and supporting students and self-perceptions of intellectual growth (Henning-Thurau et al., 2001; Nelson Laird, Chen, and Kuh, 2008; Sandler, 2000; Tinto, 2002, 1993). In addition, matches between the student's academic goals and the institution's programs (Madgett and Bélanger, 2008; Nelson Laird, et al 2008; Pascarella et al., 2008) and effective management of competing priorities (Tinto, 1993) have also been linked to academic integration. According to Machado et al. (2011), students attributed greater importance and were more satisfied by the quality of teaching, quality of courses taken and knowledge gained from courses.

So what happens when students are not being challenged in the classroom? According to James Côté a full Professor in the Department of Sociology at The University of Western Ontario, universities are facing problems of the reciprocal effects of grade inflation and academic disengagement. Currently, the average university student can treat their academic studies as a part-time job with less effort and engagement and still earn a B average. "The traditional standard for an average performance was a C, but that is now a thing of the past in most of our educational institutions. Many students now expect Bs for putting out a modicum of effort that produces mediocre work, and As if they do any more than this" (2007, para. 5). This phenomenon is a hot topic in academia as reported by McGregor (2013, para. 2): "a steady increase in undergraduate grades assigned at Carleton over the past 12 years means that, should the trend continue, the scarlet letter F will be statistically eliminated sometime in the 2030-31 school year". This topic has been a focus of attention for years. Meng and Anglin (2000) used first-year university grades from the periods of 1973-74 and 1993-94 at seven universities across Ontario to examine potential grade inflation by discipline. They found significant grade inflation in various Arts and Science programs (such as English and Biology) with no change in some subjects like Mathematics. Their results indicated the pattern of rising grades was widespread even if not uniform across all universities or individual courses.

Côté (2007) goes on to point out that “grade inflation is bad for bright students who aren’t challenged and therefore do not develop their intellectual potential in ways that would enrich their lives and contribute their talent to the Canadian economy. Inflated grades are also bad for those who are average or below because they are given higher marks, but not told how to improve. With less asked of students, many simply drift through the educational system and into the workforce without building or maximizing their intellectual potentials” (para. 6). These views regarding issues with disengagement in Canadian universities were expanded on in Côté and Allahar’s later work in 2013 (Jones, 2013). Considering the importance of the academic environment and with the issues surrounding disengage students, the move towards universities offering more articulation and partnership agreements and the changes to the demographic makeup of the student populations (e.g., college transfers, mature students and commuter students) more exploration in this area is needed.

4.2.5 Social integration

The degree to which traditional students become socially integrated impacts their chance of continuing on their educational path (Tinto, 1998). Social integration was described by Tinto (1975) as a level of integration within the institution through social support. “Most departures are initiated because the student perceives an insurmountable problem. Often this problem is the student’s perception of not belonging or not being involved in the institutional community” (Ishler and Upcraft, 2005, p. 31). Social networks and perceptions of the university’s social life provide critical support and the feeling of connection to the university environment; thus, active participation influences satisfaction and retention (Helgesen and Nettet, 2007; Rivas et al., 2007; Tinto, 2002; Wetzel, O’Toole and Peterson, 1999; Wiers-Jenssen et al. 2002). However, more exploration is needed because there is some room for debate about the importance of this aspect of the university environment. Sorey and Duggan (2008) also found non-traditional aged students’ key predictors of institutional persistence included social integration and

commitment to the institution. However, even though early retention models can loosely provide insight into non-traditional students, it is problematic to simply infer foundational retention models such as Tinto's (1993) interactionist theory are suitable for non-traditional aged students. There is currently little evidence that social integration influences their institutional commitment or retention (Gilardi and Guglielmetti, 2011; Taylor and House, 2010; Liu and Liu, 2000; Stahl and Pavel, 1992). Tinto (2007) as well as Andres and Carpenter (1997) point out that participation in social integration outside of the classroom may not be as essential as previously thought for off-campus student persistence or success. In addition, Machado et al. (2011) study found that factors such as attending university to make new friends and to be with friends were ranked as least important when students were asked the importance they attributed to, and their satisfaction with, specific aspects of the institution. Obviously, more attention needs to be given to this factor.

4.2.6 Organizational support

For a long time, measures of student satisfaction have been used to assess the effectiveness of different university services and programs (Bryant, 2006; de Araujo and Murray, 2010; Judson, Aurand, Gorchels, and Gordon, 2009; Nelson Laird et al, 2008; Letcher and Neves, 2010; Roberts and Styron, 2010). Rummel et al.'s, (2011) findings indicate that in-classroom interaction with professors and staff competency are also important. Wiers-Jenssen et al.'s (2002) analysis also demonstrated that social climate, aesthetic aspects of the physical infrastructure and the quality of services from the administrative staff were important to improving student satisfaction. In fact, insufficient information about the course or institution provided by institutions during the recruitment process, before the students enter the university, is a major cause for withdrawal (Yorke and Longden, 2007). These findings support further exploration of this factor.

4.2.7 Extracurricular activities

In addition to self-confidence, career opportunities and quality of teaching in general, extra-curricular activities are included among the factors with the greatest impact on satisfaction (Letcher and Neves, 2010). Earlier, Pascarella and Terenzini (1991) also found participation in extracurricular activities were connected to retention. This factor has remained a significant point of concern for generations of students. Prior research has also acknowledged differences in students' extracurricular involvement depending on their living arrangements (Astin, 1984; de Araujo and Murray, 2010; Christie and Dinham, 1991; Pascarella et al, 1984; Tinto, 2007; Turley and Wodtke, 2010). With an overall average of 41% of students living off-campus (CUDO, 2011), examination of this factor is timely.

4.3 Institutional Commitment

As mentioned earlier, retention of students has become an important measure that assessing bodies use to determine quality and accountability of post-secondary institutions. It has been tempting for academic institutions to focus only on satisfaction levels as these do influence institutional commitment, which in turn affects retention (Figure 3.1). This concept was explored in Bean's (1980) causal model of attrition, which included four categories of variables: background variables (precollege characteristics); organizational determinants including support services, faculty, living on-campus, among others; intervening variables (satisfaction and institutional commitment) and the dependent variable (student dropout). Bean's model explored the chain reaction created by these variables, i.e., background variables influenced responses to specific organizational determinants, organizational determinants then influenced satisfaction levels which impacted institutional commitment (intervening variables), which in turn influenced the final decision to withdraw from the institution. Bean (1980) found that satisfaction was one of the most important variables in explaining institutional commitment. Similar results were also found for nontraditional students (Metzner and Bean, 1987).

In contrast, Archambault (2008) used 418 surveys collected from the three private, higher education institutions in New England to test a structural equation model developed for the study. The data reported that there were significant relationships between service performance and student satisfaction; by contrast, there was no link between satisfaction and institutional commitment. With conflicting views expressed in the literature, exploration of these intervening variables is needed. The amalgamation of satisfaction with other intervening items that help to form institutional commitment presents a broader picture of how to modify students' decision to leave before it has been confirmed through attrition (Figure 3.1). By using the institutional commitment construct as the dependent variable, one can pinpoint areas of concern while students are still enrolled and accessible; thus, at the cusp of the attrition/retention decision and before they have actually left.

Retention models in academia rely heavily on workplace research. Commitment to an institution has been defined and explored in a variety of ways in the organizational and educational literature. In general, most organizational commitment research definitions refer to a commitment to the organizations as an obliging force that gives direction to behaviour by binding a person to a particular course of action (McNally and Irving, 2013). Within the education context, Bean (1979b) defined institutional commitment as a measurement of students' loyalty toward membership in an organization. Pascarella (1985) defined institutional commitment as a student's expectation that he or she will remain satisfied with his or her institution and the student's anticipation of remaining enrolled at the institution. According to McNally and Irving (2013), there is extensive commitment literature, using a traditional workplace context that supports the assumption that high levels of commitment could be positively associated with students' engagement and negatively associated with students' intention to quit school. Using Chickering's (1969) theory of vectors and Tinto's (1987) interaction theory, Billups' (2008) research employed dimensions of growth and development and students' overall commitment to

and satisfaction with their university as factors leading to persistence in a program. Based on the premise of Tinto's 1993 model that institutional commitment directly influenced retention, the research of Hennig-Thurau et al. (2001) approached student loyalty using Tinto's 1993 concept of institutional commitment within the framework of relationship marketing. They hypothesized that student loyalty was directly determined by a student's perception of quality of teaching, trust of the institution's personnel, integration into the academic system, goal commitments, perceptions of service quality and commitment to the institution. Hennig-Thurau et al. (2001) found, through linear structural equation modeling, that most of their model's structure was supported by key determinants of student loyalty such as quality of teaching and students' commitment to their institution.

4.3.1 Belonging and positive word of mouth recommendations

Additional educational literature has identified a sense of belonging (Madgett and Bélanger, 2008) as an important aspect of commitment. Baumeister and Leary (1995) concluded that human beings are motivated to fulfill a pervasive desire to belong by forming and maintaining enduring interpersonal attachments with others. Marshall, Zhou, Gervan, and Weibe (2012) explored multiple layers of students' sense of belonging and found participants, "described their sense of belonging to the university as being affected by interacting with peers, making new friends, interacting with faculty and advisors, living in residence, and having a manageable course load. Those who described a lack of sense of belonging to the university linked it to two or these factors (interacting with peers and not making friends) as well as the size of the campus and concerns about maintaining GPA" (p. 134). Belonging is an important consideration as many retention theories encompass students' contextual fit within an institution's environment. This factor combined with students' satisfaction with the choice of institution and a willingness to recommend the university to others are commonly used as components of institutional commitment (Bélanger, Mount, and Wilson, 2002; Bowden, 2011; Rivas et al., 2007; Strauss and Volkwein, 2004; Tinto, 2002; Wæraas and Solbakk, 2008).

4.3.2 Components of commitment

Some of the educational research has also included the consideration of the costs associated with leaving the institution before obtaining the student's goal of earning a degree. The sunk costs of tuition, residence fees, and the time spent studying make the decision to leave less attractive (Wetzel et al. 1999). Thus, similar to workplace commitment, institutional commitment in the education context might vary as a function of the three components of commitment: affective commitment (emotional attachment), normative (obligation), and continuance commitment (perceived cost) (McNally and Irving, 2013). Finding out which type of commitment drives student behaviour is important because in goal setting literature, individuals are less motivated by a sense of obligation. In addition, empirical testing has found, if individuals remain primarily to avoid costs associated with leaving (e.g., sunk costs) they will not do more than what is required of them and could start to behave in a disconnected way as a result of feeling trapped in their situation because it is too costly to leave (McNally and Irving, 2013).

McNally and Irving's (2013) research explored these three factors of institutional commitment. Their findings suggest that in terms of commitment, students' behavioural intentions are closely matched to those of traditional workplace employees with lower turnover intentions found more often in those who had affective commitment profiles rather than those with normative or continuance commitment profiles. The results of their study demonstrated that respondents with low levels of affective commitment formed intentions to leave their universities. These findings supported Bowden's (2011) research. He found there were two types of commitment: calculative commitment and affective commitment. On the one hand, calculative commitment has been linked to the more prosaic rationale for not switching universities based on cost-benefit factors such as difficulty transferring course credits or conflicting entrance requirements; on the other hand, affective commitment is connected to an emotional desire to continue the relationship as evident in the willingness to invest in the relationship through positive word-of-mouth recommendations to others. Bowden's (2011) research results indicated that student loyalty was most strongly determined by psychological attachment; student

satisfaction alone was not sufficient enough to generate loyalty, as there also needed to be a sense of belonging. In addition, students act as either disparagers or advocates of the university so the willingness to recommend the university is yet a further level of commitment (Bowden, 2011; Bélanger et al., 2002). As studies have indicated that people often behave in ways that are consistent with their intentions, these studies' findings might encourage universities to increase not only satisfaction levels but also students' emotional attachment to their institutions. These findings suggest exploration specific to affective commitment factors (such as satisfaction, a sense of belonging) and behaviours (such as positive word-of-mouth recommendations) would help to advance the literature.

4.4 Data Collection

The two studies, included in Phase One of the research, employ a cross-sectional research design that sampled the student population of two host universities and their satellite campuses. Data were collected for these research projects in 2009⁶ and in 2011 using an on-line survey-questionnaire that was designed to obtain information concerning the behaviours, beliefs and observations of undergraduate students in their first year of university study. The sample of students was drawn from two universities with their main campuses in a similar geographic region; however, using University 2 (U2)'s main campus in addition to its regional locations in other geographic locations throughout the province helped to mitigate this weakness.

In both studies, contact with the first-year students was made through the universities' email system using emails that contained links to the online survey. The survey instruments was formed from 2009 Cooperative Institutional Research Program (CIRP) Freshman Survey questions, which have been previously validated through annual review and have grown to involve over 700 institutions since its introduction in 1966 (Astin, 2003), and partially through questions that were common to multiple studies in student

⁶ Although Leslie Wardley was the lead investigator, the 2009 survey was constructed with the help of Dr. John Nadeau and Dr. Ann Pegoraro. As it was collected for a prior study, it would be considered secondary use of anonymized data in this context.

retention (NSSE, 2008; Strauss and Volkwein, 2004; Yates, 2005). The two surveys were conducted at the same time of the year (November) and did have some overlap in some of the survey items but the 2011 survey was not a duplication study. Some of the survey items used in the 2009 study were eliminated, combined or modified in the 2011 version; thus, a longitudinal study was not possible. However, some overall determinations can be made regarding the span of years because there was consistency in the dependent variable construct used to signify institutional commitment in both surveys. In order to quantitatively calculate the views, personalities and descriptions of student's university experiences, five point Likert-type scales were used with participants asked to respond to each statement in terms of their own degree of agreement or disagreement to the multiple items listed.

4.4.1 Profile of research respondents

The surveyed undergraduate university students, in their first year of university study, were asked to assess their initial impressions of their campus and to provide some demographic data. In the 2009 survey, the total respondents to the online survey from the recruitment emails ranged from 18% to 29% depending on the location with 329 of the respondents originating from U1 and 164 originated from U2. A similar outcome was found in the 2011 survey, with a 20% response rate of completed surveys with 346 of the respondents originating from U1 and 255 from U2. These levels of responses are comparable to the response rates normally found for online surveys. According to the findings of Michael Braun Hamilton, an online survey analyst, the total response rates for online surveys is 13.34% with a median rate of 26.45% (2009). However, it should be noted for both surveys that students who had certain characteristics may have been more prone to respond so there might be a response bias based on access. For example, some students may not use their university email account and, depending on their living arrangements, some students may not have had access to the Internet outside of classroom hours so their ability to respond to the survey may have been blunted.

These universities proved to be a good choice for the 2009 study as they both enroll a higher percentage of college graduates as a proportion of first-year university registrants than other Ontario universities (Kerr et al., 2010). In the 2009 survey, high school and college entry point students were directly targeted with students entering from other avenues excluded. The excluded students made up a very small portion of the participants, but the narrowing does represent a limitation in the findings as the survey participants do not represent all sections of the 2009 student population. In 2009 there was an entry point distribution of 409 (83%) originating from high school and 84 (17%) from college. This entry point split is similar to the combined average (18.6%) of the student populations as reported for U1 in the 2008 National Survey of Student Engagement (NSSE) which stated 24% of first-year students had attended community college prior to their admission to the university and for U2 in the CUCC report (2007b) which stated college transfer students made up 13.25% of the university's student population in 2006-2007. The 2011 data represented a wider section of the student population as students entering from various avenues were retained (80% high school, 13.6% college and 6.4% other avenues). Unfortunately, although students who had a college diploma were identified, the 2011 survey did not ask questions that would allow one to accurately determine if the student had entered university directly after graduation. As there could have been a significant gap between graduation from one institution and enrolment at their university, it was not possible to perform an analysis based on the entry point of the students who had reported attending college before enrolling in university. Too many unidentified external variables made it impossible to be able to determine if differences were caused by the educational avenue or potential life experiences obtained during the transition.

In the 2009 study, 70% of respondents stated their parents' income was below \$99,999; therefore, 30% was reported above the \$100,000 threshold. This changed a small amount in the 2011 survey with 62.2% reporting parental income below \$99,999. Research has supported the inclusion of the perceptions of tuition costs and other post-secondary expenses as they could have an influence on both the decision to enroll at a specific

university and the retention rates of students (Cabrera et al., 1990; Madgett and Bélanger, 2008; Wetzel et al., 1999). Initially, a financial support construct variable was included in the analysis but the groups were not statistically different in the test of mean and this factor did not influence institutional commitment in both surveys so it was removed. After review of the student participants' parental income brackets and survey responses to a question about students' confidence regarding their ability to afford their education, it is logical that financial constraints were not a concern for many of the participants.

A breakdown of the percentage of time spent engaged in specific activities (work and socializing) each week during the school year (Table 4.1) was important to capture for each of the surveys as this information could be used to identify potential time constraints during the school term. In the 2009 survey, the only grouping of interest for household duties was the age categories (2.8% of 17-to-21 year olds reported spending 11 to > 20 hours per week engaged in household duties versus 21.2% in the 22-to-55+ age) and entry point (high school 3.8% reported spending 11 to > 20 hours versus the 13.2% reported by those transferring from college).

Similar results for the age category were also found in 2011 (only 4.4% of 17-to-21 year olds reported spending 11 to > 20 hours per week engaged in household duties versus 31.9% of the 22-to-55+ age). There were some small variations between groupings in the time reported completing homework, but they were not meaningful enough for discussion.

Andres and Carpenter (1997) state that quantitative research confirmed that high school grade point average (GPA) is a strong indicator of students' academic success in university; thus, lower entrance grade levels could be a precursor to attrition. Entrance grades were not included in this analysis as the majority of student participants were in the top ranges. In the 2009 survey, 65.9% of the participants reported a high school

average of 80% or higher. In the 2011 survey, an average of 80% or higher was reported by 74.2% of the respondents. In the 2009 study and the 2011 study the majority of the participants in this study were attending their university of choice, as the findings respectively reported 72.2 % (2009) and 75.1% (2011) of students listed their current university as their first choice.

Table 4-1 Percentage of time engaged in specified activities each week during the school year (2009 and 2011 participants)

2009	Factor	Category	None	< 1 hrs.	1-2 hrs.	3-5 hrs.	6-10 hrs.	11-15 hrs.	16-20 hrs.	> 20 hrs.
Work	Entry Point	High School	20.3	2.4	2.2	5.1	13	18.1	16.1	22.7
		College	20.3	1.2	2.4	3.6	9.5	20.2	16.7	26.2
	Age (years of age)	17-to-21	20.4	2.4	2.4	5.2	13.5	19	16.4	20.9
		22-to-55+	19.7	1.4	1.4	2.8	5.6	15.5	15.5	38
	Accommodations	On-Campus	23.3	2.2	1.3	5.8	15.7	15.7	16.1	19.7
		Off-Campus	17.8	2.2	3	4.1	9.6	20.7	16.3	26.3
	KM from permanent home (KMs)	0 to 50	13.3	1.2	2.9	4.6	13.3	24.9	14.5	25.4
		51 to 500+	24.1	2.8	1.9	5	11.9	15	17.2	22.2
Socializing	Entry Point	High School	0.2	3.4	9.8	20.3	31.5	17.4	6.4	11
		College	1.2	4.8	16.7	34.5	15.5	16.7	7.1	3.6
	Age (years of age)	17-to-21	.2	3.1	8.8	22	30.3	19	6.2	10.4
		22-to-55+	1.4	7	23.9	26.8	19.7	7	8.5	5.6
	Accommodations	On-Campus	.4	4	7.6	20.6	30.5	19.3	6.7	10.8
		Off-Campus	.4	3.3	13.7	24.4	27.4	16.5	6.3	8.9
	KM from permanent home (KMs)	0 to 50	0	3.5	15.6	25.4	25.4	16.2	5.8	8.1
		51 to 500+	.6	3.8	8.4	21.3	30.6	17.8	6.9	10.6
2011	Factor	Category	None	< 1 hrs.	1-2 hrs.	3-5 hrs.	6-10 hrs.	11-15 hrs.	16-20 hrs.	> 20 hrs.
Work	Age (years)	17-to-21	26.2	1.6	1	6.4	15	16.2	14.1	19.5
		22-to-55+	24.8	1.8	0	3.5	8	3.5	11.5	46.9
	Accommodations	On-Campus	27	1.8	.6	6.3	15.9	16.2	11.4	20.7
		Off-Campus	24.6	1.5	1.1	5.2	10.8	10.8	16.4	29.5
	KM from permanent home (KMs)	0 to 50	22	1.6	1	4.7	13.6	13.6	18.3	25.1
51 to 500+		27.8	1.7	.7	6.3	13.7	13.9	11.5	24.4	
Socializing	Age (years)	17-to-21	.6	2	7.4	20.9	26	20.1	12.1	10.9
		22-to-55+	4.4	5.3	22.1	26.5	22.1	8.8	2.7	8
	Accommodations	On-Campus	.3	1.5	6.3	21.6	25.8	20.1	12.9	11.4
		Off-Campus	2.6	4.1	14.9	22.4	24.6	15.3	7.1	9
	KM from permanent home (KMs)	0 to 50	2.6	4.7	11.5	20.9	25.7	14.7	8.4	11.5
51 to 500+		.7	1.7	9.5	22.4	25.1	19.5	11.2	9.8	

Statistics reported for first-year students in full-time undergraduate study living on-campus for both of these universities, averaged 55% (CUDO, 2011). The CUDO's 2011 results of students living on-campus were similar to the 2011 study (55.4%). The survey respondents living on-campus appear to be slightly underrepresented in the 2009 dataset

(45.2%). However, some of this variance could be linked to differences in collection timeframes (2009 collection versus the CUDO 2011 statistics).

Finally, the gender split of the 2009 respondents was 30% male and 70% female. This is comparable to the gender averages of both universities, with U1's National Survey of Student Engagement (NSSE) 2008 findings identifying a gender breakdown of 33% male and 67% female and U2's 2003/2004 breakdown offered on their website of 25% male to 75% female. Therefore, the representation of the 2009 survey respondents is similar to recent statistics about both universities' student populations. In the 2011 study, the gender split was a bit more pronounced with the respondents' gender breakdown revealing a higher proportion of female respondents (80.2 %) compared to male respondents (19.8 %). A slightly higher percentage of female participants in the 2011 study than reported in the two university student populations' statistics could represent a concern that the sample did not adequately reflect the student population. However, although participants in this study spanned core undergraduate departments (education, nursing, psychology, commerce, science, kinesiology, history and geography, among others), nursing students and students within the education program, which are traditionally known to experience higher concentrations of women, formed 39% of the survey respondents. Thus, it was reasonable to expect a slightly higher percentage of female participants.

During statistical analysis, significant differences between the genders were not evident in either the 2009 or the 2011 research studies so this demographic characteristic was not included in the analysis. Similar results were found in Serenko's (2010) work on student satisfaction. Gender was entered into his model as moderating variables, but it was removed, as it was not found to be statistically significant.

4.4.2 Data analysis methods

An analysis of the data consisted of a three-step process using different statistical techniques. First, the measurement items were evaluated as a reflection of the construct. Second, the potential independent constructs were tested against the dependent construct of institutional commitment to assess which constructs were more important to consider. Third, the responses were assessed based on specified groupings to determine if differences existed.

The first step involved factor analysis and reliability tests to confirm that clusters of measurement items reflect the underlying constructs reviewed in the literature. The items clustered under all of the variable categories. Tables 4.2 and 4.3 present the results of this analysis.

Table 4-2 Factor Analysis and Cronbach's Alpha Nov. 2009 Study

Construct	Scale Items	Range of Loading	Cronbach if removed	Cronbach's Alpha
Extracurricular / Social	participate in volunteer or community service work	.741	.652	.724
	seek personal counselling	.573	.704	
	participate in student clubs or groups	.747	.647	
	participate in student government	.584	.700	
	volunteer work	.518	.741	
	communicate regularly with your professors	.575	.696	
	discuss course content with students outside of class	.480	.705	
Academic Integration	I am finding university support services are readily accessible	.499	.704	.697
	I am able to manage my time between competing priorities	.694	.499	
	I am able to understand the content and information presented in courses	.713	.578	
Support of Significant Others	my parents wanted me to go	.780	.606	.705
	my parents wanted me to come here	.834	.482	
	my friends wanted me to come here	.702	.711	
Social Integration	this university has a good reputation for its social life	.609	.802	.700
	the natural setting of this university	.617	.754	
	The orientation program helped me get off to a good start	.661	.533	
	I have already make good friends since starting school	.651	.477	
Institutional Commitment	I would recommend this university to others	.743	.727	.780
	How likely are you to be satisfied with this university	.709	.666	
	overall I feel a sense of belonging at this university	.607	.721	

Table 4-3 Factor Analysis and Cronbach's Alpha 2011 study

Construct	Scale Items	Range of Loading	Cronbach if removed	Cronbach's Alpha
Academic Environment	I am satisfied with my academic experiences	.733	.823	.868
	My classes are preparing me for further academic study	.660	.851	
	My classes are enjoyable	.644	.831	
	Material presented in class is intellectually stimulating	.599	.831	
	I am learning new things in my classes	.548	.864	
Institutional Commitment	I would recommend this university to others	.604	.561	.739
	I am satisfied with my university choice	.638	.733	
	Overall I feel a sense of belonging at the university	.564	.733	
Perceptions of Faculty	Faculty members come to class well prepared	.497	.832	.850
	Faculty members communicate effectively	.585	.796	
	I am satisfied with the quality of instruction in my classes	.612	.798	
	I am satisfied with my instructors' availability outside of class	.558	.835	
	I am satisfied with faculty respect for students	.598	.832	
Extracurricular	Attended campus social events	.530	.735	.790
	Attended campus cultural events	.490	.739	
	Attended campus lectures (in addition to regular classes)	.337	.755	
	Participated in on-campus community service	.483	.736	
	Participated in off-campus community service	.412	.744	
	Attended home games of university athletics teams	.457	.741	
	Participated in student government	.379	.751	
	Participated in peer study groups	.379	.754	
	Talking with teachers outside of class	.426	.757	
	Exercise or sports	.465	.768	
Volunteer work	.453	.755		
Organizational Features	The campus provides a welcoming environment in which to learn	.640	.563	.695
	I am finding help with questions and problems	.543	.694	
	The admission/recruitment materials portrayed this campus accurately	.585	.598	
	The orientation program helped me to get off to a good start	.488	.644	
Adapting to University	Overall my transition to university has been easy	.524	.566	.636
	I have already made good friends at university	.471	.617	
	I am able to manage my time between competing priorities	.494	.605	

The factor analysis is looking for simple structures or a pattern of results where each variable loads in only one factor. Tables 4.2 and 4.3 include a column that provides information about the factor loadings (factor pattern matrix). This information represents: 1) the variable weights for each factor and 2) the correlation between the variables and the factor within the possible value ranges from -1 to +1 (Bruin, 2006).

The next analytical process involved the Cronbach Alpha tests to determine the reliability of the multi-item scales. Normally, alpha values above .70 are considered good when using large surveys and values in the range from .71 to .99 are considered to be

exceptionally high (Gliem and Gliem, 2003). Smaller ranges of Cronbach's Alpha values may be acceptable for exploratory type studies. When the inclusion of a scale item reduced the Cronbach's Alpha value it was removed, unless the item's inclusion was supported by its clear fit within the construct.

While Cronbach Alpha values for these constructs ranged between .697 and .780 in the 2009 study and .636 and .868 in the 2011 study, most were in the good and high range demonstrating that the students were responding consistently to the survey items and that these items reflect the same underlying construct. After testing for reliability, for the remaining analysis, the factored variables were transformed into construct variables consisting of the summed survey items.

4.5 Explaining Institutional Commitment

Linear regression is concerned with the nature and strength of the relationship between two or more variables. Therefore, the use of this statistical method enables one to identify which constructs are most important in predicting institutional commitment. The construct of institutional commitment was the same for both studies, so although the independent variables are different in the 2009 and 2011 studies, they are measured against the same dependent variable. For both studies the "enter" method was used with all of the independent variables being enter all at the same time in a single model. The results show the models were a good fit for both studies with the equation explaining a statistically significant portion of the variability in the dependent variable: 2009 study ($F= 235.393$; $p < .05$) and 2011 ($F=149.427$; $p < .05$). The adjusted R Square statistic demonstrates that the model explains 65.6% (2009 study - Table 4.4) and 55.7% (2011 study - Table 4.5) of the variance in the dependent variable. In addition, for both the 2009 and 2011 studies three of the indicator constructs achieved p-values less than .05 indicating significance. Therefore, one can use three of the constructs from each year to understand institutional commitment.

As the predictors were factor scores, there were no multicollinearity issues with any of the constructs as the variance inflation factor (VIF) statistics are all considered small (i.e. less than 5) for both studies. In the 2009 study, two of the three Beta values positively influenced the construct used to identify institutional commitment; Social Integration ($\beta = .638$; $p < .05$) and Academic Integration ($\beta = .266$; $p < .05$); however, the construct of Support of Significant Others ($\beta = -.113$; $p < .05$) proved to be negatively correlated with institutional commitment. In the 2011 study, all three Beta values positively influenced the construct used to identify institutional commitment; Organizational Features ($\beta = .363$; $p < .05$); Adapting to University ($\beta = .345$; $p < .05$) and Academic Environment ($\beta = .211$; $p < .05$). The discussion of the linear regression results (2009 and 2011) have been ordered based on the independent variables' Beta size so the reader is cognisant of the variables' importance in predicting institutional commitment.

Beta(s) are the standardized coefficients. These are the coefficients that you would obtain if you standardized all of the variables in the regression, including the dependent and all of the independent variables, and ran the regression. By standardizing the variables before running the regression, you have put all of the variables on the same scale, and you can compare the magnitude of the coefficients to see which one has more of an effect. You will also notice that the larger betas are associated with the larger t-values and lower p-values (Bruin, 2006, para. 8).

4.5.1 Discussion of 2009 linear regression

Table 4-4 Regression of Factors on Institutional Commitment 2009 Study

Adj. R-Square	Std. Error	F	Sig. of F		
.656	.502	235.393	.000		
Relationship	Std. Beta Coeff.	Std. Error	t	Sig. of t	Collinearity (VIF)
Extracurricular / Social	.021	.032	.739	.460	1.125
Academic Integration	.266	.032	8.864	.000	1.290
Support of Significant Others	-.113	.022	-4.166	.001	1.047
Social Integration	.638	.028	20.802	.000	1.344

Social Integration ($\beta = .638$; $p < .05$): This independent variable had the largest Beta size and was more predictive of institutional commitment (dependent variable) levels than any other variable. Students in the first term are more interested in developing an internal network of social connections as evident by their responses to the questions: this university has a good reputation for its social life; I was attracted to the natural setting of the university, student's positive views about the orientation program and their ability to make friends easily. The results demonstrate that students were influenced by views formed before admission, such as their recruitment and selection criteria as evident by the positive view of the university's social life, reputation and image of the university campus. Similar to Tinto's research, these items relate to perceptions that were created before admission to the university but which remain important reference points for students as these impressions influenced students' views of initial social interactions and their level of institutional commitment.

Academic Integration ($\beta = .266$; $p < .05$): This variable had the second highest Beta size so it was also predictive of institutional commitment levels but less so than the social integration variable. Pascarella et al. (2008) found classroom instruction had a direct effect on institutional commitment. The findings of this research support and expand on Pascarella et al.'s 2008 findings as the inclusion of items pertaining to instructional behaviours of faculty in addition to the support of staff and the students' effective management of competing priorities proved to be predictors of institutional commitment. Further, these findings demonstrate the importance of not just faculty interactions but also accessible support services and the development of personal time management skills.

Support of Significant Others ($\beta = -.113$; $p < .05$): This variable had the lowest Beta size of the three variables but it would be a mistake to ignore its ability to predict institutional commitment levels. Similar to prior research (Ishler and Upcraft, 2005; Strauss and Volkwein, 2004), this variable included items that related to parental and friendship support for attending university in general and the university attended in particular.

However, in contrast to earlier educational retention research findings, this construct which reflected parents' and friends' influence on the university selection process, negatively predicted institutional commitment leading one to believe that outside pressure from parents and friends could create dissatisfaction with the university selected/attended. If students are not an integral part of the selection making process, there is a greater chance these students would feel their university, or the university educational system in general, did not meet their needs or preconceived vision of university life, thus, lowering their institutional commitment. This finding is an important addition to the literature as parental guidance has been on the rise (i.e., millennial "helicopter" parenting styles). Galsky and Shotick (2012), Padilla-Walker and Nelson, 2012, Segrin et al., 2013 and Vinson (2013) had identified potentially negative effects of helicopter parenting in higher education. Thus, the parents who are negatively intervening in their children's higher education not only present challenges socially, pedagogically, and legally – they also interfere with the commitment process. As millennial's entry to university are on the rise, this finding proves timely.

Note: In the regression analysis, it is important to note that Extracurricular / Social ($\beta = .021$; $p = >.05$) did not significantly predict the variable of Institutional Commitment. The timing of the survey could have influenced the lack of significance for this construct. In the first term, students are forming friendships and adapting to life within the university environment. Externalities would not be a primary focus this early in their academic career. It will take time for students to learn about what services and opportunities for participation in clubs and volunteer work are available within the university and surrounding community. It would be interesting to compare the students' responses to these externality type questions in a second survey conducted during the winter term after they have developed a social network and become more familiar with the university, cities and greater community as a whole. However, for this survey, as this construct did not predict institutional commitment it was removed from scrutiny in the regression results discussion and the ANOVA analysis in order to focus on and clarify the main points of interest.

4.5.2 Discussion of 2011 linear regression

Table 4-5 Regression of External Factors on Institutional Commitment 2011 Study⁷

Adj. R-Square	Std. Error	F	Sig. of F		
.557	.545	149.427	.000		
Relationship	Std. Beta Coeff.	Std. Error	t	Sig. of t	Collinearity (VIF)
Academic Environment	.211	.044	5.313	.000	2.125
Perceptions of Faculty	.007	.043	.173	.863	2.073
Extracurricular	.021	.032	.718	.473	1.095
Organizational Features	.363	.040	10.373	.000	1.639
Adapting to University	.345	.033	10.303	.000	1.504

Organizational Features ($\beta = .363$; $p < .05$): This independent variable had the largest Beta size and was more predictive of institutional commitment (dependent variable) levels than any other variable. Not only does this construct evaluate obtaining assistance with problems, it also includes the students' views of the campus and personal perceptions of the validity of the marketing information. With wide-ranging options available to many post-secondary students, the atmosphere of the educational setting has now become very important. Students want to study in an environment which is welcoming and supportive of the learning process. Tinto (2000) discussed the importance of universities taking responsibility for environmental factors, and not just focusing on student factors when analyzing student retention issues. This study supports and expands on this view. The participants of this study wanted more from their institutions than simply a nice place to study. They placed a great deal of importance on the after-sale services as the findings revealed institutional commitment was influenced by the learning environment and the accuracy of the recruitment material.

Adapting to University ($\beta = .345$; $p < .05$): This independent variable's Beta was close in size to the organizational features variable. In his 1993 study, Tinto expanded his original theoretical work to suggest a connection between social integration and external commitments and their positive influence on students' institutional commitment (Okun et

⁷ A version of this table and some of the discussion have been published in Wardley, L. J., Bélanger, C. H., and Leonard, V. M. (2013) Institutional commitment of traditional and non-traditional-aged students: a potential brand measurement?, *Journal of Marketing for Higher Education*, 23:1, 90-112, DOI: 10.1080/08841241.2013.810691

al., 2009). It was perceived that, by adding this further aspect to social integration, the model became an adequate predictor of student withdrawal. Thus, this construct also measures both social interactions and balancing of competing priorities. By adding the aspect of external commitments to the construct this research provides new information. Both in support of and contrary to Tinto's research, this study confirms that social integration influences institutional commitment.

Academic Environment ($\beta = .211$; $p < .05$): This variable had the lowest Beta size of the three variables. Tinto (2000) stated "for those who commute to school or have family commitments, the classroom may be the only place where they interact with students and faculty so it becomes very important" (p.4). Pascarella et al. (2008) and Tinto (2002) found classroom instruction had a direct influence on institutional commitment. Similar results were evident in this research as findings supported prior student retention research but also added a new element as this study expanded this construct to include more than the classroom environment. Students in this study were asked to comment on their discernment regarding preparation for further study. As stated earlier, Heslop and Nadeau (2010) and Rapert et al. (2004) found students were uniquely qualified to assess their educational experiences based on process and outcome themes. In fact, determinations of quality directly influenced students' satisfaction with their program. This study also established that, in addition to demonstrating positive views of the academic components of the classroom atmosphere (process), if students felt there was a future benefit (outcome) they were also more committed to the institution.

Note: In the regression analysis, it is important to note that the Perceptions of Faculty and Extracurricular variables did not significantly predict the variable of institutional commitment. Thus, these variables were removed from scrutiny in the regression results discussion and the ANOVA analysis in order to focus on and clarify the main points of interest. The surveys were conducted in the later part of the first term (November); however, these variables may be tied to longer timeframes. During the first term,

students may not yet feel the pressure of competing obligations. Many first-year students may not understand the important role faculty members play in students' successful transition to university because of the guidance and academic feedback they can provide so Faculty Interactions ($p = > .05$) may be lower at this point. It is possible the importance of this variable increases over time. The same may apply to the 2011 Extracurricular ($p = > .05$) variable, which was expanded from the 2009 construct in hopes it would capture more key components. As it was also was not a predicting factor, in the first-term students may be just starting to form friendships and social networks during the first term at university. It would be interesting to explore what would happen if the surveys were administered later in the school year or students' academic career (third or fourth year).

4.6 Construct Differences Based on Means

As the univariate scales had intrinsic meaning to the analysis, it was determined that the analysis of variance (ANOVA) test was the best statistical test to determine if there were significant differences among the groups. This "technique analyzes the variance of the data to determine whether [one] can infer that the population means differ" (Keller, 2007, p. 493). A p-value below .05 resulting from an ANOVA test would indicate that the selected constructs have significantly different means among the groups analyzed. Tables detailing the ANOVA results for entry point (Table 4.6), age (Table 4.7), distance from permanent domicile (Table 4.8) and on-campus vs. off-campus (Table 4.9) are included below; a brief description of the main findings from the student survey will allow one to identify the key differences between specific groups. Previous studies had identified distinct groups with differing qualities, needs and outlooks depending on student input characteristics and environment. The ANOVA results partially verified these findings, as these student characteristics and living arrangements were the cause of differences, to varying degree, for the constructs tested.

4.6.1 Entry point

Academic Integration, Social Integration and Institutional Commitment were all found to have significantly different means based on entry point with p-values < .05. The high school entry point students reported a higher mean compared to college entry point students for each of the factors with significant differences (Table 4.6). Also, it should be noted that Support of Significant Others ($p = > .05$) was not significant; therefore, there was no differences between high school and college entry point student respondents with regard to this factor.

Table 4-6 Mean comparisons and ANOVA results for constructs based on entry point

Construct	2009 Mean Scores		F	Sig.
	High School n=409 83%	College n=84 17%		
Academic Integration	3.62	3.40	5.405	.020
Support of Sign. Others	2.31	2.20	0.800	.372
Social Integration	3.41	2.96	16.277	.000
Institutional Commitment	4.03	3.62	16.141	.001

(**Bold** indicates higher mean and significance at $p < .05$)

Academic Integration ($p < .05$): Students, based on their entry points, viewed academic integration differently. High school entry point students appeared to be more academically integrated within the university system than their college counterparts (\bar{x} HS = 3.62 vs. \bar{x} C = 3.40). This is an interesting finding as college entry point students' previous post-secondary education did not appear to have provided an advantage over those entering directly from high school. This could be tied to the advanced standing provided to the college entry point students. Many of these students are skipping first- and second-year foundational courses where faculty expectations regarding academic performance are formed (Gawley and McGowan, 2006; Laanan, 2007). Similar to the work of McCroskey, Booth-Butterfield, and Payne (1989) and McGowan and Gawley (2006), it suggests this group of students may require more support to develop adequate study habits and overcome possible feelings of intimidation within the upper-year classroom.

Social Integration ($p < .05$): Why are college entry point students significantly less socially integrated (\bar{x} HS = 3.50 vs. \bar{x} C = 3.03)? As they would have more employable credentials, it would be logical to identify work as a major consideration but as noted in Table 4.1, differences between the entry points regarding hours spent working for pay during the school term are not that noteworthy. College entry point students did report lower levels of time spent socializing (Table 4.1) with only 27.4% of respondents spending from 11 to >20 hours of their time socializing with friends versus the 34.8% reported by high school entry point students. Coupled with the majority of college entry point students not living on-campus in university residences (only 10.7% vs. 51.1% of high school entry point students) their social interactions would often be limited to the time spent in class. They would simply have fewer opportunities to become socially integrated. In addition, high school entry point students are traditionally offered more orientation support during their first year than college entry point students who are transferring into upper-year classes from other institutions (McGowan and Gawley, 2006; Tinto, 2002). The high school entry point grouping have the opportunity to participate in multiple institution-supported social events during their first week at university and are provided ample opportunity to become acquainted with their peers. It has been noted in the research of Gawley and McGowan (2006), the differences in the maturity levels of incoming high school students and those coming from college were viewed as a deterrent against college transfer students' involvement in orientation week functions. In some schools they would not be extended the offer – even if the student fit within the younger age grouping.

Institutional Commitment ($p < .05$): Significant differences between the entry points were also found in the responses to questions about institutional commitment (\bar{x} HS = 4.12 vs. \bar{x} C = 3.80). High school students were more likely to feel a sense of belonging, recommend their university to others and be satisfied with their university. In this research, the constructs with significant differences between the entry points were found

in areas that have previously been associated with voluntary leavers. Previous studies have identified academic standards, external demands from family, financial costs and learning environment all leading to feelings of being unprepared for university study. Coupled with the responses from this research, college entry point students could be at a higher risk for dropping out. This corresponds with the previous findings that college entry point students tend to have higher attrition rates (Bens et al., 2004; Carney, 2012; CUCC, 2007b; CUCC 2008).

4.6.2 Age

Support of Significant Others, Social Integration, Institutional Commitment, Academic Environment, Organizational Features and Adapting to University were all found to have significantly different means based on age with p-values < .05. Therefore, there were differences between students' respondents with regard to each of the factors (Table 4.7).

Table 4-7 Mean comparisons and ANOVA results for constructs based on age

Construct	2009 Mean Scores		F	Sig.
	17-to-21 n = 422 85.6%	22 and over n = 71 14.4%		
Academic Integration	3.59	3.55	.114	.736
Support of Sign. Others	2.40	1.67	32.347	.000
Social Integration	3.43	2.75	31.975	.000
Institutional Commitment	4.00	3.76	.917	.027

Construct	2011 Mean Scores ⁸		F	Sig.
	17-to-21 n = 488 81.2%	22 and over n = 113 18.8%		
Academic Environment	3.75	3.91	4.483	.035
Institutional Commitment	4.14	3.76	19.594	.000
Organizational Features	3.64	3.38	12.205	.001
Adapting to University	3.81	3.50	13.101	.000

(**Bold** indicates higher mean and significance at p<.05)

⁸ A version of the 2011 table and parts of the analysis has been published in Wardley, L. J., Bélanger, C. H., and Leonard, V. M. (2013) Institutional commitment of traditional and non-traditional-aged students: a potential brand measurement?, Journal of Marketing for Higher Education, 23:1, 90-112, DOI: 10.1080/08841241.2013.810691

The younger age grouping reported higher means scores compared to those in the older age grouping for each of the factors with significant differences, except for the Academic Environment variable (those over 22 years of age demonstrate higher means) and the Academic Integration which had no discernable difference between the groups.

Support of Significant Others ($p < .05$): For younger students (17-to-21 years old), interference during the university selection process could create far-reaching issues with their institutional commitment. The younger age grouping was statistically different from the older grouping (\bar{x} 17-to-21-year-olds = 2.40 vs. \bar{x} 22-to-55+-year-olds = 1.67) with a higher mean. Support of significant others has a negative influence on institutional commitment so the higher mean for the younger age group represents a point of concern. Galsky and Shotick (2012) and Vinson (2013) had identified potentially negative effects of helicopter parenting in higher education. It is important to note, in regard to the support of significant others that there were no significant difference in the means for the two entry point groupings (high school vs. college). These findings identify students within the younger age grouping who are experiencing issues with the academic environment - potentially because of interference from those in their personal support network. This seems to be true regardless of their educational background. Students in the 17-to-21 years of age category spent less time occupied in household duties (Table 4.1) with only 2.8% spending from 11 to >20 hours per week versus 21.2% of 22-to-55+ year-old students. This difference is interesting as it speaks to 17-to-21 year olds “getting” more support than “giving” in all areas of their lives.

Social Integration ($p < .05$): Why are older students significantly less socially integrated (\bar{x} 17-to-21-year-olds = 3.43 vs. \bar{x} 22-to-55+-year-olds = 2.75)? This finding is similar to the entry point analysis as college entry point students were also less socially integrated. It would be easy to link these two factors together and form the opinion that these groups represent the same student population because a majority of the college entry point students would naturally fall predominantly into the mature student category. This leap

would be a mistake, as the ANOVA findings and the disparities in the percentage breakdown of time spent engaged in primary activities demonstrate key and informative differences between the entry point and age categories. Based on the literature for the entry point students, a lack of social integration could be linked to the difficulty that could occur when bypassing first-and second-year curriculum based on prior learning and the lack of formal orientation programs for students transferring into upper-year courses (McGowan and Gawley, 2006; Tinto, 2002). However, mature students would be progressing through the system in the traditional way, as they are not gaining entry to upper-year courses based on prior learning and transfer credits etc. For those in the older age grouping, social interactions may be impacted more heavily by conflicts between outside obligations such as multiple life roles (such as work or family) and time constraints regarding “free time” to interact with other students outside of formal class timeframes.

In Table 4.1, differences are found between hours spent working for pay for the 17-to-21 year old (20.9% working > 20 hours per week) and the 22-to-55+ year old students (38% working > 20 hours) in the 2009 study. It also important to note that differences were also found in the 2009 study regarding hours spent working for pay between the 22-to-55+ age group (38% working > 20 hours) and the college entry point students (26.2% working > 20 hours) included in the previous ANOVA analysis – confirming the potential reasons why these groups were not as socially integrated and verifying noteworthy differences between these two student input factors (entry point and age).

Institutional Commitment ($p < .05$): As the same construct was used to assess institutional commitment in both studies, some comparisons across the years can be made in this area. Institutional commitment proved to be significantly different between the two age categories in both the 2009 and 2011 studies. Contrary to the research of Liu and Liu (2000) and Schofield and Dismore (2010), this study supports the prior research of Gilardi and Guglielmetti (2011) and Kim et al. (2010) as students in the non-traditional

age category appeared to be at higher risk of dropping out in both studies. The participants in the mature age composite appeared to be less willing to recommend their university to others, feel a sense of belonging or express overall satisfaction with their university (2009: \bar{x} 17-to-21-year-olds = 4.00 vs. \bar{x} 22-to-55+-year-olds = 3.76 and 2011: \bar{x} 17-to-21-year-olds = 4.14 vs. \bar{x} 22-to-55+-year-olds = 3.76).

Academic Environment ($p < .05$): Meaningful differences in the responses of each group were also found with this construct (\bar{x} 17-to-21-year-olds = 3.75 vs. \bar{x} 22-to-55+-year-olds = 3.91) with a significantly higher mean for the non-traditional aged students. This result was somewhat surprising as the majority of these two groups had similar secondary school grade point averages (GPA) and the measurable differences in parental education levels did not appear to support the non-traditional student's heightened interest. Parental support and educational achievements have been attributed to increases in future generations' pursuit of post-secondary education (Krahn and Taylor, 2005); overall, the parents of the traditional age students were the ones who possessed more post-secondary education. If one based the findings on parental education influences, it would have been logical for this construct to have more bearing on the traditional aged students. However, this finding supported the prior retention research of Bean and Metzner (1985). This study also found that students in the non-traditional category put more relevance on their academic environment than the traditional age category. This is interesting because in the 2009 study there were no differences in the academic integration construct. The inclusion of the classroom environment and long-term academic goal aspects to the 2011 construct appears to have made a difference as mature students do not appear to be intimidated by their delay of entering university study and, in fact, demonstrate a more long-term focus to their studies than traditional aged students. They held positive views regarding the academic aspects of their university.

Organizational Features ($p < .05$): Once again the traditional age category demonstrated significantly higher mean averages for this construct (\bar{x} 17-to-21-year-olds = 3.64 vs. \bar{x}

22-to 55+-year-olds = 3.38). Similar to research conducted by Tinto (2002) and McGowan and Gawley (2006), the results for this study found traditional students generally participated in more orientation activities and utilized more university support than those in the mature age category. These differences could be attributed to the following reasons. Due to the short distance, for some of the non-traditional students', from the university to their permanent abode (33.5 % live under 10 km from their year-round home versus only 12.2 % of 17- to 21-year-olds); it is logical that they selected their university because of its location. It is also possible they may have spent less time researching the campus and its features, or had to choose the local university because of their current job status. In addition, when this observation was combined with the findings from the adapting to university construct, the mature age category identified struggling with time management between competing priorities as an issue, so they may not have had the time available in their schedules to connect with support staff and faculty to find answers to their questions and problems.

Adapting to University ($p < .05$): Significant differences were also noted for this construct. Those in the traditional age category expressed better adaptation to university (\bar{x} 17-to- 21-year-olds = 3.81 vs. \bar{x} 22-to-55+-year-olds = 3.50) compared to their counterparts. At first glance this result was surprising as the majority (65.6%) were attending school over 101 + km from their permanent abode. However, in the 2011 study, they were also more likely to live in university residences (65.8% versus 10.6% for those in the non-traditional age category). Factors such as living on-campus in residence and being immersed in the university atmosphere could potentially contribute to these students becoming more easily socially integrated. In addition, in the 2011 study, 92.8% of the traditional aged students identified themselves as single versus only 66.4% of older age grouping, which may mean that differences in family responsibilities could account for the younger students being able to juggle competing priorities more effectively. Also of note is the significant differences between the age groups in the 2011 study regarding the time spend working for pay during the school term (Table 4.1). Of the older age group 46.9% are working > 20 hours per week versus only 19.5% in the 17-to-21 year

old age category. This focus on work commitment could hamper their overall adaptation to the university culture.

4.6.3 Proximity to permanent domicile

Academic Integration, Support of Significant Others, Social Integration, Institutional Commitment, Organizational Features and Adapting to University were all found to have significantly different means based on distance from permanent domicile with p-values < .05. Also, it should be noted that Academic Environment was not significant (p-value >.05); therefore, there was no differences between students' respondents with regard to this factor. The participants in the 51 to 500+ category reported higher means scores for each of the factors with significant differences, except for the Support of Significant Others variable (Table 4.8).

Table 4-8 Mean comparisons and ANOVA results for constructs based on distance from permanent domicile

Construct	2009 Mean Scores		F	Sig.
	0 to 50 KM n=173 35.1%	51 to 500+KM n=320 64.9%		
Academic Integration	3.43	3.67	9.761	.002
Support of Sign. Others	2.48	2.19	8.606	.004
Social Integration	2.97	3.53	45.021	.000
Institutional Commitment	3.67	4.12	34.238	.000

Construct	2011 Mean Scores ⁹		F	Sig.
	0 to 50 KM n = 191 31.8%	51 to 500+ KM n = 410 68.2%		
Academic Environment	3.79	3.78	.066	.797
Institutional Commitment	3.85	4.17	19.837	.000
Organizational Features	3.41	3.67	16.979	.000
Adapting to University	3.54	3.85	19.568	.000

(**Bold** indicates higher mean and significance at p<.05)

⁹ A version of the 2011 table and discussion for distance from permanent domicile have been published in Wardley, L. and Bélanger, C. (2013): Rites of Passage: Does adaptation to university mean severing connections?, Tertiary Education and Management, DOI:10.1080/13583883.2012.742557

Academic Integration ($p < .05$): Students living further away from their permanent domicile demonstrate significantly more academic commitment (\bar{x} 0 to 50 KMs = 3.43 versus \bar{x} 51 to 500+ KMs = 3.67). They also reported less competing priorities than those who are closer to established social networks. In the 2009 study, (Table 4.1) students living 0 to 50 KMs from home are working more (64.8% are working 11 to > 20 hours per week versus the 54.4% in the 51 to 500+ group). That represents approximately a 10.5% difference between the two groups. The respondents to the survey expressed confidence in their ability to finance their education; nevertheless, this may be coming at a high cost to their academic studies. The participants of the survey were full-time students. Full-time academic study should be considered a full-time job. Universities across Ontario traditionally restrict student on-campus employment opportunities to 10 hours per week in recognition of the importance of this viewpoint. Both groups are working enough hours to impact their academic performance; however, it is those closest to home that are most at risk. They are identified as being at risk for each of the factors tested. They are working more for pay and socializing less than those who have separated from their prior communities. Based on how students are allotting their after school hours times, as the academic integration factor included classroom content, time management and support services it makes sense that there would be differences expressed. It is of interest that when additional items were added to the academic atmosphere factor in the 2011 survey (such as long-term academic goals, intellectual stimulation etc.) and time management and support services were removed - the factor identified no statistically significant differences between these groups. This change points to the importance of time management and finding support services for those attending university in close proximity to their permanent domicile.

Support of Significant Others ($p < .05$): As noted earlier, this student input factor negatively influences institutional commitment so a higher mean signals an area that needs attention. Students who are living closer to their permanent domicile during the

school term are an at-risk group (\bar{x} 0 to 50 KMs = 2.48 versus \bar{x} 51 to 500+ KMs = 2.19). Those who stay closer to home to gain family support or because of pressure from support networks may be hurting themselves. This finding is contrary to Tinto's (2007) statement, "we now know that for some, if not many students, the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence"(p. 4). Williams and Luo's study (2010) also found the proximity of the student's permanent home to the university campus increased first-year student persistence. In the literature, living closer to the permanent home was listed as an advantage as it increased social integrity through retaining close relationships with family and friends. However it is important to note, according to this study's findings, these same conveniences can also create more obligations. Making lifestyle adjustments by cutting ties and treating education as a main priority could improve final outcomes.

Social Integration ($p < .05$): Contrary to Williams and Luo (2010) and Luo et al. (2006), the results of this study found students without easy access to their prior community made significant more progress in becoming socially integrated than those students with easy access to their permanent home (\bar{x} 0 to 50 KMs = 2.97 versus \bar{x} 51 to 500+ KMs = 3.53). This finding is somewhat surprising as the 5.2% difference between how many of those living closer to their family home reported socializing 11 to > 20 hours per week (Table 4.1) whereas for those living further away this aspect was not really that striking (30.1% versus 35.3% of the 51 to 500+ group). There could be more at play here. Being closer to home may cause these students to remain too attached to previously established social networks so meeting new friends that are connected to the university, may not be viewed as important.

Institutional Commitment ($p < .05$): As stated earlier, Tinto (1988) describes students' participation in a 'Rite of Passage' during their post-secondary study by their progression through three stages: separation (leaving home, family and friends behind), transition (to a new and different life at college) and incorporation (making new friends and becoming

actively involved in college life) (Kelley-Wallace, 2009). Van Gennep and Tinto proposed that, in new situations, embracing the customs and values of the institution was important because the disassociation from previous support networks and communities (separation) allowed the individual to form bonds (transition) and lasting commitment (incorporation) to the new institution. The 2009 study also found students were significantly more likely to be committed to their university if separation was encouraged through a greater distance between the students' permanent home and the university (2009: \bar{x} 0 to 50 KMs = 3.67 versus \bar{x} 51 to 500+KMs = 4.12). The 2009 results were confirmed again in the 2011 study as, once again, those with permanent domiciles further away from the university demonstrated more committed to their institution (2011: \bar{x} 0 to 50 KMs = 3.85 versus \bar{x} 51 to 500+KMs = 4.17).

Organizational Features ($p < .05$): Significant differences in the two groupings' responses were found for students' permanent homes as a higher mean was reported for those living further away (\bar{x} 0 to 50 km = 3.41 versus \bar{x} 51 to 500+km = 3.67). This is logical simply because the long distances for some of the students' between the university and their permanent abode, means these students would have less opportunity to travel back home so they would need to learn how to navigate the universities support services in order to become successful.

Adapting to University ($p < .05$): Students who lived on-campus during the school term felt their transition to university was easier. This also applied to students moving farther away from prior communities (\bar{x} 0 to 50 KMs = 3.54 versus \bar{x} 51 to 500+ KMs = 3.85), as noted earlier, adapting to university involves coping with demands within the context of the new environment. It is normal for students in the first weeks of university to not only start to make friends but also to rely heavily on home support (Wilcox, Winn, and Fyvie-Gauld, 2005). However, students living within easy access to their prior social networks appeared to have on-going conflicting priorities, which have restricted their transition to university. To support this view, it is noteworthy that in the 2011 study (Table 4.1),

students living 0 to 5 KMs from home reported working more (57% are working 11 to > 20 hours per week versus the 49.8% in the 51 to 500+ group) and socializing less (34.6% are socializing 11 to > 20 hours per week versus the 40.5% in the 51 to 500+ group).

4.6.4 Living accommodations (school term housing)

Academic Integration, Social Integration, Institutional Commitment, Organizational Features and Adapting to University were all found to have significantly different means based on living accommodations with p-values < .05 (Table 4.9). Also, it should be noted that Support of Significant Others and Academic Environment were not significant (p-value >.05); therefore, there were no differences between students' respondents with regard to this factor. The participants in the On-Campus category reported a higher mean for each of the factors with significant differences.

Table 4-9 Mean comparisons and ANOVA results for constructs based on on-campus vs. off-campus

Construct	2009 Mean Scores		F	Sig.
	On-campus n=223 45.2%	Off-campus n=270 54.8%		
Academic Integration	3.68	3.50	6.256	.013
Support of Sign. Others	2.27	2.31	.229	.632
Social Integration	3.72	3.01	83.242	.000
Institutional Commitment	4.21	3.76	35.982	.000

Construct	2011 Mean Scores ¹⁰		F	Sig.
	On-campus N= 333 55.4%	Off-campus N= 268 44.6%		
Academic Environment	3.78	3.78	.005	.944
Institutional Commitment	4.29	3.78	65.056	.000
Organizational Features	3.78	3.34	62.239	.000
Adapting to University	3.98	3.47	62.762	.000

(**Bold** indicates higher mean and significance at p<.05)

¹⁰ A version of the 2011 table and discussion for living arrangements were published in Wardley, L. and Bélanger, C. (2013): Rites of Passage: Does adaptation to university mean severing connections?, Tertiary Education and Management, DOI:10.1080/13583883.2012.742557

Academic Integration ($p < .05$): There were statistically significant differences between the means of students living in residence and those living off-campus (\bar{x} on-campus = 3.68 versus \bar{x} off-campus = 3.50) for this variable. As the literature findings suggest, in contrast to on-campus students, many students who live off-campus spend less time engaging in the extracurricular activities and study habits that would improve their academic performance (de Araujo and Murray, 2010). In addition, working more than 20 hours per week and living at home increased the likelihood that first-year students would leave school. However, working 20 hours per week did not increase the attrition rates of first-year students who lived on-campus (Bozick, 2007). In the 2009 study, (Table 4.1) students living off-campus report working more (26.3% worked > 20 hours per week versus 19.7% of the On-campus group). Working 20 hours per week was specifically mentioned as a risk factor in prior studies that examined student retention. With more off-campus students working greater than 20 hours per week this connection is noteworthy and could point to an area of concern that should be explored. This potential area of concern is reinforced by the 2011 survey's academic environment construct's lack of significance. This construct focused on classroom content with the support services and the effective management of time among competing priorities components (present in the 2009 study's academic integration construct) removed.

Social Integration ($p < .05$): According to the literature, living on-campus enhances students' social interactions and fosters social competencies (Moos and Lee, 1979). Research has found that students living on-campus were able to form friendships that diverged from those relationships formed by classmates within the lecture hall (Bozick, 2007; Christie and Dinham, 1991; Jacoby, 2000). The findings in this study are similar because students living on-campus in residence were significantly more socially integrated (\bar{x} on-campus = 3.72 versus \bar{x} off-campus = 3.01). In the 2009 study (Table 4.1), students living on-campus were socializing with friends more (36.8% spending 11 to > 20 hours per week versus the 31.7% of the off-campus group) but the difference would only be about 5% so it is not too remarkable. Frequency of social interaction with others can be a lifestyle choice but students' socio-economic background could also

impact their ability to participate in these activities. In the 2009 study, (Table 4.1) students living off-campus were working more (63.3% are working 11 to > 20 hours per week versus the 51.5% in the on-campus group). With approximately a 12% difference between the two groups this connection is noteworthy.

Institutional Commitment ($p < .05$): In the 2009 study, significant differences in the responses were found for living arrangements (\bar{x} on-campus = 4.21 versus \bar{x} off-campus = 3.76). Thus, students who progressed through the separation and the transition stages of the 'rites of passage' demonstrated more commitment (incorporation) to their new institution. The 2009 results were confirmed again in the 2011 study as, once again, those who were living off-campus demonstrated less institutional commitment (\bar{x} on-campus = 4.29 versus \bar{x} off-campus = 3.78). In support of the findings of Chong Ho, DiGangi, Angel-Jannasch-Pennell, and Kaprolet (2010), Christie and Dinham (1991), Gallais Black (2009) and Moos and Lee (1979), students who live on-campus experienced better adaptation to university than those students living off-campus. Students living on-campus are more socially and academically integrated within the new community, which eased their transition and adaptation to the university demands leading to higher levels of institutional commitment.

Organizational Features ($p < .05$): Significant differences in the two groupings' responses were also found with this construct. This variable is closely connected to the early stages of transitioning to university life. The survey was conducted during the first term of the participants' initial year at university when students are in search of help and support resources. Students living on-campus generally utilized more university support than those in the off-campus grouping (\bar{x} on-campus = 3.78 versus \bar{x} off-campus = 3.34). This is logical; these students would need to learn how to navigate the universities' support services quickly in order to become successful because they have less outside support, as they are not living with family or other advocates.

Adapting to University ($p < .05$): Similar to those who do not live in close proximity to their permanent home, students who lived on-campus during the school term felt their transition to university was significantly easier. These students had already become socially integrated through meaningful friendships at university and were better able to manage competing priorities than those students living off-campus (\bar{x} on-campus = 3.98 versus \bar{x} off-campus = 3.47). It is normal for students in the first weeks of university to start making friends but also to rely heavily on home support (Wilox, Winn, and Fyvie-Gauld, 2005). However, students living at home with their prior social networks intact appeared to have on-going conflicting priorities, which have restricted their transition to university. In the 2011 study, (Table 4.1) 29.5% of students living off-campus report working > 20 hours per week versus 20.7% of the on-campus group. As mentioned earlier, working more than 20 hours per week and living at home increased the likelihood that first year students would leave school. In contrast, working 20 hours per week did not increase the attrition rates of first year students who lived on-campus (Bozick, 2007). These findings highlight a potential problem area in need of attention.

4.7 At-Risk Profile Emerges From Linear Regression and ANOVA Results

When the linear regression results are combined with the mean scores recorded during the ANOVA analysis (Table 4.10), the findings contained in this section of the dissertation provide one with a roadmap for identifying areas of concern for specific sectors of the student population. A profile of at-risk students quickly emerges identifying three main areas of focus: entry point, age and living arrangements.

Table 4-10 Combination of Linear Regression and ANOVA results for Constructs

Linear Regression Significant Factors	Categories that represent problem areas for factors that were significant in the linear regression analysis			
	Entry Point	Proximity to permanent abode	Age	Living Accommodation (School Term Housing)
Academic Integration	College	0 – 50 KMs	No difference	Off-campus
Support of Significant Others*	No difference	0 – 50 KMs	17 – 21 years old	No difference
Social Integration	College	0 – 50 KMs	22 – 55+ years old	Off-campus
Institutional Commitment (2009)	College	0 – 50 KMs	22 – 55+ years old	Off-campus
Academic Environment	-	No difference	17 – 21 years old	No difference
Organizational Features	-	0 – 50 KMs	22 – 55+ years old	Off-campus
Adapting to University	-	0 – 50 KMs	22 – 55+ years old	Off-campus
Institutional Commitment (2011)	-	0 – 50 KMs	22 – 55+ years old	Off-campus

*Support of significant others has a negative influence on institutional commitment so higher means represent problem areas.

4.7.1 Profile of at-risk students

First, college transfer students who live close to their permanent abode and off-campus are at risk. A specific age could not be assigned to this profile as age was a factor in some areas; by contrast age did not make any difference in another area identified as significant for the college transfer student and vice versa; as prior education makes a difference for some age categories but did not for others. These two categories (i.e. age and entry point) represent different risk profiles so they cannot be combined to create one simplistic outline of at-risk students. This point regarding the research findings is noteworthy, as it had been a habitual practice to dismiss the importance of entry point, as subtle differences were hard to determine because the majority of college transfer students fall in the mature age category. Separating this factor for closer examination contributed new and important information to the literature at a timely point, especially with the increasing trend of college/university bilateral and direct entry programs facilitated through degree completion, joint/integrated or credit transfer/advanced standing programs. College transfers are on the rise in Ontario and there is a push for universities to start accepting college transfer credits at an almost one to one ratio. This move is outlined by the 2013 College-University Consortium Council (CUCC) Business Administration Transfer Pathway Project which was formed to develop pathways for graduates of the General Diploma (two year) and Advanced Diploma (three year) Business Administration so block credits from college studies could be received from collaborating universities.

Second, both age categories include students who are at-risk. As stated earlier, students who are 17-to-21 years of age and live in close proximity to their permanent abodes and live off-campus represent one group. This group is not influenced by prior post-secondary education as both college transfer students and those entering directly from high school are equally at risk. The second at-risk age profile consists of students who are in the 22 to 55 plus age category, live off-campus within 50 KMS from their permanent abode and have transferred from college. Thus, the two-age categories have different points of risk. Focusing only on one age group would be a mistake as the research findings demonstrate this approach fails to acknowledge that students lack homogeneity regarding patterns of prior post-secondary attendance, reasons for pursuing university study, family challenges and resources, among others. In addition, it does not recognize that differences between non-traditional and traditional students may be attributed to factors other than age. Accordingly, a one age category approach to profiling students who are at risk would leave out traditional age students who, because of a number of other factors, may exhibit non-traditional characteristics (Kim et. al, 2010) and vice versa.

Finally, the combination of living in close proximity to permanent abodes and off-campus represents significant risks for students as this profile of students' living arrangements spelled potential disaster for those transferring from college and both age categories of students. The army engages in a boot camp approach to initiating new members where new recruits are isolated from outside influences and put through an orientation process as a unit. The findings from this research did point to some of the logic of this approach of the severing of prior networks so "newbies" are forced to embrace the group norms and become integrated in the new culture.

4.8 Theoretical contributions

The aim of the Phase One study was to explore which variables influenced students' commitment to their institution and the differences that existed between university students based on educational background, students' age configurations, living arrangements during the school year, and the distance between the university and the student's permanent home. As anticipated, the findings did provide new information regarding which factors influenced institutional commitment for the identified at-risk groups mentioned earlier.

Entry Point: College entry point students had lower mean scores for not only institutional commitment but also variables retained in the linear regression model that influenced institutional commitment, such as academic and social integration. They answered less favourably to questions regarding accessibility to support services, comprehension of class content, forming friendships and an overall feeling of belonging at the university. These markers identify that college entry point students are less satisfied with their university choice, thus, demonstrating lower institutional commitment and a potentially higher risk for dropping out than their high school entry point peers. Higher college entry point dropout rates (CUCC, 2008; Trick, 2013) identify a problem that needs to be addressed.

Although college entry point students had been identified as a more at risk group what is interesting, and not covered in the prior retention research, is that the findings do not rule out the high school entry point entirely. Support of Significant Others also proved to be a factor that influenced institutional commitment. Although this construct did not differ significantly between the entry points, with its negative correlation, both entry point populations are demonstrating their need to be strategically involved in the university selection process – adding a new component to the literature.

Age: The age aspect of the Phase One study adds to the literature. The findings indicate that retention factors do vary for first-year students depending on age. For example 17 – 21 years old students demonstrate a lack of academic engagement while the university’s organizational (support) features and social interactions contribute more to their campus integration; whereas, the academic environment is key to non-traditional aged students’ integration but they struggled with social interactions, obtaining support features and adapting to university. Overall for students in the non-traditional age category, lower levels of institutional commitment are noteworthy. Those in the non-traditional age category need more provisions to increase their adaptation to university and encouragement to utilize organizational support features. Universities have started to move in this direction by taking on more customer service tactics. This research lends credibility to this approach for those who are identified as at-risk.

In addition, similar to the entry point grouping, the risks of the overactive involvement of significant others were flagged for those in the age categories. For younger students, increased family or friend interference in the selection process and stress to attend university could be negatively related to their long-term adaption to university and institutional commitment. These findings were similar across the grouping of living off-campus and close to one’s permanent home, pointing again to potential helicopter parent risks.

Living arrangements and distance from permanent abode: The importance of separation regarding students’ living arrangements and distance from home impacted the transition and incorporation variables, which influenced students’ institutional commitment. Combining the two groupings of distance from permanent domicile and living arrangements has not been done previously and adds new information to the current literature as both of these factors consistently represented problem areas. There was no

variance in the findings – these categories were jointly identified as a point of concern every time causing issues with academic and social integration, institutional commitment, use of organizational features and the overall adaptation to university. In contrast, living over 51 KMs away from one's permanent domicile (not within an easy commute) and living on-campus were not highlighted as problem areas. Separation as a key component of transitioning to university has been largely dismissed in the more current student retention literature (Ishler and Upcraft, 2005; Tinto, 2007). However, for many students these findings suggest that it may be less about easing students into university life through encouraging students to continue to rely on prior networks and supports and more about having students sever their ties and take on the customs and culture of the host environment.

The overarching theoretical contribution; the research supports the view that separation, from both prior social networks and communities, is still an important stage in the 'rites of passage' in the current generation. Before one gets too focused on this point, the research is not decreeing that students are unable to progress through these stages without severing ties. However, separation does appear to intensify the odds of increasing first-year undergraduate students' commitment to their university. These findings may only get more pronounced as helicopter parents, economic downturns and increased demands for costly on-going education (theory and practical application) are creating the need to retain these ties. This focus requires more exploration in the literature. Based on this research there are possible solutions to the problems listed, which have been identified and included in the implication section.

4.9 Practical Implications¹¹

As the prior theoretical contribution section highlighted, the research findings from the Phase One research offer new insights to the student institutional commitment and retention literature. These findings also provide an opportunity to identify some underlying implications that have arisen based on the stated issues; thus, some practical suggestions have been included below.

Offer stronger orientation programs: College entry point students appear to demonstrate less institutional commitment. Adequate information regarding the university's services and interaction with peers can enhance morale and increase institutional commitment. University identity is constructed through interactions with organizational literature, campus personnel and networking, which are all aspects of the orientation process, and initial interactions with faculty, staff and peers. Orientation programs need to be redesigned and new academic student support programs developed which will appeal to the maturity level and special academic needs of the college entry point student. This could offer some synergy through universities offering orientation programs that combine mature students and those transferring from college. However, specialized aspects need to be added to this combined student orientation program. As discussed, because of transfer credits being awarded based on prior study, college entry point students are not transitioning with other first-year students (no matter their age). These students would have different needs related to finding support systems within the upper year classes they are transitioning to so including opportunities to form additional networking with more senior level students would be advantageous.

Enlarge support services: It would appear universities have been focusing too much on the traditional aged student population. The results of this study established non-

¹¹ Although most are novel, it should be noted that a few of the implication in this section are similar to those published in Wardley, L. and Bélanger, C. (2013): Rites of Passage: Does adaptation to university mean severing connections?, Tertiary Education and Management, DOI:10.1080/13583883.2012.742557 and Wardley, L. J., Bélanger, C. H., and Leonard, V. M. (2013) Institutional commitment of traditional and non-traditional-aged students: a potential brand measurement?, Journal of Marketing for Higher Education, 23:1, 90-112, DOI: 10.1080/08841241.2013.810691

traditional aged students' comfort was restricted to the university's academic environment. This finding seems to indicate that mature students are prepared for the academic rigor but are not transitioning well and embracing the social and support characteristics of university. Since they have been identified in the Phase One research as demonstrating less institutional commitment, academic rigor has not proven to be enough to retain them. Their inability to adapt to university and less reported success in finding support within the institution could be attributed to specific lifestyle choices. They are dealing with non-traditional family and living configurations; therefore, respect for these differences could improve their overall fit with the university. Providing more support services through extending administration's hours beyond the standard 9 to 5 window and the promotion of events that would allow the more mature students to connect with others would be useful. For example, incorporating fewer underage dance parties and more university-supported book clubs similar to the common book programs found in some universities (where every student reads the same book annually so they have shared experiences and discussion points across the disciplines) can ease the transition of these students beyond the classroom environment.

Increase student engagement: Non-traditional aged students' return to academic life was preceded by life experiences, which allows them to appreciate the value of their education, and focus on their plans. In contrast, traditional aged students are demonstrating less satisfaction with their academic experiences. Traditional aged students are not finding the classroom enjoyable or material intellectually stimulating or challenging. This should be a red flag for university faculty and administrators. Raising the bar regarding student achievement and clarifying expectations, provides a roadmap for achievement. Further, relevant learning is connected to student retention (Tinto, 2000). Preparation for further study may be tied to the age of the students. It would be easy to just put this risk down to the age of the student and do nothing and hope maturity will amend this view naturally. However, with a lack of classroom engagement these students may leave before they have gained enough life experience to recognize the

worth of their education. Or, maybe the students are making an accurate judgement of their class content. With the current trend in post-secondary study regarding grade inflation (Côté, 2007; Jones, 2013; McGregor, 2013), students may not find the class content challenging enough to stimulate them into seeing its worth. Either way, more investigation into how course content and the classroom environment can be structured to be more engaging is needed.

Assess transitional courses and re-evaluate transfer credits: College entry point students appear to be less academically integrated. They were less likely to be able to find university services or manage competing priorities and reported difficulty in understanding the content and information presented in class. These findings could be tied to a number of things. For college entry point students, it could be a sign of “transfer shock” reported in the literature where transfer into third-year level course without a foundation of university level study has caused too steep of a learning curve (Laanan, 2007) or it could be a sign of boredom or lack of interest in their program (McGowan and Gawley, 2006).

Mandatory transition courses could provide a better evolution for students who received transfer credits from their college level studies which focused on the building of practical skills directly tied to specific professions. Reassessing outdated credit transfer agreements, so there is less overlap with previous learning, could increase college entry point students’ academic integration and thus their performance in their classes. McGowan and Gawley (2006) found college transfer students are keenly focused on obtaining credit transfers that will shorten their stay at university. Their focus has tended towards the short-term benefit of reduced timeframes for degree completion to the detriment of their personal interests and long-term career goals. The findings were supported by the responses from this study, as college entry point students identified that credit transfer was a consideration during their university selection process. Up-to-date and complete assessment of prior learning could provide these students with a wider

range of program options or exploration of areas of personal and professional interest through the use of electives. This ongoing review process can offer these students greater flexibility during their studies and provide validation for the educational goals achieved during their college studies.

Reinforce contact with faculty and academic advisors: Non-traditional aged students' institutional commitment levels are telling. Although non-traditional aged students have returned to school because of a perceived benefit to continue their education, as evidenced by their value of the academic environment, they are not feeling an emotional tie to their university. According to Bélanger, Syed and Mount (2007), consumers of services have taken the stance of "what have you done for me lately" (p.171). They are becoming more resolute about reliability, improved quality and fiscal competitiveness; institutions need to also be perceived as providing a unique after-service benefit. In order for institutions to build an ongoing relationship (institutional commitment), they need to encompass more than a relationship built on rational grounds (academic environment); connections must also be created at the emotional level. More interaction with faculty and academic advisors who can describe the advantages of obtaining a university degree and future career opportunities could help assist with the prosaic aspects while also building stronger emotional connections through positive face-to-face interactions.

Boost student's involvement early in the term: Student involvement during the transition process needs to be encouraged for both entry points. With college entry point students' propensity to apply to fewer universities and elicit less support from significant others, they may not have been flagged as needing more support during the encounter and transition stages. With college entry point student's higher reported dropout rates and this research identifying lower institutional commitment, it becomes important for universities to find ways to encourage academic and social interactions during the college entry points first term of university study. It could be perceived that orientation programs could be enough to transition these students but more group assignments and

supplementary peer contact from in-class breakout exercises could prolong interactions. Colleges may provide a consistent stream of potential university bound students, however, universities need to develop specific retention strategies to help retain them.

Urge student's involvement in the selection process: Policies that set boundaries that assist in overcoming the dangers inherent in the overactive participation of significant others in the university selection process and in the initial pressure to attend university would be beneficial. The over-involvement of significant others was a concern for younger students (17 – 21 years old). It is also interesting to note that although support of significant others did not differ significantly between the living accommodations during the school term, it was an important factor for those living too close to their prior communities. With its negative correlation, students who are selecting universities close to their permanent communities need to get more involved in the selection process. In addition, no one living accommodations demonstrated a greater need to be strategically involved in the university selection process – they both did equally so more detailed recruitment literature would be beneficial for all involved.

Encourage first-year students to live on-campus: College entry point students appear to be less socially integrated. As college entry point students do not really belong to either first-year or third-year cohorts, there is a lack of identity on-campus and an ambiguity surrounding where they fit in the university community. Mutually the off-campus living arrangements and continued connection to prior communities also raise concern; these differences in maturity and life experiences appear to be adding to the lack of social integration. University residences are a hot bed of activities and potential networking. In common areas there are notices of social events posted detailing study groups, athletics, clubs and volunteering opportunities. With encouragement from roommates and residence leaders it becomes easier for the students living on-campus (in traditional or specified mature student residences) to become integrated within the new community through social situations, which might ease their transition and incorporation within the

university. If there are no additional restrictions caused by family commitments, encouraging first-year students to live on-campus could provide an advantage because they will become more immersed in the university's culture.

Bolster extracurricular activities: The findings from the first phase of research support the view that “for some students ‘over-attachment to social contacts at home can lead to withdrawal from university” (Wilcox et al., 2005, p. 720). The quantitative data from the Phase One research supports Christie and Durham's (1991) qualitative findings. They had reported that off-campus students found that their living arrangements restricted their opportunities to meet other students or engage in extracurricular activities. These students were simply not on-campus enough to be included in after-class ad hoc study groups or social interactions even if they did start to make connections with classmates. There was a tendency for them to keep themselves segregated from their classmates by only attending classes and then returning home. Inclusions of this group in weekend or weekday spur-of-the-moment social activity decisions, by the very nature of their situation, hampered interactions outside of the formal classroom environment. It is reasonable to suggest that the same interactions are happening here, as students who live off-campus and within an easy commute to their previous community struggle more with their transition and commitment to university. The way for off-campus students to overcome these limitations could include becoming more involved in extracurricular activities, which could create social interactions similar to on-campus living.

Support separation from prior networks: Getting all students involved in the university community through the use of extracurricular events and learning communities where students can transition through some key courses as a group may help with many of the identified issues. In support of the move to separate students from their prior networks and communities, no matter their age or entry point, the best combination to improve the transition to university appears to be living on-campus without easy access to prior communities. This combination represented the most progress towards not only an easier

transition to university but also incorporation within the university. Think back to the army metaphor, what one can gain from this information is a further understanding of why attending university close to home or living off-campus does not work. Individuals not only rely upon behavioural changes and coping strategies when they are adapting to their environment but they also attempt to shape their environment in order to meet their personal needs (Dyson and Renk, 2006). For the students who separated from their prior culture to embrace the culture of the university, their environment helped to impact their behaviour and ability to adapt. With more ready contact with peers and fewer opposing priorities from prior networks and communities they were free to embrace the university and its social systems.

4.10 Summary and Conclusions

More and more research is being conducted focusing on individual groups so an environment that best fulfill students' expressed needs and expectations can be constructed. This method has helped universities develop intervention strategies that support students who are at risk of leaving – hopefully before the decision to leave has been fully formed. Based on the Phase One research (contained in Sections Three and Four), we know potential risks are different for the traditional (i.e. those within the specified age, entering university from high school and living on-campus) and non-traditional students (i.e. 22-to-55+ years old, living off-campus and transferring from college). However, as noted in the prior study, for students to get the most out of their academic experiences, they need to become meaningfully and psychologically involved with the university (Bowden, 2011). Tinto (2007) touches on this aspect when he discussed making the work more challenging.

Based on prior research (Tinto, 1987; Pascarella and Terenzini, 1991) there is a need to identify factors which affect student engagement beyond the first year of the student's

studies. Some factors will be consistent across the years; however, it is expected that the classroom environment becomes even more important as students progress in their studies. It is likely the causes for a lack of affective commitment during the 2nd and 3rd years are more connected to teaching and course content than during the first year because as students progress through their studies they start to gain more knowledge and can more accurately measure their university's performance in these areas. The hope is that the Phase Two analysis will result in designing a student's academic "job" so that it will be intrinsically motivating students. Why is a shift in focus from a service support approach to an academic engagement approach important? Section Five will attempt to answer this question.

5 Limitations of a Customer Services Approach

5.1 The Customer Service Model

Adapting services in order to meet identified needs and enhance customer satisfaction has become a primary goal of universities. Yet higher education institutions have not fully utilized the benefits of the customer service business research conducted (Ng and Forbes, 2009). As of late, customer satisfaction structures within business have been a popular research topic. This interest has come to the forefront, substantially driven by the assumptions that customers' assessment of a product or service is the foundation of all marketing endeavours and finding an effective way to measure satisfaction will improve organizations' competitive advantage (Keith, 2005; Woodall et al., 2012). Helgesen and Nettet (2007) defined customer satisfaction as quickly formed subjective conclusions based on the customer's actual experiences with the product in comparison to their preconceived expectations. The successful fulfilment of the customer's expectations results in an increase in satisfaction, willingness to recommend and the construction of customer loyalty (Rummel et al., 2011). Letcher and Neves (2010) also tied consumers' satisfaction with a product (and by extension a service) to their subjective impression and measure of the value customers place on the outcomes or experiences associated with the product's purchase or use. Thus, to attain enduring market advantage, organizations that take on a more consumer-oriented approach to their marketing need to generate customer loyalty by making sure they deliver as promised (Elliot and Healy, 2001; Ng and Forbes, 2009).

This attempt to measurement satisfaction is core to the customer service model, which has been defined as the considered development of support activities designed to increase satisfaction through customers' perception that services have met or exceeded their expectation (Boyd, 2012). The effective execution of the customer service model involves several far-reaching and comprehensive components that impact every aspect of

the organization: determining customer needs, employee attitude, administrative commitment, training, resources, recognition, and evaluation (Spicuzza, 1992).

5.2 Viewing Students as Consumers

Higher education administrators have joined an ever-increasing group of managers who have learned that competitive advantage is created by viewing the relationship between students and universities from a marketing exchange perspective (Elliot and Healy, 2001; Judson and Taylor, 2014; Letcher and Neves, 2010; McAlexander and Koenig, 2010; Spicuzza, 1992). For the last two decades, drawing from the marketplace, the dominant metaphor used to describe the relationship between student and university has been the 'student as consumer' (Clayson and Haley, 2005; Kuo and Ye, 2009; McCulloch, 2009; Natale and Doran, 2012). Within the literature, students as 'customers' has been found to be a valid frame of reference and analysis, as universities have started to view students as sources of revenue, started to treat faculty as providers of a service and students have been cast in the role of consumer with students taking on many customer behaviours (Elliot and Healy, 2001; Machado et al., 2011; McCulloch, 2009; Ng and Forbes, 2009; Peters, Bradbard and Martin, 2005; Serenko, 2010; Spicuzza, 1992; Thomas, 2011; Woodall et al., 2012). As Serenko states,

According to the students-as-customers approach, students and their educators are engaged in a value exchange relationship. Students exercise educational choices by selecting institutions and enrolling in classes that best meet their personal needs. Students also pay for their education, expect their schools to offer a certain level of instructional quality and view faculty members and staff as primary service providers (2010, p. 2).

Unmistakably, the student is a customer when one considers their use of residence space, the purchase of meals, and other such internal institutional services (Bay and Daniel, 2001). In addition, competitive funding models have created a highly marketised environment where universities have become subject to consumerist pressures (Woodall

et al, 2012). Although many academics would hesitate to label students as “customers” because of the student-faculty relationship, the fact remains that without the revenue attached to students through tuition and government funding (i.e. paying for a service) there would be no need for educational institutions (Thomas, 2011). Without students, universities would no longer be institutions of “higher education”. They would be allotted the task of searching for revenue streams sustained solely by “buyers” of the research they might generate and competing among other industries for already trained and skilled technicians.

Given the economic constraints placed on many higher education institutions, universities have started to implement customer service orientation strategies in their marketing activities in order to solidify value exchange perceptions and differentiate themselves from their competitors and understand and improve retention rates (Elliot and Healy, 2001; Henning-Thurau et al., 2001; Keith, 2005; Machado et al, 2011). However, universities that seek to attract and retain their students would be well served to treat these “customers” of their services well. The benefit of acquiring an education from a specific institution has very few tangible attributes that can be evaluated before purchase. However, similar to how a chipped wine glass may help to form a perception of a restaurant’s quality, gaps between expected and experienced customer service can be an indication of the overall quality of the institution (Ng and Forbes, 2009). A key, therefore, to successfully implementing this marketing concept is to evaluate student perceptions of the institution.

The findings from the first stage of thesis research into first-year students’ institutional commitment (which included a combination of satisfaction, word-of-mouth recommendations and a sense of belonging) helped to measure students’ perceptions of their university. This research also offered new insight into some key areas that are emerging as meaningful such as: college transfer students problems with their transition

to university; the impact helicopter parenting practises may have on students in the 17-to-21-year-old category as well as how students in this category are not finding their classes intellectually stimulating; issues with living off-campus and attending university too close to “home”, among others. However, what is also striking is the realization that this study’s review of the literature and findings also point to universities attempting to solve retention issues through a student customer service approach. It appears that there has been an emphasis on services over engagement – students work too much, stay too connected to prior networks, live at home and generally do not embrace higher education beyond a prosaic focus of customer services which can be “bought”. According to Kennett et al.’s (2011) research, the majority of students in both upper (95.24%) and lower years (84.06%) listed obtaining a career as influencing their decision to attend university, while giving back to society (1.45% of lower- and 14.29% of upper-year students) and the intrinsic value of higher education (2.9% of lower and 1.59% of upper-year students) were not a consideration for most. Universities offer detailed recruitment literature that is geared towards students’ declared area of interest, provides orientation programs, student service departments, funding and encourage on-demand communication between student and administration, staff and faculty. However, many of these services are only tied to student satisfaction ratings, which were already discussed as lacking the overall assessment needed for student success.

5.3 Students’ Evaluation of Services

In 2001, Elliot and Healy introduced a variation of the traditional customer satisfaction concept by exploring student satisfaction and students’ evaluation of their experience with education services. They found student centeredness, campus climate and instructional effectiveness had the greatest impact on overall student satisfaction. Based on previous research, these findings were not that surprising. However, their research went on to reveal that student centeredness and campus climate were not even in the top four dimensions students had perceived as important to them in their educational experience. Elliott and Healy’s 2001 findings were of significance because their study

identified that what students report as being important to them in their overall educational experience may not necessarily be the same factors that most significantly impact their overall satisfaction with their educational experience. Marozzi (2011) expanded on this point by stating that satisfaction levels are determined by the difference between the student's perception of service quality and what the student expects. Thus, student satisfaction cannot be directly measured because it depends on too many different aspects relating to the individual student. Because it cannot be directly observed, satisfaction can only be a composite indicator based on other variables; thereby, it has limited value in helping institutions manage retention.

Additionally, Serenko's (2010) research findings implied that satisfaction did strongly increase program loyalty and positive word-of-mouth and was strongly affected by program quality; by contrast it was only slightly impacted by its perceived value, marginally raised tuition loyalty and was not influenced by prior student expectations at all. Contrary to expectations, cost was only a marginal factor for students. Serenko's work demonstrates some weaknesses in the premise of students as customers (purchasers) of a service or product, as within the customer framework, price is an important and guiding principal during the transaction process.

5.4 Dangers of the Customer Service Model in Higher Education

Customer service within a university context relates to providing service throughout the transaction process by offering information and assistance to those attempting to decide on a university and offering support that meets their individual needs during their university studies. Bay and Daniel (2001) agreed with other researchers concerning modern business marketing techniques being embraced by an increasing numbers of colleges and universities in the hopes of improving enrolment and retention rates. However, they took a contra approach by describing the dangers of institutions of higher education regarding students as the customers. Their paper proposed, "differences

between profit-seeking enterprises and colleges and universities preclude the customer-focus from being an entirely useful one. In fact, the student-as-a-customer paradigm may cause institutions to concentrate on short-term, narrow student satisfaction” (p.1).

Other theorists also highlighted some issues with viewing students as consumers because of the role students play in the transfer process. Peters et al. (2005) arguing that, as far as the learning process is concerned, “students are not well placed to exercise ‘informed choice’, because they do not have the necessary information (and tools to use it) to do so. That information and the necessary tools are something that develops during a programme of study, but at early stages of programmes more control must lie in the hands of the higher education professional, and often the role of the lecturer is extended to include the provision of such information” (as cited in McCulloch, 2009, p. 174). It is doubtful that students can determine if their lower year courses are adequately preparing them for upper year study until the students have taken the sequential courses. Similarly, Bay and Daniel’s (2001) stated consumers can determine their own needs and then make attempts to satisfy them through the purchase of a service or product. However, unlike customers, students may not be in a position to determine their needs or the quality of their education until after graduation through obtaining career experience. Thus, post-secondary institutions are in a better position than students to be able to determine what information produces a quality education.

Consumers make judgments of satisfaction and quality based on the purchase price. In many countries, external stakeholders (e.g., government and benefactors) provide financial assistance so its citizens can attend institutions of higher education; thus, many students do not pay the full cost of their tuition. As students do not pay the full price of their tuition, Bay and Daniel (2001) stress the peril of students undervaluing the benefits of their education because they lack a solid reference point regarding its true cost. The inclusion of stakeholders also denotes a substantial difference between customers and students. A customer’s purchase of a product or service contributes to bottom-line

business profits that are transferred on to shareholders or other stakeholders. However, contrary to the business profit framework where businesses recruit as many customers as possible to increase profit margins, institutions of higher education have a mandate to not only put “bums in seats” but also to find students that can make the transition to university (threshold entrance requirements) and that match the institution values and capabilities (Bay and Daniel, 2001; Kamvounias, 1999; Pitman, 2000). Bay and Daniel (2001) and Clayson and Haley (2005) expressed concerns with too great a focus on students as consumers and keeping students satisfied and not enough focus on the legitimate needs of the other stakeholders (society, government, benefactors, parents, business etc.). Thus, higher education has many goals that do not fit in the profit model. Some stakeholders believe a university’s role is to produce high quality faculty research – others want a match between human capital and current and future labour market demands (Bay and Daniel, 2001). Neither of these goals is suggestive of the typical “profit model”. Combining these goals with students’ freedom to select areas of study based on individual interests instead of filling identified gaps in Canada’s future labour demands, and the gap between post-secondary institutions and the business model widens.

The student as a consumer approach and the treatment of higher education as a producer of a product, i.e., the value of the degree only measured with regard to the labour market present another danger. Students start to view education as something to be achieved or endured and do not embrace the learning process or their role within it. The focus is on learning only what will be included on the test or exam so they can obtain a degree and not about the advancement or gaining of knowledge or their personal growth. It has been argued that university’s mandates are to help mold students into well-rounded, thoughtful human beings by not teaching them what to think but more importantly, providing them with the self-fulfilling attributes of how to think and deliberate on their own. This emphasis on the cultivation of the intellect over the memorization of content establishes a university’s role as the developer of knowledge and understanding, not the trainer of specified job skills (Ng and Forbes, 2009). Thus, a customer service approach could have

negative long-term effects on “the formation of general intellectual abilities and perspectives, and the enhancement of the individual student’s personal character (Wiers-Jenssen et al., 2002, p. 186).

Furthermore, although there are entrance standards, post-secondary institutions cannot simply eliminate students based solely on their entrance abilities. They have been given the mandate to provide bridging courses and other ways to help facilitate personal growth and advancement. “If the mission of the university is to provide opportunities for all citizens of the state, even beginning a partnership with an ill-prepared student may lead to a fruitful partnership if the institution can provide the necessary support and the student is motivated” (Bay and Daniel, 2001, p. 9). Thus, universities are assigned the role of providing students with opportunity to attain their full potential during their studies. In contrast, businesses rely on costs to rationalize their services so employees that are expensive to develop are eradicated from the production process.

Using a customer orientation with students also creates a short-term focus and leaves students in judgement of the service provider. “If the service provider (instructor) does not please the customer (for whatever reason, it need not be related to teaching), then the customer fills out a service form (teaching evaluation) outlining their discontent” (Clayson and Haley, 2005, p. 3). With the current system where most universities use students’ evaluations of professors in the promotional and hiring process, by using a customer model, students’ reactions to an instructor or the difficulty of the curriculum could result in the loss of tenure or advancement for faculty. This pressure to please the customer (student) can result in leniency with academic standards (Franz, 1998; Natale and Doran, 2012) so “approval” ratings are improved and resources are put into areas based on student demands. Birnbaum’s (2000) study, which used 208 faculty members and 142 students found, “according to the majority of faculty members, the incentive system [using student evaluations for promotion and tenure decisions] puts teachers in a

conflict of interest between making changes that would improve student learning and making changes that would improve student evaluations” (para. 30).

The final and most important point Bay and Daniel (2001) discuss concerned students’ role in impacting the quality of their own and other students’ education. Education is not simply a service or product that is exchanged for a monetary sum. There are additional dangers in viewing students as consumers, because by encouraging the student to accept “the role of consumer of what is provided by the university, and by encouraging universities to adopt their market role of providing what students demand, the student’s role in the production of learning is de-emphasised and thus learning itself may be diminished” (McCulloch, 2009, p. 173). This inducement to have students view their role as purely a customer of a product may start to provide acceptance for the attitude that it is “the universities’ responsibility to provide an education to the students, and that students have little responsibility in the process” (Bay and Daniel, 2001, p. 6). Students are part of both the consumption of education but they are also partners in its production (Clemes, Ozanne, and Tram, 2001). Many use the success of the United States as an example of the dangers of creating systems where students feel they paid a lot of money (through high tuition fees) and based on this investment are entitled to the degree “they purchased”. Students take on a passive role in this process; they “paid their money” for the product so it does not matter how much effort they put into their studies. Students come to class to be entertained and feel, as they are the consumer of the product (i.e. knowledgeable about what they find worthwhile or what makes them happy), they have the right to let the instructor know if they feel he or she is inadequate (Ng and Forbes, 2009). Thus, it is highly inappropriate to compartmentalize or describe the educational experience as a product as opposed to a process in which students play an integral part (Franz, 1998; McCulloch, 2009; Natale and Doran, 2012). Students play a significant role in the construction of knowledge. Institutions that attract higher calibre students, who are engaged in the learning process, can provide a higher quality education.

In summary, the stated objectives of the first phase of this research were successfully fulfilled. The historical approaches embraced by universities, when attempting to overcome the problem of student attrition, were explored through the review of foundational student retention theorists. In addition, the two studies (2009 and 2011) included in the first phase of research helped to expand the current literature regarding which factors helped to predict institutional commitment and identified differences between the specified groups. Additionally, the first phase of the research emphasized that providing university support services that are matched to students' personal needs can be an important way to increase institutional commitment. However, this phase of the research also suggests that an over reliance on university support systems can result in too much focus being placed on externalities and control. This attempt to control the students' environment can be used as a way to support students; however, it must be used in moderation and in conjunction with inspiring students to perform.

In Douglas McGregor's (1960) book, *The Human Side of Enterprise*, he presented two competing theories of motivation and management. McGregor presented basic assumptions about the nature of human beings through the use of Theory X and Theory Y. Theory X proposed that people are lazy, lack drive and ambition and must be forced to work. Thus, Theory X managers attempted to totally control the employee's environment. This management approach assumed that without this control employees would not be able to achieve the desired performance. In contrast, Theory Y managers viewed people as active contributors to their environment based on their desire to grow and assume responsibility for their actions. Theory Y proposes that the best way to manage people was to inspire them by encouraging and supporting their personal growth. McGregor proposed that when people were allowed to become co-creators of their environment, once they were inspired, they were creative in overcoming barriers and limitations themselves. That internal motivation and creativity were stifled through over-management and the use of control or threats to perform.

Phase One findings are important and provide ground-breaking insights, but unless carefully considered there could be an overreliance of control. There is a fine line between supporting students so they can succeed and controlling their environment because the university has decided to take on a Theory X approach. Taking a Theory Y management approach by using job design theories to construct the work of students permits more attention to be placed on internally motivating students by engaging them in the learning process, which is the focus of the second phase of the research.

6 Work Design and Engagement (Phase Two Research)

The conventional attitude-based approach to consumer relationship building relies on assumptions that there is a link between students' evaluations of service quality and their subsequent behaviour. The attitude-based approach also requires inferences to be made concerning what aspects of the services delivered inspire positive opinions of the services provided. As noted, this approach is still widely practiced in universities. Yet, there could be a different approach to increasing student commitment through internal motivation created by developing tasks and course content that inspire students to become more engaged in their university studies. There is a direct link between motivation and engagement. For the purposes of this study, motivation is defined as an internal drive that stimulates behaviour which allows an individual to attain his or her identified goals through perseverance (Rabideau, 2005). Motivation is linked to engagement because internal drive stimulates a reaction or action. Student engagement, synonymous with involvement or participation, is defined as a state of heightened interest and cognitive effort, in other words, being energized and inspired by learning, which results in actions that demonstrate perseverance and concentration or being engrossed in one's work (Schaufeli and Bakker, 2004; Shantz, Alfes, Truss and Soane, 2013).

6.1 The Co-Creation of Value

An attempt to motivate students to get involved or "engaged" in the learning process can be linked to the co-creation of value premise found in business, government, and health care settings (Alford, 2009; Iandolo, Calabrese, Antonucci, and Caputo, 2013; Jaakkola and Alexander, 2014; Payne, Storbacka, and Frow, 2008; Prahalad and Ramaswamy, 2004; Saarijärvi, Kannan, and Kuusela, 2013; Vargo, Maglio and Akaka, 2008). Co-creation also described as collaborative creation, means students and other stakeholders cooperatively and reciprocally contribute to the value creation process (Fagerstrøm and Ghinea, 2013; Grönroos and Voima, 2013; Minkiewicz, Evans, and Bridson, 2014). This

collaborative focus involves changing the way universities interact with students and other stakeholders. Specifically co-creation involves joint responsibilities; universities and their agents need to create new ways to structure their interactions so students can insert themselves in the value chain of the institution. Students need to raise their participation through increased engagement. Researchers agree that co-creation indicates stakeholders are active in the creation of their experiences. Thus, students are not consumers of education (Natale and Doran, 2012); they are co-creators through not only word-of-mouth recommendations, but also participation in the classroom, interactions with those in the community, peer support and faculty interactions (Balasubramanian and Wilson, 2007; Judson and Taylor, 2014; McWilliam, 2008; Saludadez, 2010; Williams and Williams, 2011). Axelson and Flick (2010) support this co-creation viewpoint by proposing that student engagement is evident through students' involvement and interest in learning and their commitment to their classes, their institution, and each other. Therefore, students are directly involved in this production of value and their activities are more akin to work than consumption, which is an underlying assumption of the customer service approach.

Co-creation is now quite evident within the hospital/health care setting. In health systems there is an exchange among many different stakeholders with value formed not just in the service transaction but created by all those who participate (Iandolo et al., 2013). Previously, patients entered the health care setting to describe aches and pains or symptoms with the health care professional cast in the role of fixing the problem through diagnosis and treatment and with little responsibility placed on the passive and, at times, unenlightened patient. However, this environment has evolved with patients and other stakeholders now informed and involved in the co-creation of the patient's health. For example, "some hospitals are also starting to take responsibility for their role in assisting people to quit smoking through expanding the smoke-free zone to property-wide and by including smoking cessation programs in their 'best practices' policies" (Wardley, Mullen, Bélanger, and Reid, 2014, p. 25). As a result, hospitals are taking a proactive

part in the co-creation of patients' health but substantial elements of these programs are also based on peer support groups and government legislation surrounding the restriction of second-hand smoke.

The push to get patients to take a more active role (become engaged in healthier practices) is also found at the physician level. Physicians have the right to reject patients who do not fulfill their part in the co-creation process, in other words, not performing surgery or accepting individuals as patients if they are not proactively attempting to overcome harmful behaviours such as smoking and the like. According to Dr. Graeme Cunningham, head of the College of Physicians and Surgeons of Ontario, doctors are not required to retain smokers on their patient lists as long as they guide them towards suitable care options from an alternative source (Papp, 2011).

Within the higher education sector there has been an over reliance on the customer service approach at the expense of making students take more responsibility for their learning (Natale and Doran, 2012). It is disturbing that researchers are observing signs that fewer students are putting an honest and sustained effort into their studies; grade inflation is evident in high school and post-secondary education and the increasing number of degrees granted to underachieving students is devaluing university degrees in the marketplace (Côté, 2007; Kuh, 2003). However, responsibility for this problem should not be placed fully on the student or prior education institutions who are accused of lowering the bar and reducing the value of student engagement through grade inflation and lower standards overall through re-admission policies and threshold entrance requirements. The university system is also a partner in the co-creation of academic standings (e.g., granting of degrees) and learning experiences. Blame could be placed on a lack of funding, ever mounting faculty to student ratios, and pressure from governments, that started in the 1990s, to focus on underrepresented populations and individuals from disadvantaged backgrounds which have overextended support resources

(Demetriou and Schmitz-Sciborski, 2011). However, in addition to trying to juggle demand and funding issues, it is also in universities' purview to help form the expectations, duties, opportunities, and tasks contained within the university environment so students are challenged and engaged (Coates, 2005; Saludadez, 2010). Finding out how to design the work of the student so it can be more engaging is among the first steps.

Pascarella and Terenzini (2005) state, "since individual effort or engagement is the critical determinant of the impact of college, then it is important to focus on the ways in which an institution can shape its academic, interpersonal, and extracurricular offerings to encourage student engagement" (p.602). Engagement in the classroom is a partnership between students and faculty but is also facilitated by university support services. The students' effort includes being involved cognitively (challenge themselves through contemplation and reflection); emotionally (passion for their work); and behaviorally (attending class, doing homework, paying attention). Faculty members' role in value creation efforts includes providing academic challenge, active and collaborative learning (team work and discussion), feedback (comprehensive assignments), enriching educational experiences (solving practical and relevant problems and community work), and supporting self-directed learning. Administrators have the responsibility to live up to their obligations as well by providing support services (academic advising, student accessibility etc.) and resources (libraries, technology etc.) in addition to connections to community partners and experiential learning opportunities.

Getting students involved in the co-creation process is important because research findings have demonstrated that student engagement influences learning and persistence (Campbell and Cabrera, 2011; Pike and Kuh, 2005). Both of these outcomes are important; we want to retain students but also want to encourage their personal growth and development. Ishler and Upcraft (2005) defined student success as the development of intellectual and academic competence through obtaining the necessary skills to become an educated person: critical thinking, problem solving and reflective judgement.

Thus, when attempting to generate institutional commitment and support students' personal growth (outcomes of engagement) by focusing on developing students' internal motivation, a review of the whole student experience that expands beyond the first-year is needed.

6.1.1 Purpose of the Last Stage of the Dissertation Research

The purpose of the final phase of this dissertation (Phase Two) was to develop a work design model that identified the student engagement dimensions that influence students' institutional commitment and personal growth using three years of secondary data obtained from the 2006, 2008 and 2011 National Survey of Student Engagement (NSSE) participants of the small Northern Ontario university i.e. (U2) used in the Phase One research study.

6.2 Work Design Literature Review

Jobs, and their design, provide structure to the organization but they also help to form important outcomes for the organization and its stakeholders. Work design, in both professional and education situations, is the conceptual or practical examination of factors that influence work and the rearrangement of them into a motivational structure that increases work performance or achieves desired outcomes. The relationship of these concepts spawned research in work design.

6.2.1 Frederick Winslow Taylor

Building on Adam Smith's (1776/1937) work into the deconstructing of labour into micro level tasks to improve efficiency, Frederick Winslow Taylor's work (1931/1967) devised a system which he called "scientific management". The main premise of this theory focused on the efficient design of jobs and the alignment of incentives to increase

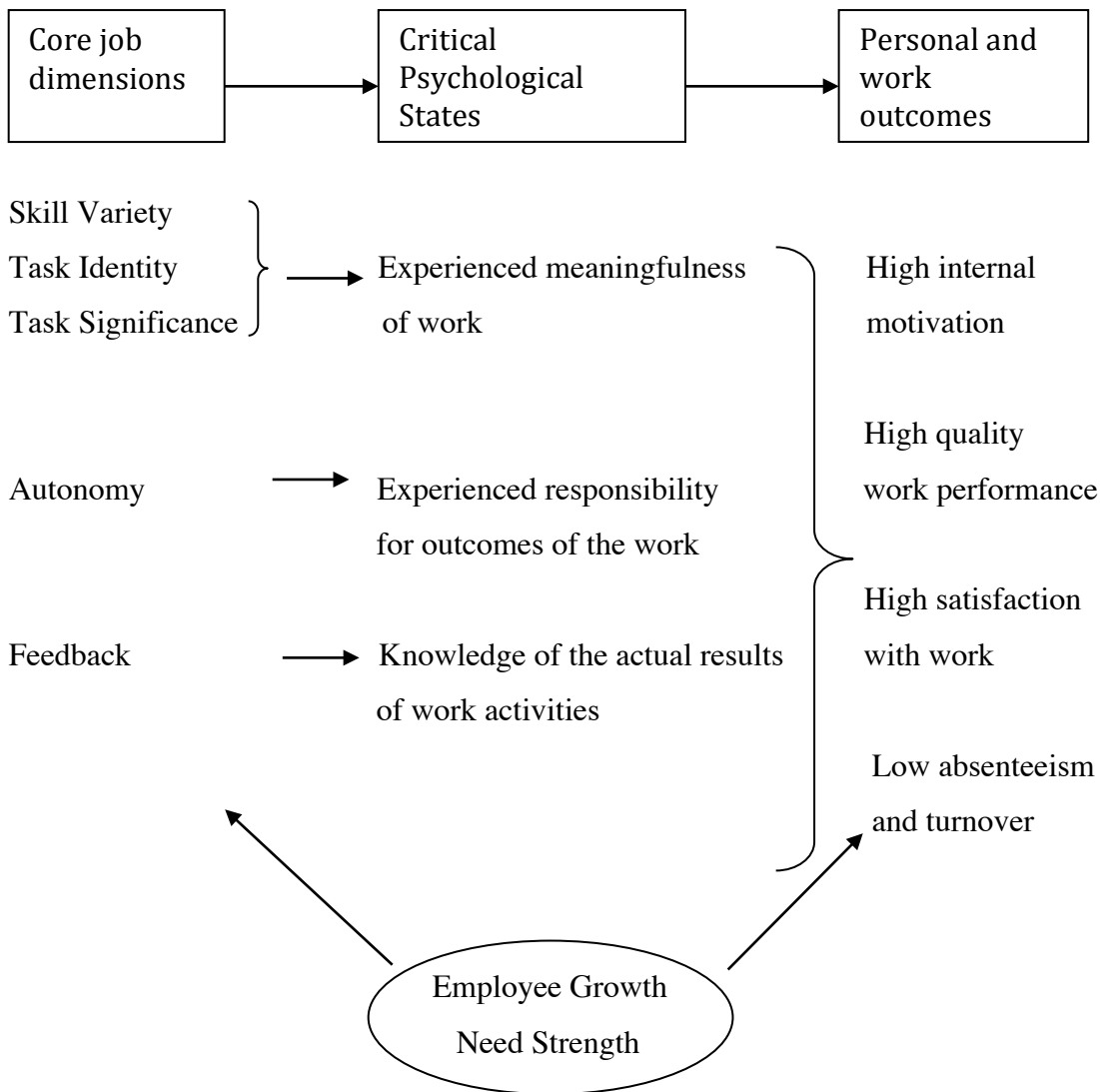
productivity with the downside being decreased satisfaction, increased turnover and absenteeism (Humphrey, Nahrgang and Morgeson, 2007). These negative outcomes resulted in job design research expanding to include a more complex set of management objectives that moved beyond simple efficiency measures to include job enrichment, job enlargement and forms of employee satisfaction (Cohen, 2012).

6.2.2 Hackman and Oldham's Job Characteristics Model (JCM)

The job characteristics model (JCM) (Hackman and Oldham, 1976, 1980) was one of the first theories to focus on the environmental determinants of job satisfaction and is still commonly used today (Cohen, 2012; Morgeson and Humphrey, 2006). The JCM proposes that complex jobs are associated with increased job satisfaction, motivation and performance and low absenteeism. Five core job dimensions are associated with these positive outcomes (refer to Figure 6.1).

These core job dimensions include skill variety (the use of different skills), task identity (completion of the whole piece of work), task significance (the job's effect on other peoples' lives), autonomy (independence or freedom to make decisions), and feedback (information about the effectiveness of performance). This framework was constructed using organizational psychology and concentrates on enhancing job satisfaction and the motivational nature of jobs through developing the psychological aspects of the work (Campion, 1988).

Figure 6-1 Job Characteristics Model



Source: Hackman, J. R., and Oldham, G. R. (1976). Motivation through the design of work: Test of a theory, *Organizational Behavior and Human Performance*, 16, p. 256.

In Hackman and Oldham's (1976) theory, the five variables are indirectly related to job satisfaction, among other outcomes. There are three intervening critical psychological states (CPS): 1) experienced meaningfulness of the work, 2) responsibility for outcomes, and 3) knowledge of results. The five job characteristics determine these critical psychological states. Experienced meaningfulness of the work refers to the degree to

which the individual finds the job meaningful and worthwhile based on skill variety, task identity, and task significance. The experienced responsibility CPS in the model is determined by how much autonomy the jobholder has in his or her work. The knowledge of results aspect of the model is based on the feedback the individual receives that allows him or her to gauge his or her work performance. These CPS are proposed to hold a mediating role between the core job dimensions and a number of personal and work outcome measures. Furthermore, workers' growth need (individuals' needs for stimulating and challenging work) strength moderates the degree to which the five dimensions affect these outcomes (Figure 6.1). The relationship between the motivating job design characteristics and selected outcomes is strongest for individuals with a high need for personal growth. Later expansions of the JCM model included additional moderating effects such as knowledge and skill, context satisfaction (workers' satisfaction with pay, job security, co-workers and direct managers) (Hackman and Oldham, 1980), achievement motivation, and job longevity (Arnold and House, 1980).

6.2.3 Conflicting views on the critical psychological states (CPS)

Many scholars have found the conceptual JCM difficult to replicate (Morgeson and Humphrey, 2006) whereas others have criticized it on theoretical grounds (Cohen, 2012). Although the JCM has demonstrated it is effective in predicting job satisfaction, motivation, absenteeism and turnover across a variety of work environments, these positive work outcomes are more strongly related to perceived increases in the core dimensions (task characteristics, feedback and autonomy) rather than the critical psychological states (CPS) described in the model (Fried and Ferris, 1987; Kass, Vodanovich, and Khosravi, 2011; Spector, 1985). There has been little empirical support for the inclusion of the CPS (Campion, Mumford, Morgeson, and Nahrgang, 2005; DeVaro, Li, and Brookshire, 2007; Shantz et al., 2013). Fried and Ferris' (1987) meta-analysis was based on correlational data from 76 job design research studies and a narrative review of 124 more for a total of 200 studies examined; however, they found that only eight studies included CPS and of that eight only three examined the CPS mediation role, i.e., Arnold and House (1980), Hackman & Oldham (1976), and Wall,

Clegg and Jackson (1978). In addition, the Hackman and Oldham (1976) and Arnold and House (1980) studies demonstrated that all three of the critical psychological states (CPS) are not required to explain the outcome variance (Renn and Vandenberg, 1995).

More recently, Renn and Vandenberg (1995) also examined the mediating role of CPS in the JCM using two studies. The first study found there was no support for the hypothesis that all three CPS must be experienced to increase internal work motivation which supported their proposition that the CPS are partial rather than complete mediating variables. Results from the second study provided strong support for a job characteristics model that allowed the core job dimensions to have direct and indirect effects on personal and work outcomes. Thus, the finding from the second study supported the first study's finding that the CPS are, at best, partial mediating variables.

Due to these inconsistencies in the conceptual model, researchers stopped assessing the psychological states such as “meaningfulness of the work” and started to use the task characteristics as proxies instead (Steger, Dik, and Duffy, 2012). Also, contrary to the JCM meta-analytic findings of Fried and Ferris (1987), the student outcomes that Bloom, Yorges, and Ruhl (2000) and Tiegs, Tetrick, and Fried (1992) measured did not appear sensitive to students' desire to grow and change. In addition, DeVaro et al. (2007) found the moderating effect of context satisfaction was unsupported thus, reducing the value of testing the moderating influences (e.g., growth needs strength and the context satisfaction) aspects of the model too.

The issues with the CPS and the original model's focus on only motivational job characteristics (while largely ignoring occupational and social context) have also revealed problems with the underlying structure of the model (Grant, 2007; Hackman and Oldham, 2005). Thus, many researchers have identified how the narrow focus of the original model and other issues with the inclusion of mediating and moderating variables have

diminished the reliability of the model, weakening support for some aspects of the theory – something other seminal models attempted to overcome.

6.2.4 Champion's 1985 Multi-method Job Design Questionnaire

In an attempt to overcome some of the JCM structural issues and low internal consistency, Champion and Thayer (1985) and Champion (1988) developed the Multi-method Job Design Questionnaire (MJDQ). This model included an interdisciplinary perspective by combining theories from organizational psychology (motivational approach), industrial engineering (mechanistic approach), biomechanics (biological approach) and experimental psychology (perceptual/motor approach). They found, through their review of the job design literature, that although there was some overlap in the recommendations, much of the advice from the different disciplines was conflicting with each discipline claiming their model produced job satisfaction and increased performance (Champion, 1988; Champion et al., 2005). These conflicting views resulted in poor advice if used in the wrong context. Using only mechanistic and perceptual/motor approaches that minimize mental demands and the need for training was not a good fit for jobs that required highly skilled staff who were motivated by mental challenge and personal growth. There was also a trade-off for jobs developed using only the motivational approach as jobs that were designed to stimulate mental demands could produce negative outcomes, such as increased training time and recruitment and retention difficulties (Champion, 1988). Champion and Thayer's 1985 interdisciplinary approach was an attempt to overcome these conflicts.

Although the wider and more comprehensive approach was a good start, Champion and Thayer's 1985 findings had limitations as the findings were based on blue-collar workers in the manufacturing industry with low technology demands, thereby excluding knowledge workers. Champion's 1988 research study was an attempt to replicate Champion and Thayer's 1985 study by expanding the sample to include blue-collar manufacturing jobs and white-collar jobs with high technology needs. The resulting

model accounted for 31% of the variance in the outcomes. However, even when the JCM was expanded and varied job characteristics added, the MJDQ model also suffered from measurement problems and issues with the structure of the constructs (Edwards, Scully, and Brtek, 1999; Morgeson and Humphrey, 2006). Edwards et al.'s (1999) study found the MJDQ's 4-factor structure was conceptualized better through the use of 10 factors; however, this model was missing the element of work autonomy, a factor with strong empirical support for its inclusion (Morgeson and Humphrey, 2006).

6.2.5 Morgeson and Humphrey's (2006) Work Design Questionnaire

Using past work design literature, Morgeson and Humphrey (2006) combined existing (17%) and adapted (33%) items with newly identified (50%) work design characteristics in their conceptual model. The model encompassed four broad categories based on how work is performed; 1) task characteristics (the skill variety, task significance, task identity, autonomy and feedback from the job which was taken from the JCM); 2) knowledge characteristics which brought an ability-orientation to the work design perspective (e.g., job complexity, information processing, problem solving, skill variety and specialization) which was supported through the work of Campion (1988), Edwards et al., (1999), Hackman and Oldham (1980), and Wall, Corbett, Clegg, Jackson and Martin (1990); 3) social characteristics that included social support, interdependence, interaction outside the organization and feedback from others (Hackman and Lawler, 1971; Karasek et al., 1998; Kiggundu, 1981; and Stone and Gueutal, 1985); and 4) contextual characteristics such as ergonomics, physical demands, work conditions and equipment (Champion and Thayer, 1985; Edwards et al., 1999; Stone and Gueutal, 1985). Unlike previous work design literature such as Hackman and Oldham's JCM, which had discussed moderating factors between work characteristics and potential outcomes, the WDQ explored the direct relationship between the WDQ scale items and outcomes. The primary focus of the WDQ study was to develop and examine the construct validity of new measures of work design so these potential moderating factors were eliminated.

Using a sample of 540 incumbents employed in 243 distinct jobs, the resulting Work Design Questionnaire demonstrated better reliability and convergent and discriminant validity than previous work design attempts. The WDQ explored the relationships between task and knowledge characteristics and the outcome of work satisfaction and their relationship with training and compensation requirements. Morgeson and Humphrey (2006) found all of the task and knowledge characteristics were significantly related to satisfaction; in contrast, only knowledge characteristics were positively related to training and compensation requirements. Except for autonomy and task significance (which demonstrated a small relationship with training requirements) task characteristics did not demonstrate a strong relationship with either of these requirements.

The WDQ made numerous contributions to work design research, such as the integration of 40 years of research into a comprehensive work design measure, clarity added to the existing scales, internal consistency with an average reliability of .87, empirical support for the 21-factor solution and better identification of differences in various occupations (Morgeson and Humphrey, 2006). However, the predominance of managers in the sample may have inflated the relationships and skewed the outcomes. Furthermore, task characteristics' significant relationship with satisfaction, training and compensation requirements excluded, leads one to question the model's fit across job situations.

6.2.6 Changes found within industry

Even if every aspect of these theories had been empirically validated, with the changes found within industry concerning greater flexibility (telecommuting, move from the use of manager to team leaders etc.), expanding service sectors and diminishing manufacturing industries, the significant workplace changes require a re-examination of work design theory. Technology alone has changed the workplace landscape with information instantly available and the removal of geographic boundaries through the use of the Internet. According to Torraco (2005) and Oldham and Hackman (2010), many features of existing work design theories do not accurately explain the emerging

workplace existence. In 2007, DeVaro et al. empirically tested the JCM using a large-scale, nationally representative dataset that included all industries with multiple workers from each establishment. They wanted to see if Hackman and Oldham's JCM theory was relevant within the modern organizational environment. This study was also an attempt to overcome the limitations that can occur when using meta-analysis (e.g., Fried and Ferris, 1987), such as the combination of studies that vary in sampling procedures, collection periods, geographic regions, response rates, measurement construction and methodology.

DeVaro et al.'s (2007) use of a single representative dataset with uniform measurement variables and analysis methods were proposed to be an improvement on past research findings. Their results supported some of the JCM model's predictions, such as skill variety and worker autonomy's positive association with labour productivity and product quality and the notion that autonomy was also associated positively with satisfaction. However, their study did not find support for the moderating effects of context satisfaction. Similar to the findings mentioned earlier which questioned the mediating role of the CPS and moderating effect of growth needs, DeVaro et al.'s (2007) findings also encourage the development of more simple occupation-focused theories of work design that do not attempt to solve all work context issues with one model. The inconsistencies that crept into the models, when attempting to span all job contexts and the issues with the CPS, highlight that the strength of certain job design models may lie in their lack of complexity.

6.2.7 A simplistic work design approach for students' work

There have been few work design measures that successfully assess a wide range of employment perspectives (Dierdorff and Morgeson, 2013; Morgeson and Humphrey, 2006). It is difficult to identify key work characteristics that can reliably span a multitude of professions and work situations, as the context of the work would change for each occupation. When participating in work design, the use of occupation-focused theories

adds tremendous value as it highlights which system wide discrepancies can be attributed to occupational context, helps to explain the impact occupational context wields on an individuals' behaviour and attitudes, and implies that the degree of fit between institutions and individuals helps to explain job satisfaction levels (Dierdorff and Morgeson, 2013). An organization's atmosphere (organizational culture) has a direct link to how jobs are designed to fit into the workplace's environment.

It is logical that some occupations and work environments would require different resources and tasks. Contrary to Champion's attempt to use interdisciplinary integration to combine the various job design approaches into a model that could fit any industry, there is a call to refine the approaches even more and to expand into areas which had previously been untapped. For example, university students are dealing with condensed work periods, various course delivery methods, income restrictions which result in more students taking on part-time jobs during the school term (Manthei and Gilmore, 2005; Robotham, 2009) and tasks that require highly technical skills. These students could potentially benefit from greater autonomy so they could juggle their multiple demands and reduce the resulting stress. University students fit most closely to professional white-collar workers but not entirely, as their motivations are different. Both are involved in high-level mental tasks but the fundamental aspects of why they are engaging in their work is very different; for instance, university students pay for the privilege to attend school to learn and attain credentials while professionals are paid for their established knowledge and output. However, manufacturing jobs, which are developed so workers learn one way of approaching the tasks and discourage variation from the job procedures based on efficiency and safety concerns are not a good comparator either.

Similar to industry, the changes within the university environment highlight a need for renewed attention to the structure and construction of students' work. Students' work is undergoing an astonishing transformation as present-day university delivery structures are changing. Technology demands, online learning and shifts from the traditional

lecture (such as a professor talking with students taking notes) to the more student participation and discussion style of seminars (such as the professor is seen as guiding the class discussion not leading them) have resulted in substantial differences in expectations. Closer examination of the best way to structure students' work, based on the new working environment, is urgently needed for this fairly uncharted segment of work design research.

Moving beyond just an examination of job characteristics, work design examines and modifies the structure, content and environment within which jobs and roles are established; thus, work design is scrutinized and systematized by occupation (Dierdorff and Morgeson, 2013). The wording of work design over the use of job characteristics is purposeful. It is not just what students do but also the environment in which they do it. Narrowing the focus of this study to designing an engaging work environment for undergraduate university students based on their occupational context should help create a model that can offer generalizations and reliability of the constructs in this one sector. Thus, reducing the occupational effects could contribute to some of the unexplained variance found in many job design models.

6.2.8 JCM theory used in the education sector

Although there have been many advancements in the work design field, Hackman and Oldham's (1975, 1976, 1980) JCM is still the prevailing theory used today and is the basis for most of the work design models created since its inception (DeVaro et al., 2007; Humphrey et al., 2007; Tiegs et al., 1992). It has also been marginally used within the education sector. Catanzaro (1997) used the JCM for the conceptual redesign of university psychology department curriculum. Bloom et al. (2000) tested the JCM in a college setting (using psychology students) and found four core dimensions (skill variety, task significance, autonomy and feedback) were predictive, to some extent, for all of the tested outcomes, for instances, R^2 statistics of 19% (absenteeism), 28% (performance), 34% (motivation), 35% (desire to learn), 40% (interest), and 53% (satisfaction). Jackson,

Jackson, and Gaulden (2006) borrowed from the JCM to develop an alternative approach to assessing courses and ultimately curricula through the Course Diagnostics Survey (CDS). They used a sample of 586 (represented across all academic disciplines, age distribution, sex, and ethnic background) undergraduate and graduate students from a school of business in a small southwest regional university and found the instrument has potential in this area.

More recently, Kass et al. (2011) tested the core dimensions of the JCM in university classrooms through the use of a modified version of the Job Diagnostic Survey, which also included Job Boredom Scales among others. They found significant relationships between task characteristics (variety, identity, significance) and autonomy and feedback and certain outcomes such as, affective (satisfaction and boredom etc.) and behavioural (absenteeism etc.). Kass et al. (2011) examined the JCM dimensions association with positive classroom and school outcomes. They uncovered some interesting findings. Students' ratings of each of the core dimensions in their courses were significantly related to course satisfaction and classroom boredom in the anticipated directions, in other words, they were positively related to satisfaction and negatively related to boredom. More specifically, skill variety and task identity added significantly to the regression equation for predicting course satisfaction ($R^2 = 0.51$). In addition, all core dimensions were significantly and negatively related to classroom ratings of class boredom, with skill variety ($r = -0.45$) and task identity ($r = -0.46$) correlations being the highest. Thereby, these two dimensions were also the ones contributing significantly to the prediction of class boredom ($R^2 = 0.24$).

Further, Kass et al.'s (2011) ratings of core dimensions pertaining to school experience were significantly related to the affective measures of school satisfaction, ratings of overall educational experience and intent to stay (retention). For the school satisfaction ($R^2 = 0.34$) and educational experience ($R^2 = 0.25$) outcomes, only skill variety and feedback made significant contributions to the regression equation. Likewise, skill

variety held prominence in relation to another outcome as it was the only significant predictor of retention ($R^2 = 0.18$) in that outcome's regression analysis. Finally, none of the school core dimension ratings were significantly related to the GPA performance outcome. Thus this study suggests that enriching classroom environments, which encompassed variety, task identity and autonomy etc., were significantly related to greater course satisfaction and lower perceived boredom – with skill variety and task identity the most significant predictors of both.

These studies are of interest as they support the use of JCM concepts within the education setting. However, much of this research has stopped short of exploring a university wide application of JCM concepts or using the JCM with an existing and readily available store of databases, so the theory's core elements (based on definitions of the core job dimensions, among others) and new job dimensions that better suit the university student population can be tested using previously developed and validated engagement scales. These are research limitations that the Phase Two research will broach.

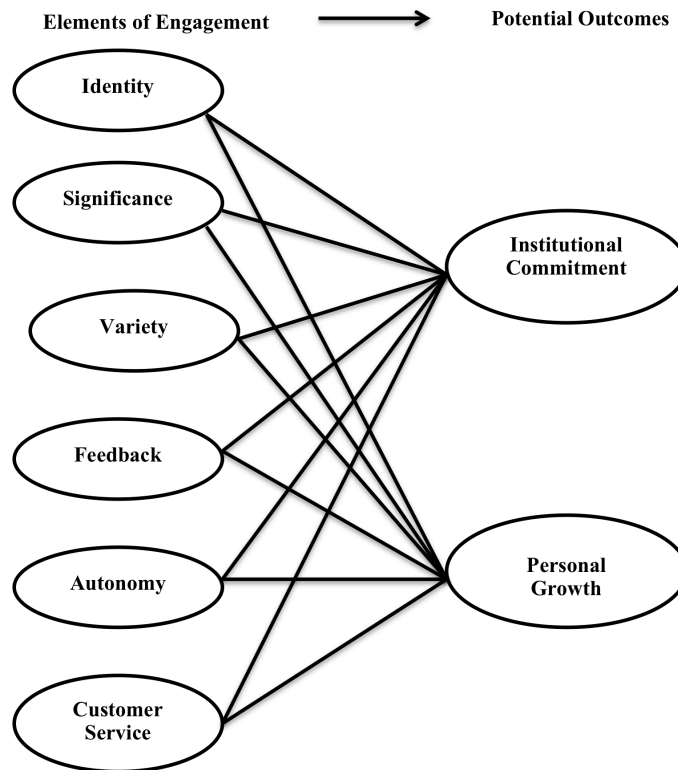
7 Conceptual Student Engagement Work Design Model

Hackman and Oldham used a very fitting quote to reflect how each theory builds on another, “Suffice it to say that I have borrowed along the way, and the occasional sense of originality has faded on a little better scholarship” (Dulany, 1968, p.342 as cited in Hackman and Oldham, 2005, p. 161). This quote is also fitting for this conceptual model. Although it breaks new ground, through the addition of new features (based on the Phase One research study findings) and modifies definitions of constructs and outcomes to fit the educational environment, it is constructed based on established theories. The student engagement conceptual work design model is simply bringing together these theories in a new and previously uncharted territory.

The best student retention factors are based on student input and environmental factors. Similarly, theories that relate to work design and employee motivation and satisfaction include both dispositional (i.e. characteristics of the employee such as, needs and expectations, prevailing tendencies) and environmental predictors (i.e. work characteristics such as, autonomy, feedback etc.). Some theorists focus on only dispositional predictors, whereas others focus on environmental predictors. However, as is evident by the research conducted in the previous phase, more recent theorists recognise the importance of both types of predictors.

The conceptual Student Engagement Work Design Model (SEWDM) used in the Phase Two study (Figure 7.1) is based on the underlying definitions of core job dimensions mentioned in Hackman and Oldham’s conceptual model (1976, 1980) but it is not tested using the Job Diagnostic Survey scales – another survey instrument was used instead. It also does not include the mediating and moderating influences contained in the original JCM due to the lack of empirical support for their inclusion.

Figure 7-1 Conceptual Student Engagement Work Design Model (SEWDM)



In addition, the Phase Two research offers an expanded meaning for autonomy and includes the new construct of customer service, which is specifically related to students and highlights the differences between white-collar professionals and students who are paying to attend universities and use university services. As established in the prior review of literature and the Phase One research study – support services do impact institutional commitment, which would have an impact on the other variables included in the conceptual model.

7.1 Elements of Engagement - Independent Variables

Using wording from Schaufeli and Bakker (2004) and Shantz et al., (2013), employee engagement is a positive, fulfilling, work-related state of mind that is illustrated by vigor, absorption and dedication to the organization. Changing this definition a bit to reflect the

academic environment, for the purpose of this study, engagement (synonymous with involvement or participation) is defined as a state of heightened interest and cognitive effort, or being energized and inspired by learning, which results in actions that demonstrate perseverance and being engrossed in one's work.

Similar to employees, students become engaged in their work when they make a psychological investment, in this case in learning, and try hard to discover what the educational institution or faculty has to offer. When students are genuinely engaged in the learning process they are more likely to be able to absorb and retain new information and knowledge. Even though co-creation (mentioned earlier) is focused on students becoming engaged in the learning process; institutional practices can influence student engagement. Pike and Kuh (2005) stated that background characteristics generally account for only 1% to 5% of the variance in levels of engagement. Thus, the most important institutional factors for student success are the policies and practices institutions adopt to increase student engagement. Engaging work is labour that allows creativity, sparks curiosity, provides the opportunity to work with others and produces a feeling of success (Bowen, 2003). Using the motivational approach, incorporating key elements of engagement into a job design fulfils basic human needs. For example, receiving constructive feedback can promote learning, thereby, increasing job competence, satisfaction and positive evaluations of services, whereas decision-making latitude satisfies the need for autonomy and social support satisfies the need for belonging (Bakker and Demerouti, 2007). The construct discussion that follows is founded on the supposition that university students' work can be improved through a motivational (engagement) approach that is focused on increasing mental tasks over another work design approach such as experimental psychology's perceptual/motor approach.

7.1.1 Task significance

Task significance has been defined as the degree to which the work influences the lives of others (inside or outside of the organization). Hackman and Oldham's (1976) JCM model was mostly focused on employee's reactions to how their tasks are structured. Yet, the task significance construct does provide some insight into how jobs can be designed to increase motivation by shaping how employees interact with the people affected by their work. Research has recently disputed the belief that students' experiences within the classroom are the singular or ultimate measure of their educational experience (Coates, 2005). Many students want their work during their educational studies to be more than simply a way to earn a degree. "Students want an audience beyond the teacher to affirm the work is important, needed, and worth doing" (Bowen, 2003, para., 18). They want their work to be meaningful to others. According to Steger et al. (2012), people who say their work is meaningful report better psychological adjustment, place a higher value on their work and report more job satisfaction.

Bloom et al.'s, (2000) research into the JCM and classroom curricula using 219 psychology students found task significance to be the most salient predictor of the outcomes of motivation, satisfaction, interest, performance, absenteeism and desire to withdraw. This finding is logical as students would be more interested in courses which draw on learning methods that reinforce the course contents' benefit to others, such as how knowledge can be applied on the job or positively impact students' interactions with others. So forming this construct to include involvement in practica, internships, field experiences, working with students outside of class on assignments, participation in community-based projects or learning communities, and the like helps to clarify how students' interactions with others may influence how students view their work.

This element of engagement is important to consider for the reasons mentioned but there is another aspect that causes heightened concern. It is unlikely that students will be able to fully determine the value of obtaining a degree and what that degree will subsequently

offer them as they move forward in life until after they graduate (Bay and Daniel, 2001), enter the workforce and have had the opportunity to test the full extent of their acquired knowledge's influence on the physical or psychological well-being of others. Many students, especially first-year students or those who have limited interaction with the greater community, have not had the opportunity to test their newly acquired knowledge. Also, until students fulfil their degree requirements they have not obtained the full extent of the required knowledge so even placements and additional interactions with others provides but a limited assessment of future impact.

The most common way to determine the impact of students' eventual degree before graduation is through university promotional efforts and discussions surrounding future job opportunities. Recruitment messages are one of the best ways to communicate how a job will influence society and the lives of others (Gully, Phillips, Castellano, Han and Kim, 2013). However, these recruitment messages may not be truly reflective of actual outcomes after graduation. Thus, it is hard for students to make definitive assessments of the significance of their work, so this area is definitely in need of more exploration so that universities can determine if the messages they are sending are relevant and effective.

7.1.2 Task identity

Catanzaro (1997) defined task identity in the academic setting as the degree to which students' feel responsible for their work from start to finish. According to Shantz et al. (2013), individuals must be able to envision how each task builds on the other and how the end product or service contributes to organizational goals in order to inspire engagement and the accompanying pride in one's work. When individuals' work allows them to be responsible for the completion of the whole job, it is more likely that they will feel a meaningful connection with what they are doing. If jobs are deconstructed to the point of only involving a minor or insignificant part of the product or service, it is harder

for them to determine how the tasks they are completing contributed to achieving the desired outcome.

This factor holds importance in the conceptual SEWDM because it was one of the main reasons why, although the division of labour (Adam Smith, 1776/1937) and “scientific method” (Frederick Winslow Taylor, 1931/1967) increased worker efficiency and productivity, the deconstruction of labour into micro level tasks decreased satisfaction and increased turnover and absenteeism (Humphrey et al., 2007). In Adam Smith’s needle manufacturing industry example, each worker, through a division of labour model, is assigned a specific part in the construction of the end product. The deconstruction of duties obfuscates the end product - a situation that is also evident in higher education.

Catanzaro (1997) points out that, by necessity, degree requirements are broken down into manageable sections with measurable learning outcomes connected to specified course content. Students obtained fractured knowledge in separate courses (some only lasting one term). Frequently, these courses include term papers or tests based on only the information contained in the individual course. As a result, university students have the required content to obtain a degree broken down into functional specializations or subtasks. Students seldom get the opportunity to integrate all of the knowledge they have accumulated into a meaningful whole within one course or year. Students would be incorporating skills learned throughout their studies if they were responsible for synthesizing, analyzing, making judgments about the methods or approaches, applying theories and concepts to solve practical problems, and interpreting data and assessing the soundness of the conclusions during their university studies. However, frequently this scope of integration may not be encouraged or possible as few faculty members can speak knowledgeably outside of their areas of expertise so asking students to incorporate knowledge from other disciplines or courses may not be encouraged.

Including this construct in the conceptual model is important because students are functioning at the upper levels of mental capacity. Not being able to see the full extent of what they have learned could be frustrating and could diminish the value they place on what they have learned. Conversely, the weighting placed on task identity could also vary depending on the situation. First-year students may feel less stress if they are only asked to concentrate on one aspect of the whole; by contrast, this may change for upper-year students who have had more opportunities to develop the broad skillset needed to generate this level of work.

7.1.3 Skill variety

In the JCM, skill variety has been described as the work an individual is required to perform or demonstrate over a wide range of tasks and, by extension, skills. Similarly, Catanzaro (1997) defined this term for the academic setting to be the degree to which students' studies require them to use an assortment of multifaceted skills. Providing a work design structure that includes a variety of tasks or skills can allow the employee to become more engaged and motivated. Research into the negative issues created by repetitious work lends credibility to this assumption (Shantz et al., 2013). As mentioned earlier, job designs based on Frederick W. Taylor's (1931/1967) research included designing work systems so tasks were standardized and highly simplified. This allowed workers to be easily interchanged, almost like standardized machine parts, which facilitates lower training and startup costs. Unfortunately, the stripping down of the work into highly repetitive steps created problems because people did not enjoy the monotonous nature of their jobs and wanted greater variety. These issues shifted the work design focus to increasing motivation and engagement through jobs that were enriched rather than simplified (Oldham and Hackman, 2010). Kass et al. (2011) found that skill variety (the extent jobs allow workers to use different skills or talents) was highly related to school satisfaction. This factor, along with task identity, was also a predictor of class boredom ($R^2 = 0.24$) and course satisfaction ($R^2 = 0.51$) outcomes. In addition, skill variety (and feedback) made a significant contribution to the regression equations of school satisfaction ($R^2 = 0.34$) and educational experience ($R^2 = 0.25$) outcomes.

In the educational setting, this factor would include the degree to which the student's studies required the student to use various complex skills. For example, low skill variety would include classes where students passively listen to lectures and take multiple-choice tests that are based on the memorization of definitions obtained from textbooks without class discussion or interactions with peers and faculty. During one term or class, this tactic could occur for a number of reasons, but if the student's whole year were structured in this way it would become monotonous creating problems with motivation and engagement which could lead to boredom with accompanying job dissatisfaction, attrition and absenteeism (Kass, et al., 2011). Thus, the definition of skill variety used in this Phase Two study would be the degree students experienced variety in their academic studies, such as critical and analytical thinking, learning to write and speak clearly, use of technology, analysis of quantitative problems, group work, and development of professional knowledge and skills.

7.1.4 Autonomy

In Hackman and Oldham's (1976) JCM, autonomy was viewed as the amount of freedom and independence an individual has to carry out his or her work. Research has demonstrated that incumbents in position that offered a large amount of autonomy are more willing to invest effort and persist in the face of obstacles (Shantz et al., 2013). In fact, for those in high job demand positions, when autonomy is low it can be an important predictor of psychological strain (Bakker and Demerouti, 2007). However, Oldham and Hackman (2010) have asserted that the top-down nature of jobs, common during the time the original JCM was developed, has changed with employees now more involved in the job design process which emphasizes a need for a re-examination of job design based on current workplace dynamics. Thus, exploring this element holds importance across industries with strong empirical support for its inclusion in current work design models. It is noteworthy that this element offers even more importance for research into the design

of university students' work. In this context, the definition of autonomy needs to be expanded to facilitate a better fit with the expectations of higher education, which differ from those found in the conventional workplace.

University students do experience high job demands created by the condensed nature of their course timetables (usually 13 weeks per term). In addition, they may not always be able to decide how their work will be evaluated (multiple choice tests or essays etc.), when assignments are due or when they are working with other students on group assignments. However, for the most part, students have decision-making autonomy. There are some mandatory courses directly connected to degree requirements but the timing of when these core courses are taken, the delivery method (online or on-campus) and what electives are selected rests in the hands of students. Even if there is some inflexibility due to a lack of alternatives, the lack of autonomy is not prolonged. The short duration of courses (one or two terms) and the opportunity to combine low autonomy courses with those selected based on preference still allows students a lot of control. Students pay tuition and, although society also makes an investment in students' education, students have the ultimate control over what school they will attend, their program of study and their timetable so they experience more autonomy than found in the traditional workplace. Thus, the traditional definition of workplace autonomy does not hold the same significance for students; however, the meaning of autonomy has many layers.

Within the university setting, fundamental freedoms which are connected to parliamentary democracy, have constantly been held in reverence. Universities encourage an environment where students can explore tough societal questions protected from external pressure. Preservation of our human rights, based on protected grounds (R.S. 1985, cH-6) of discrimination, is offered to all Canadians through the *Canadian Human Rights Act*. These aspects are not included in the traditional definition of autonomy, as every employee would be provided these legislated rights. However,

autonomy in the academic environment moves past the traditional job dimensions to include an expectation for students to challenge previously held assumptions. For example, academic tenure (lifetime tenure similar to that awarded to judges and senators) was created to help “bolster the academic freedom without which research universities in particular run the risk of being crippled by administrators and other functionaries committed to defending established corporate interests and familiar modes of thought” (Ginsberg, 2012, para., 2). Thus, protecting faculty members and researchers if they openly disagree or oppose prevailing opinions or authorities within or outside of the institution is of utmost importance. This type of presumption of freedom to question administrative and government decisions is specific to institutions of higher education, thereby allowing or encouraging students to assume this role in society.

Research projects, classroom discussions and course content focus on challenging the status quo, validating innovative thinking and encouraging the expansion of theory and research boundaries. This exploration may cause students to question authority, for example government or public policy or corporate benefactors of the university itself etc. These expanded expectations support the inclusion of a new and more sophisticated definition of autonomy with students free to express themselves spiritually, ethically, politically and professionally without threat of expulsion or discrimination based on views which may run contrary to governing forces.

According to the *Stanford Encyclopedia of Philosophy*, being “autonomous is to be one’s own person, to be directed by considerations, desires, conditions, and characteristics that are not simply imposed externally upon one, but are part of what can somehow be considered one’s authentic self” (Christman, 2011, para., 2). For the conceptual model, the definition of autonomy has been modified for the academic setting to be the degree to which students have the freedom to express themselves and to expand pre-established limits that prevent meaningful choice without the interference of others. This definition is based on a more philosophical understanding of autonomy than Hackman and

Oldham's business related definition. This modified definition of autonomy has never been empirically tested within the workplace or educational work design research so its inclusion contributes something new to the literature.

7.1.5 Feedback

Feedback from others reflects the degree to which organization provides information about performance. In the original JCM, feedback was job-based where the job itself provided immediate information about the success of the performance. Later models were expanded to include feedback received from others (Oldham and Hackman, 2010). This level of communication is important because research has demonstrated that "...supportive colleagues and proper feedback from one's superiors increase the likelihood of being successful in achieving one's work goals" (Bakker and Demerouti, 2007, p. 314). When students are more autonomous they are more likely to take responsibility for their learning; however, education is a co-creation of value where faculty play a pivotal role in the learning and assessment process. Faculty identify and set performance standards and communicate them to students so they know exactly what is expected of them, such as how students will be measured during the assessment process through grade breakdowns and course syllabus and what supports are available such as assistance with learning course information or skills. According to Bowen (2003), "in order to stay motivated, students must feel a sense of accomplishment for their efforts in a reasonably challenging task. Learners need to use their new skills as soon as possible, be offered unexpected rewards, praise and motivating feedback" (para. 9).

Feedback, in the educational setting, is of particular importance because of the effect generational values play in employee workplace perceptions. Findings have revealed differences between generations for factors such as feedback and recognition, involvement in decision-making and teamwork and collaboration (Mencil and Lester,

2014). Although students come from a more varied age group than previously was the case in higher education (for more information please see Phase One), currently the majority of university students fit within the Millennial (also known as Generation Y) age group (born between the years of 1979 and 2000). Millennials have been connected to an increased need for instant gratification and rewards even if performance has not been achieved (e.g., trophy for all participants). This generation is also the first to have been raised with technology so they have also become accustomed to the immediate access to information through use of the Internet and email. This expectation for more immediate and detailed feedback translates into the desire to communicate and receive guidance from supervisors and on a more frequent basis (Mencel and Lester, 2014). The concentrated grouping of one generation could place even more importance on the feedback construct within the educational environment than found within the more generationally diverse workplaces where the JCM factors has previously been tested.

7.1.6 Customer service

As mentioned earlier, by emphasizing and attempting to improve the aspects of the students' educational experience, universities are not dictating what services students receive. Universities are working together with the student to find out what services students expect which moves student satisfaction into the realm of customer service (Kamvounias, 1999; Lomas, 2007; Obermiller and Atwood, 2011; Obermiller et al., 2005; Pitman, 2000). The customer service model has been defined by Boyd (2012) as the considered development of support activities designed to increase satisfaction through customers' perceptions that services have met or exceeded their expectations. These expectations would be different depending on the student's background and personal characteristics. Students' perceptions of the institutional environment are partially formed by students' encounters with their peers, faculty members, their involvement in campus activities, the utilization of campus facilities and other opportunities provided by the university (Rocconi, 2011).

Using the work design literature and definitions, it could be easy to make the mistake of attempting to align services students receive with the provision of job resources. In work design, “job resources refer to those physical, psychological, social and organizational aspects of the job that are either/or: functional in achieving work goals; reduce [sic] job demands and the associated physiological and psychological costs; stimulate [sic] personal growth, learning and development” (Bakker and Demerouti, 2007, p. 312). Once again the flow of money draws attention to the difference between industry and academe.

University students may not be buying their “degree” or be customers with regard to learning outcomes, but they are paying tuition with the expectation that the university will provide them with support and services during the learning process so they can achieve their goals (Palli and Mamilla, 2012; Ng and Forbes, 2009; Vauterin, Linnanen, and Marttila, 2011). Unlike job resources, which are paid for by the organization and allow employees to be more efficient in completing their work resulting in increased profit margins, customer services are based on perceptions of whether the services provided before, during and after the transaction met or exceeded expectations. The perceptions that students formed about the services provided to them is a measure of whether they felt their money was well spent. Providing event planning (special speakers, cultural performance, athletic events), academic support services (accessibility and tutoring etc.), time management support (which extends to non-academic responsibilities such as work and family), and providing a diverse cultural environment are all designed to increase students’ positive perceptions of the organization’s support of the student before, during and after enrolment and fit with the definition of customer service.

7.2 Potential Outcomes – Dependent Variables

Students need to have work that is connected to an end result that is both achievable and meaningful to them. This premise is founded in Vroom's motivational theory. This theory proposes that for people to be motivated in their work, they must feel that there is a strong probability that their effort will lead to performance (Expectancy), that good performance will lead to an outcome/reward (Instrumentality) and that they will value the outcome/reward (Valance) because the reward is based on their individual needs, goals, and other sources of motivation (Demetriou and Schmitz-Sciborski, 2011; Lunenburg, 2011).

Students attend university for a number of reasons; nonetheless, two important outcomes from the institution and student perspective are personal growth and institutional commitment. It is noteworthy, that these outcomes are affective responses to one's environment. DeVaro et al., (2007) stated, "the predictive relationship between core job characteristics and performance outcomes have not been consistently supported in the previous empirical tests, much stronger and consistent support has been found for the predicted effects of the core job characteristics on affective responses" (p. 989). Using Chickering's (1969) theory of vectors and Tinto's (1987) interaction theory, Billups' (2008) research employed dimensions of growth and development and students' overall commitment to their university as factors leading to persistence in a program. This Phase Two research will also focus on these affective outcomes.

7.2.1 Institutional commitment

As stated earlier, academia relies heavily on workplace research. "Job resources such as social support, performance feedback, and autonomy may instigate a motivational process leading to job-related learning, work engagement, and organizational commitment" (Bakker and Demerouti, 2007, p. 309). Commitment to an institution has been defined and explored in a variety of ways in the organizational and educational

literature. In general, most organizational commitment research definitions refer to a commitment to the organization as an obliging force that gives direction to behaviour by binding a person to a particular course of action (McNally and Irving, 2013). Within the education context, Bean (1979b) defined institutional commitment as a measurement of students' loyalty toward membership in an organization. Pascarella (1985) defined institutional commitment as a student's expectation that he or she will remain satisfied with his or her institution and the student's anticipation of remaining enrolled at the institution.

7.2.2 Aspects of student satisfaction

Student satisfaction results when actual performance meets or exceeds the student's expectations (Elliott and Healy, 2001). Thus, the students' positive perception of the quality of their educational experience, created through the fulfillment of personal needs, results in student satisfaction (Athiyaman, 1997). Willingness to attend the university again and the evaluation of the entire educational experience are assessments of value and important aspects of institutional commitment.

The repurchase decision or decision to purchase the product or service again and the value students place on the educational experience they have received are linked directly with students' fit with the institution. According to Hsu, Gardner, and Srinivasan (2014), online repurchase behaviours are motivated by various strategies such as customer satisfaction, brand image creation, loyalty development, and service provision with repurchase behaviour being simulated by a strong willingness to repurchase from the same provider. Repurchase decisions would be similar in the education context.

Upper-year students who have stayed throughout their studies or transferred into the university are more likely to experience satisfaction and express positive feelings about their university experience. Simple attrition would remove many discontented students

by their final year. This places an important focus on increasing the probability of the good fit among first-year students. They are just forming their perceptions of the university and could leave if they experience a major disconnect between themselves, their goals and the institution. Thus, by including these aspects (repurchase decision and evaluation of the educational experience) in the institutional commitment construct, they provide a determination of how well marketing communications (brand image creation) accurately portrayed the type of experience a first-year student is likely to have so as to not oversell or misrepresent the institution. Student satisfaction was explored in Bean's (1980) causal model of attrition, which explored organizational determinants' influence on satisfaction levels and the impact on institutional commitment. Bean (1980) found that satisfaction was one of the most important variables in explaining institutional commitment. In contrast, Archambault (2008) reported that there were significant relationships between service performance and student satisfaction but no link between satisfaction and institutional commitment. Thus, similar to the Phase One research study, the amalgamation of satisfaction with other factors that make up institutional commitment presents a broader picture of how to design the work of a student so they are more internally motivated/engaged throughout their university experience.

Calculative commitment can be viewed negatively as the individual having no other choice than to continue because of the costs of terminating the relationship. However, on the flip side, the positive dimension of calculative commitment relates to potential benefits, such as anticipating future gains in terms of time, effort, money, knowledge etc. while affective commitment results from perceptions of the fit between the two parties and feelings of being psychologically bound (Roxenhall and Andréson, 2012). Components of calculative commitment (e.g., quality of advising) and affective commitment (e.g., the forming of positive relationships) can be described in terms of commitment to the institution or "institutional commitment". These factors combined with students' satisfaction with the choice of institution (e.g., willingness to attend again) and the quality of the institution (e.g., evaluation of entire educational experience at the university) can be used as components of institutional commitment (Bélanger et al., 2002;

Bowden, 2011; Demetriou and Schmitz-Sciborski, 2011; Rivas et al., 2007; Strauss and Volkwein, 2004; Tinto, 2002; Wæraas and Solbakk, 2008).

7.2.3 Quality of academic advising

Students' evaluation of the quality of the academic advising they receive is the single most powerful NSSE predictor of satisfaction (Kuh, Kinzie, Bridges, and Hayek, 2007). Why was academic advising included in the institutional commitment measure? Kuh et al., 2007 stated that academic advising increased retention especially for students who had not decided on a degree path, first-generation students who did not have family experience to guide their transition, and students who transferred or decided to change their major. In addition, advisors "also encourage students to become involved with peers in campus events and organizations and invest effort in educational activities known to promote student learning and development" (Kuh et al, 2007, p. 59).

Similar to the employment sector, which would offer assistance to employees from the Human Resources Management Department when employees are attempting to obtain a promotion or after restructuring has resulted in job loss, universities also have professionals who assist students in planning their academic career. Academic advising holds a distinct level of importance to university students who hope to acquire the required skills to enter the job market. More jobs are demanding higher education credentials; the number of jobs filled by university graduates more than doubled from 1.9 million in 1990 to 4.4 million in 2010; conversely 1.2 million fewer jobs were available to high school diploma holders (AUCC, 2011b). This trend is also evident in the latest 10-year outlook (2008 to 2017) by Human Resources and Skills Development Canada (HRSDC) which projects 1.4 million jobs (close to 70% requiring post-secondary education) will become available due to retirement (AUCC, 2011b). However, the job openings are concentrated in some specific sectors. University graduates encompass 60 to 80% of those employed in business and finance; art, culture and recreation; health; engineering and applied sciences; social and legal professions; and teaching. According

to the Association of Universities and Colleges of Canada, (2011b), business and finance professions saw a growth of more than 95% with 1.67 million more professional and management jobs in 2010 than in 1990 with about 80% filled by university graduates. Effective academic advising can include help with setting students' timetables to ensure all degree requirements are met but can also include assistance with obtaining accurate information about future job trends as supplied by the different government and departmental resources. This specific assessment helps to build commitment to the institution as it helps students meet their future employment goals.

7.2.4 Forming relationships with faculty, peers and administrators

Bowden's (2011) research results indicated that student loyalty was most strongly determined by psychological attachment; student satisfaction alone was not sufficient enough to generate loyalty, as there also needed to be a sense of belonging. Marshall, Zhou, Gervan, and Weibe (2012) explored multiple layers of students' sense of belonging and found participants determined their level of belonging to the university through their interactions with peers, faculty and advisors, their ability to make new friends and their ability to effectively manage their course schedule. Baumeister and Leary (1995) concluded that human beings are motivated to fulfill a pervasive desire to belong by forming and maintaining enduring interpersonal attachments with others. Beginning as far back as elementary school, students who feel low levels of relatedness to their teachers are less engaged in school. In addition, students who begin the school year with high levels of relatedness are not only more engaged than students with lower relatedness, their engagement levels also continue to improve more as time passes (Furrer and Skinner, 2003).

Research does not suggest that as students grow older and move on to university relatedness becomes less salient; this need continues even in workplace venues too. Employees view the social component as making up a substantial part of work (Freeneay and Fellenz, 2013; Morgeson and Humphrey, 2006). Building relationships also has

additional benefits, according to Bowen (2003) affiliation through interacting and building relationships with others (peers, teachers, students from other schools etc.) promote cognitive effort, planning and organizing, and self-motivation. Thus, the forming of a sense of belonging through building positive relationships is an important consideration as many retention theories encompass students' contextual fit within institution's environment.

According to McNally and Irving (2013) and Demetriou and Schmitz-Sciborski (2011), there is extensive literature, using a traditional workplace context, that supports the assumption that high levels of commitment could be positively associated with students' engagement and negatively associated with students' intention to quit school. Studies have indicated that people often behave in ways that are consistent with their intentions. These studies' findings assist universities to increase not only satisfaction levels but also students' calculative and emotional attachment to their institutions. As mentioned earlier, retention of students has become an important measure that assessing bodies use to determine quality and accountability of post-secondary institutions (OCUFA, 2006). Roxenhall and Andrésen (2012) found, that when the affective component of commitment was present it was more significant in relationship building than the calculative component; in contrast, calculative commitment was more important for initiating interactions. These findings suggest exploration specific to affective commitment (satisfaction through a sense of belonging, the formation of positive relationships, and the willingness to attend the institution again, i.e., repurchase) and calculative commitment (determinations of quality) factors would help to advance the literature. As universities struggle with less funding from the government and more of their operating budgets derive from tuition and increased competition for those tuition amounts, being able to identify the areas where they are doing things right becomes very important to universities' longevity and stakeholders' views of their brand image as value producing institutions.

7.2.5 Personal growth

Over the years, growth need had been tested in the JCM in a number of ways. As discussed earlier, the original model (Hackman and Oldham, 1976) included the moderating effect of growth need strength. Growth need strength measured a person's need for personal accomplishment, learning, and development. There is little empirical evidence to advocate support for the moderating influence of personal growth (Spector, 1985) so it was also tested in the capacity of a growth satisfaction outcome. Growth satisfaction reflected an amalgamation of workers' attitudes about aspects of their work, such as feelings of accomplishment, degree of autonomy, sense of personal development, and level of challenge. The research results surrounding this outcome have been mixed too (DeVaro et al., 2007) and in need of further empirical testing. Even if this aspect has been empirically supported in the prior JCM research, students are notably different from employees; thus, exploration of the direct effect engagement elements may have on students' personal growth need is appropriate. Students are paying to work at their studies in hopes of the realization of unfulfilled goals instead of being paid to work so their motivation and the strength of their need would be different. These differences would be reflected in the student's need for personal growth too.

7.2.6 The “pursuit of knowledge”

The pursuit of knowledge outcome is also important from a societal perspective, as governments struggle to find funding for higher education; in this economic downturn environment, there has been a shift in society's relationship with knowledge. As funding restrictions increase, there is a danger that the current trend in government program prioritization (based on popularity and association to industry) could create a new model of higher education where the value of 'the pursuit of knowledge' is determined by 'practical' job related outcomes at the expense of helping students reach a broader understanding of themselves and others. This theory is not unfounded; there is an expanding volume of research suggesting universities today are less supportive of students' intellectual and personal growth. According to Judson and Taylor (2014), recent analysis of university students' concluded that “a significant proportion of students

demonstrate no significant improvements in a range of skills including critical thinking, complex reasoning, and writing. They attribute this impotence of learning to a growing student body distracted by socializing or employment and institutional cultures that put undergraduate learning close to the bottom of institutional priority lists” (p. 51).

One also sees this shift among the students entering university, as evidenced by research findings which suggest the majority of students are more focused on attending university to obtain a career, while giving back to society, scholarship, and the intrinsic value of higher education are not a consideration for most (Judson and Taylor, 2014; Kennett et al., 2011). In order for universities to avoid developing their curricula and programs based on students’ positive evaluation of services or becoming training centers for industry (with an eroded broader curriculum because it is not needed for a professional designations) they need to become cognizant of what factors influence students’ personal growth.

The JCM personal growth need has been compared to Maslow’s social, esteem and self-actualization level of needs. Maslow’s Hierarchy of Needs Theory (1954) states that within every human being there is a hierarchy of needs which include: physiological (shelter, hunger etc.), safety (security and protection), social (belonging, acceptance and friendship), status (esteem, self-respect, achievement) and self-actualization (internal drive to achieve one’s full potential and self-fulfillment). Some researchers have considered the top two levels of Maslow’s hierarchy as connected to the conceptualization of JCM personal growth strength and others have included the top three (Spector, 1985).

For this study, personal growth needs is conceptualized as relating to Maslow’s highest order need, i.e., self-actualization which refers to what a person's full potential is and the

realization of that potential (Noltemeyer, Bush, Patton, and Bergen, 2012). For this study's conceptual SEWDM, personal growth encompasses both personal development (such as self-awareness and expansion of views), as well as consideration for others and society's views and needs. Contrary to Maslow's theory, there is little empirical support for higher-level needs being motivational only after lower-level needs have been satisfied so the desire to fulfill the need for personal growth (understanding of themselves and the world around them) can occur independent of the students' level of personal development or situation. Thus, the personal growth factor helps capture the broader life context of students' desired outcomes from their academic effort.

7.2.7 Work Design Hypotheses – Testing the Conceptual SEWDM

To meet the aims of the study, a number of hypotheses have been developed and are included below.

- 1) Inclusion of the customer service element of engagement will help to explain the selected outcomes of “institutional commitment” and “personal growth”.

Exploration of this hypothesis is important as the inclusion of the customer service dimension is specific to the academic environment (Palli and Mamilla, 2012; Ng and Forbes, 2009; Vauterin et al., 2011) and adds substantially new information to the job design research literature.

- 2) If tasks and skills (meaningfulness), autonomy (responsibility), feedback (knowledge of results), and customer service (organizational support) have been incorporated into students' ‘work environment’, this attempt to get students to be more engaged/internally motivated will positively influence their assessment of the quality of their education and commitment to their institution.

This hypothesis tests an aspect of the conceptual SEWDM and basic assumptions of the study which adds new information to the work design and institutional commitment research literature. The study aims to extend the engagement context to provide

information to universities regarding how they can design students' work to increase their institutional commitment; in other words, views of the quality of their education and relationships combined with the desire to repurchase (Hsu et al., 2014; Huh et al., 2007; Bowden, 2011).

- 3) If tasks and skills (meaningfulness), autonomy (responsibility), feedback (knowledge of results) and customer service (organizational support) have been incorporated into students' 'work environment', this attempt to get students to be more engaged/internally motivated will positively influence their personal growth.

This hypothesis also tests an aspect of the conceptual SEWDM and basic assumptions of the study, which will substantially contribute to the current work design and student engagement research literature. The study aims to extend the engagement context (Spector, 1985) to provide information to universities regarding how they can design students' work to encourage students' personal growth, through an expansion of students' intellectual and interpersonal development.

- 4) Autonomy has a more in-depth meaning in the higher education sector than found in the traditional workplace setting and will help to explain both institutional commitment and personal growth outcomes.

Exploration of this hypothesis is important because the higher education environment does differ from the traditional workplace setting. As students (with the help of society) are paying to attend university, they have control over which classes they may want to attend or how they structure their timetables. They even have limited control over deciding on the structure of the classes they take because, often times, they can select delivery methods (online or on-campus) and the faculty member whose teaching style matches their individual learning preferences. However, students also need a more in-depth level of autonomy (Christman, 2011) so they can fulfil societal expectations that

they will, with heightened understanding and thoughtful consideration, push beyond established frameworks to expand the boundaries of knowledge.

7.3 History of the National Survey of Student Engagement (NSSE)

To test these hypotheses, use of the National Survey of Student Engagement (NSSE) was a logical choice. NSSE was developed by the Indiana University Centre for Post-Secondary Research to measure students' participation during their studies in educational activities that assisted with their learning and personal development. This new style of survey satisfied the demand for another form of ranking beyond the surveys that were focused on reputation and/or resources (Pike, 2006). Research has found that students' engagement in their institution influences learning and persistence (Campbell and Cabrera, 2011) so the work undertaken as part of the NSSE has performed a critical role in identifying good practices within publically funded institutions.

Over the years the NSSE has continued to grow, according to a 2009 Canadian University Press Release, this survey has been administered to random samples of students in over 500 universities and colleges in Canada and the United States resulting in over 300,000 student participants (<http://www.canadian-universities.net>). Canadian universities joined their NSSE counterparts south of the boarder for the first time in 2004 with eleven universities participating. By 2006, the number of Canadian universities had more than quadrupled. Participation rates have held steady as all twenty of the provincially assisted universities in Ontario participated in the NSSE survey during 2006, 2008 and 2011 (the three collection periods used in this study).

This high survey participation rate was due in part to the Ontario government's call for greater accountability through Bob Rae's 2005 report on post-secondary education in the province. The former Ontario premier's report had recommended that every two years all

Ontario universities should administer the NSSE (Keller and Farran, 2009). In addition, pressure from Maclean's magazine has encouraged universities to make their results publically available so the findings can be used as a measurement of how government-supplied resources are being used to advance students' educational engagement (2014). The added benefit is students and their parents are more informed of the differences between the university choices during their deliberation process. It is expected that the results from the NSSE surveys allow a detailed examination of the quality of undergraduate university student's learning experiences (OCUFA, 2006).

7.3.1 NSSE's five-construct structure proves difficult to replicate

The NSSE is a self-reported instrument designed to reduce threats to its validity through question familiarity, clarity, merit, recency of information, and privacy of respondents. NSSE does not directly assess learning outcomes, it measures engagement using five institutional benchmarks or categories that identify opportunities for improving undergraduate education: level of academic challenge (LAC), active and collaborative learning (ACL), student interactions with faculty members (SFI), enriching educational experiences (EEE), and supportive campus environment (SCE). Items in these benchmarks measure phenomena such as whether students ask questions or contribute to discussions, how many books they read or drafts they prepare of their work before submission, their interactions with other students and the community, their voting behaviour in government elections, their study patterns outside of class, and whether faculty, peers and administration has been supportive, among others. Items are scored on a four- or seven-point Likert scale, with scores indicating the frequency students reported performing the behaviour. Compared to their USA counterparts, Canadian universities score lower on the active and collaborative learning and student-faculty interactions (AUCC, 2011b).

NSSE has typically been held in quite high regard because of the extensive psychometrics to support its validity and reliability. A number of current research studies

reported that “measures of student engagement, similar to those used by NSSE, are significantly related to students’ learning and development” (Pike, 2006, p. 179). So on a practical level, the indicators of engagement are consistent with research findings in this area but the challenge is to also ensure the indicators are generic enough to enable comparison across institutions, disciplines and programmes. In some cases dependability of results has been forthcoming but not in others.

Pike’s (2006) analysis of 12 scalelets from the NSSE survey items indicated that the scalelets produced dependable measures of educational effectiveness based on a small sample size of 25 to 40 respondents. This finding allowed NSSE results to be used at the department level without need for the expensive practice of sampling large numbers of students. In 2013 Pike again empirically tested NSSE results and found benchmarks proved dependable for 50 or more students and demonstrated a significant relationship with important institutional outcomes such as retention and graduation rates. As a result of studies such as these, NSSE has enjoyed a distinct advantage for allotting resources and marketing purposes but there have been some critics too.

Other researchers have stated NSSE has yielded minimal evidence to support claims of validity (Campbell and Cabrera, 2011; Porter, 2011; Porter, Rumann, and Pontius, 2011). To be effectively used by government and in university ranking and promotional efforts, NSSE benchmarks should be a valid measure of student engagement across a variety of institution types and student populations and the five benchmarks should be able to actually measure institutional effectiveness. Porter (2011) found that NSSE failed to meet validity or reliability standards; in essence, the five benchmarks were not replicated and failed to meet the reliability threshold of .7 alpha levels. Similarly, Campbell and Cabrera (2011) found that during confirmatory factor analysis the five benchmarks did not hold; the benchmarks suffered from low alpha reliabilities and low factor loadings; validity of the model linking GPA and the five benchmarks represented a poor fit; and the EEE benchmark had proven so unreliable it had been excluded from many research

studies. Some suggested that issues with reliability could be connected to some of the academic challenge questions which ask students to report the number of books, problem sets and papers (including the length of the papers assigned) in all of their classes for the entire academic year.

These NSSE questions concerning volume and frequency of workloads based on timeframes of this duration are stored in the respondents' long-term memory. If successful retrieval of factual and relevant long-term memories is achieved, the information must then be combined or augmented with additional information (e.g., the aggregate number of books assigned in each class for the whole school year) to form a subjective answer. It is difficult to trust that most students would be able to offer factual answers to these types of questions. Students are required to read many books and write many papers over the course of their studies, these tasks are routine and not noteworthy enough to make a meaningful impression, so accurate counts are unlikely to be retained in memory (Porter et al., 2011).

With inconsistent findings in the literature for NSSE research, the inclusion of questions that cause issues with accurate recall of information, and the factoring issues have created problems with NSSE but it also offers some unique possibilities. Exclusion of the questions, which focus on aggregate long-term memory, and the development of new construct indicators based on job design theory, could be a new and more reliable way to use the NSSE databanks.

7.3.2 Database Hypothesis - A new approach to the use of NSSE data?

To meet the aims of the study, a number of hypotheses have been developed and were included previously but there is one more proposition to test.

- 5) NSSE can be repurposed to test the conceptual Student Engagement Work Design Model (SEWDM) through the restructuring of the scale items into constructs that fit with the conceptual work dimensions and potential outcomes measures.

Institutions are more likely to use NSSE data when specific actions for improvement are outlined (Pike, 2006). The NSSE survey was developed to measure student engagement; hence, use of these scale items in the new way builds on both the JCM and NSSE literature. By modifying NSSE's original purpose, through restructuring the engagement scale items into constructs that fit with the JCM core work dimensions, among others, this research study proposes that NSSE databases can be repurposed. Based on NSSE's high response rate and the decade long span of its influence across Canada (even longer in the United States), the findings from this work design research could help other institutions utilize prior NSSE collections to form generalizations of undergraduate university students across disciplines and years of study on a national level.

Additionally, the NSSE database was not specifically designed to test the JCM core dimensions (in other words, NSSE did not use the Job Diagnostic Survey scales) so only the model features that had observed counterparts in the data could be explored (e.g., institutional commitment instead of work performance or attrition). While on the surface this limit did not allow a full testing of the JCM; however, it did allow testing of new additions to the JCM model, for example the inclusion of customer service and a new definition of autonomy in the core job characteristics and testing of students' institutional commitment and personal growth needs. In addition, because NSSE was designed for another purpose, the extent that the predictions of JCM find support through the use of the NSSE databases provides a stronger test of the conceptual model.

7.4 Data Collection

The purpose of the second and final phase of the research was to develop a theoretical

work design model that identified the student engagement characteristics that predict institutional commitment and personal growth outcomes using three years of secondary data obtained from the 2006, 2008 and 2011 National Survey of Student Engagement (NSSE) participants of a small Northern Ontario university. As the surveys were already collected prior to this study, with students indicating their informed consent, the information contained in the surveys is considered anonymized secondary data. Although ethics approval was granted by the Ethics Review Board of the institution where it was collected, and again for this study, it was not really needed for this study's purpose as the participants could not be individually identified and the data is considered a secondary source.

An average of all Ontario response rates for 2006, 2008 and 2011 range from 33% to 41%, which are comparable to the level of response for all NSSE institutions (37% to 39%). Typically surveys among post-secondary students achieve between 20% to 50% response rates for the traditional paper and pen format and fall to below 10% for online evaluations but, as the number of surveys administered grows, those ratios are optimistic due to survey response fatigue (Wiggers and Arnold, 2011). As NSSE is an online survey, response rates are higher than expected for this type of format.

7.5 Data Cleaning

Data were initially entered into Microsoft Excel 2011 (Mac version) for pre-processing and determination of missing cases, normality, outliers, skewness, Kurtosis and analysis of the scales to ensure the survey items had been flipped to match the order of the other variables. The assumption of normality was violated with some of the scale items being either mildly positively or negatively skewed as expected with large databases of over 2,000 responses and will not result in a substantive disparity in the analysis (Tabachnick and Fidell, 2007; Pallant, 2007). The original database included 2,356 individual responses (2006 = 650; 2008 = 834 and 2011 = 871). Of the total respondents, surveys

that had more than 20% of responses to key areas missing were deleted from the data set resulting in a final sample size of 2,160 (2006 = 604; 2008 = 761 and 2011 = 795) for data analysis.

7.6 Profile of research respondents

The surveyed undergraduate university students in the U2 NSSE surveys for 2006, 2008 and 2011 were in their first and senior year of university study. They were asked to assess their impressions of their university experiences and to provide some demographic data. The total respondents to the NSSE online survey from the recruitment emails ranged from 39.5% to 45%¹² depending on the year. These levels of responses are slightly higher but still comparable to the response rates normally found for NSSE surveys completed in Ontario. However, it should be noted that for each year surveyed, students who had certain characteristics might have been more prone to respond so there might be a response bias based on access. For example, some students may not use their university email account and depending on their living arrangements, some students may not have had access to the Internet outside of classroom hours so their ability to respond to the survey may have been blunted.

7.6.1 Prior education

In the Phase Two study's database, the breakdown of prior education exhibited an allocation of 76% with high school education, 14.3% having completed college or vocational training, 5.4% transferring from another university and 4.3% falling in the other/unknown category. This entry point split is similar to the CUCC report (2007b), which stated students transferring from college made up 13.25% of the university's student population in 2006-2007. Unfortunately, although students who had a college diploma were identified, the NSSE survey did not ask questions that would allow one to

¹² 2006: First year response rate 36% and Senior year 43%; 2008 First year response rate 47% and Senior year 43%; 2011 First year response rate 42% and Senior year 43%

accurately determine if the student had entered university directly after graduation. As there could have been a significant gap between graduation from one institution and enrolment at their university, it was not possible to perform an analysis based on the entry point of the students who had reported attending college before enrolling in university. Too many unidentified external variables made it impossible to determine if differences were caused by the educational avenue or potential life experiences obtained during the transition.

7.6.2 Grade point average

Kass et al. (2011) found none of the university students' ratings of the core JCM dimension was significantly related to the GPA school performance outcome. However, Andres and Carpenter (1997) and Dooley, Payne, and Robb (2011) state that quantitative research confirmed that high school grade point average (GPA) is a strong indicator of students' academic success in university; thus, lower GPA entrance levels could be a precursor to attrition. High School GPA was not offered in the survey database, but it is logical that the importance of GPA in university (which was tracked) is also significantly related to retention and a determinant of university student success, even with the Kass et al. (2011) findings to the contrary. However, GPA was not included in this analysis as the majority of student participants were in the top ranges. In the Phase Two survey database, 83% of the participants (pooled first and senior) students reported a university average of a B or higher, i.e., 58% in the B grade range and 25% in the A grade range. This percentage was lower than the combined average of the peer institutions, which identified their participants as 54.3% in the B range and 37.6% in the A range. The Phase Two database results were also lower than the 2006 and 2011 U2 NSSE collection periods, with the 2008 variation mostly restricted to the A grade range which dipped 13% in 2008 (2006: B = 57% and A= 39%; 2008: B = 58% and A = 26%; 2011; B = 59% and A=31%). It would appear that students in the top percentile were less likely to answer all of the NSSE questions, which could mean that this group was slightly under represented in the Phase Two database.

7.6.3 Breakdown by living arrangements, age and enrolment status

Statistics reported for this study's respondents (Table 7.1) highlighted that the university is a commuter school as the location of the campus is on the outskirts of the city and not within easy walking distance from off-campus student housing or the city center.

Combined first- and senior-year response rates were similar to the peer NSSE participants (41.8% living on campus or in residence vs. 41.6% reported in the peer participants).

However, the number of students living within walking distance of the campus was lower for the study's university (8.7% vs. 18.6% for the peer institutions) and those living off-campus within driving distance was higher (47.1% vs. the 37.9% reported for the peer NSSE participants).

Table 7-1 Breakdown of Demographic Markers

	NSSE Peer Participants 2006, 2008, 2011 Percent (%)	Phase Two Database Frequency	Phase Two Database Percent (%)	Phase Two Database Cumulative Percent (%)
Living Arrangements				
Room/apartment in university residence or campus housing	41.6	896	41.8	41.8
Off-campus accommodation walking distance of campus	18.6	187	8.7	50.5
Off-campus accommodation driving distance of campus	37.9	1010	47.1	97.7
Other (distance education) or missing	0.5	67	3.0	100.0
Totals	100	2160	100.0	
Age Categories				
19 or younger	41.8	1036	48.0	48.0
20-23	39.9	858	39.7	87.7
24-29	9.3	121	5.6	93.3
30-39	4.7	75	3.5	96.8
40-55	4.0	64	3.0	99.7
Over 55	0.5	6	0.3	100.0
Totals	100	2160	100.0	
Enrolment				
Part-Time	10.4	400	18.5	18.5
Full-Time	89.6	1760	81.5	100
Totals	100	2160	100.0	

All students deserve the same level of engagement no matter the size of the class or how long they have been in post-secondary study. Consequently, both first-year and senior-students were included in the dataset because this span provides a wider range of student experiences and activities and perceptions of the institution. Seniors have had more time

to form lasting relationships and generally experience smaller class sizes due to their upper-year status (coursework concentrated on their degree major) while first-year students are providing their initial responses to work load and faculty availability and the formation of new relationships etc. The breakdown of survey respondents according to year of study was 61% in first year and 39% in their final year of study (senior). The analysis used the combined totals of first and senior year students to test the hypotheses for all students (i.e., more generalized); thus, it was not logical to breakdown the database according to these groups when comparing the demographic information. One exception of note is the difference between the living arrangement of first- and senior-year students. The percentage of students who reported living on-campus in their first year was substantially higher (62.3% Phase Two study's university and 69% peer NSSE participants) than those living on-campus in their senior year (6.3% Phase Two study's university vs. 5.7% peer NSSE participants) for both the peer NSSE participants and the study's university population. Therefore, the combined average of the living arrangement, noted previously, does mask the differences between first- and senior-year participants.

The age breakdown for the Phase Two survey database shows a higher percentage of students under 19 years of age compared to peer institutions and the conversely lower percentage of students over 24 years of age (Table 7.1). However, the Phase Two database breakdown is similar to those reported for the U2 NSSE participants with the percentages reported in each of the U2 NSSE collection periods showing very little variation in each age grouping.

Enrolment figures between part-time and full-time were also different for the Phase Two database and the peer institutions (Table 7.1). The approximately 8% difference is noteworthy; however, it could be partially explained by the differences in age groupings. As the Phase Two participants are younger it is logical to assume the majority are not attempting to juggle full-time work and family responsibilities with schooling. The

differences could also be connected to U2's distance from its city center. More students who live off campus are driving to the U2 institution compared to its peer institutions which may highlight the difficulty part-time students may have traversing the distance required to reach the institution from the outlying areas. The extra time required to reach the institution may work as a deterrent for part-time study. These are points of interest that could be investigated in further research studies.

7.6.4 Gender split

Finally, the gender split of the NSSE (2006, 2008, 2011) respondents in the survey database was 19.4% male and 80.6% female. This is comparable to the Phase One 2011 study, which had a gender breakdown of female respondents (80.2%) compared to male respondents (19.8%). These breakdowns demonstrate a much higher percentage of females compared to males than the Peer Benchmarks offered by NSSE, i.e., overall average of 41.3% male versus 58.7% female experienced during the survey years (2006, 2008 and 2011) and the breakdown represented in the results posted by NSSE for U2 (overall average of 26.5% male vs. 73.5% female).

The participants in the Phase Two study spanned core undergraduate departments (Table 7.2) such as education, nursing, psychology, commerce, science, kinesiology, history and geography, among others. It was reasonable to expect a slightly higher percentage of female participants in the database as the programs offered at this university have been traditionally over-subscribed by the female population. (e.g., nursing and education). However, this does not explain the differences in the breakdown between the Phase Two survey database and the NSSE U2 reported gender participation rates of those who had completed at least one question in the survey. As responses from participants that contained over 20% missing data were deleted, the lack of completed surveys by the male respondents during these years (2006, 2008, 2011) could have caused the male population to be under-represented in the final database used in this study. This situation does represent a limitation to the findings and should be considered when reviewing the results

and conclusions.

During statistical analysis, significant differences between the genders were not evident in the research study except for the task significance construct ($p = < .05$ with a higher mean for female students $\bar{x} = 2.4684$ than males $\bar{x} = 2.3206$). As this construct did not prove to be statistically significant in the linear regression analysis (in other words it did not explain either the personal growth or institutional commitment outcomes), this demographic characteristic was not included in the analysis. Similar results were found in Serenko's (2010) work on student satisfaction. Gender was entered into his model as moderating variables, but it was removed, as it was not found to be statistically significant.

7.6.5 Breakdown of respondents by degree major

As mentioned earlier, the number of jobs filled by university graduates has more than doubled in one decade, from 1.9 million in 1990 to 4.4 million in 2010 (AUCC, 2011b). This trend is expected to continue; according to the latest HRSDC 10-year outlook (2008 to 2017), retirement will create an additional 1.4 million jobs (close to 70% requiring post-secondary education). However, this increase is not across the board. According to the Association of Universities and Colleges of Canada (2011b), business and finance professions saw a growth of more than 95% from 1990 to 2010. This job growth and the pressure within industry for academic credentials is evident in the breakdown of NSSE participants with business students making up 8.1% of the surveys participants and about 39% of the Applied and Professional Studies category (Table 7.2).

Of the total Phase Two participants, social science and sociology, nursing and criminal justice programs make up 7.7%, 5.6%, and 4.1% respectively (Table 7.2). As stated earlier, university graduates encompass 60 to 80% of those employed in applied sciences, health and legal professions (AUCC, 2011b). As there is a clear demand for university

degrees in these professions, it is not surprising to see higher percentages also evident in the Phase Two database in these areas.

It is also not surprising that the participants used for this study were concentrated in the concurrent education program (7.4%) and the subject matter areas which could lead to acceptance into the faculty of education after graduation, for example psychology (11%), English (12.1%), geography (7.1%), history (11.3%) etc. (Table 7.2). The university used in the Phase Two research (U2) has a long and distinguished history in Ontario as possessing one of the first education programs to be fully accredited by the Ontario College of Teachers (OCT). The concentration of participants in these areas is logical based on market demands and the history of the institution (even if job demands in the education sector have fallen over the last decade).

Table 7-2 Breakdown of Respondents by Degree Major

		Faculty Average	Phase Two Database Frequency	Phase Two Database Percent (%)	Phase Two Database Cumulative Percent (%)
Degree Major					
Business	Applied & Professional Studies	n= 456 21%*	176	8.1	8.1
Criminal Justice	Applied & Professional Studies		89	4.1	12.2
Nursing	Applied & Professional Studies		122	5.6	17.8
Social Welfare	Applied & Professional Studies		26	1.2	19.0
Child and Family Studies	Applied & Professional Studies		43	2.0	21.0
Education	Education	n= 237 11%*	160	7.4	28.4
Physical and Health Education	Education		77	3.6	32.0
Computer Science	Arts and Science	n= 1465 68%*	18	.8	32.8
Fine Arts	Arts and Science		50	2.3	35.1
Biology	Arts and Science		81	3.8	38.9
Mathematics	Arts and Science		53	2.5	41.4
Psychology	Arts and Science		238	11.0	52.4
Classical Studies	Arts and Science		14	.6	53.0
Contemporary Studies	Arts and Science		50	2.3	55.3
English	Arts and Science		261	12.1	67.4
Geography	Arts and Science		154	7.1	74.5
Gender and Social Justice	Arts and Science		33	1.5	76.0
History	Arts and Science		243	11.3	87.3
Political Science and Economics	Arts and Science		12	.6	87.9
Social Science and Sociology	Arts and Science		167	7.7	85.6
Religion	Arts and Science		32	1.5	97.1
Unknown or Undeclared	Arts and Science		48	2.2	99.3
Native Studies	Arts and Science		5	.2	99.5
Philosophy	Arts and Science	6	.4	99.9	
Missing		2	.1	100.0	
Total		2160	2160	100.0	

* rounded

7.6.6 Breakdown of parents' educational background

The breakdown of parents' educational background also highlights some similarities and some important differences from the peer institutions (Table 7.3). Although there was only a very slight (about 4%) difference, first-generation students (i.e., students with neither parent having any education beyond high school) made up a large portion of both the peer (36.9% of fathers and 33.7% of mothers with no higher education) and Phase Two database (40.8% of fathers and 33.9% of mothers with no higher education) participants. Mainly tied to the millennial generations' close relationship with their parents, Williams and Williams (2011) have suggested that even after enrolment parents play a key role in encouraging and motivating students to do well at university. Although the percentage of first-generation students was similar between the peer institutions and the Phase Two database, it is noteworthy because of the previously mentioned higher need for academic advising and university support systems for this grouping of students. Contrary to established practices, these students may not be able to count on parental guidance in these areas.

Table 7-3 Breakdown of Parents' Educational Background

	NSSE Peer Participants 2006, 2008, 2011 Percent (%)	Phase Two Database Frequency	Phase Two Database Percent (%)	Phase Two Database Cumulative Percent (%)
Education Completed by Father				
Did not finish high school	8.9	329	15.3	15.3
Graduated from high school	28.0	552	25.5	40.8
Some or completed college or CEGEP	14.2	725	33.6	74.4
Attended university without earning degree	9.6	90	4.2	78.6
Completed a bachelor's degree (B.A., B. Sc., etc.)	23.8	288	13.3	91.9
Completed a master's degree (M.A., M.Sc., etc.)	11.4	125	5.8	97.7
Completed a doctoral degree (Ph.D., J.D., M.D., etc.)	4.4	29	1.3	99.0
Missing	0	22	1.0	100.0
Totals	100	2160	100.0	
Education Completed by Mother				
Did not finish high school	6.7	182	8.4	8.4
Graduated from high school	27.0	551	25.5	33.9
Some or completed college or CEGEP	15.1	869	40.2	74.1
Attended university without earning degree	13.4	91	4.2	78.3
Completed a bachelor's degree (B.A., B. Sc., etc.)	24.6	360	16.7	95
Completed a master's degree (M.A., M.Sc., etc.)	11.6	83	3.8	98.8
Completed a doctoral degree (Ph.D., J.D., M.D., etc.)	1.6	8	.4	99.2
Missing	0	16	.8	100.0
Totals	100	2160	100.0	

Also of note are the differences between the peer institution participants and the Phase Two participants. Contrary to the peer institutions, both parents' higher education participation in the Phase Two database is more focused on completion of college (33.6% for fathers and 40.2% for mothers) than completion of university (13.3% of fathers with a bachelor's degree and 16.7% of mothers with a bachelor's degree). It is also evident that mothers are following the current higher education trend of females enrolling in higher education (at the college and undergraduate level) in greater numbers than males for both the peer and Phase Two database. In addition, in the Phase Two database, completion of graduate studies such as a master's degree or doctoral degree is low (5.8% master's degree and 1.3% doctoral degree for fathers and 3.8% master's degree and 0.4% doctoral degree for mothers), especially when compared to the peer institutions (Table 7.3) as both parents from these institutions had a greater percentage of graduate level education (11.4% master's degree and 4.4% doctoral degree for fathers and 11.6% master's degree and 1.6% doctoral degree for mothers).

7.7 Data analysis methods

An analysis of the data consisted of a two-step process using different statistical techniques. First, the measurement items were evaluated as a reflection of the construct. Finally, the potential independent constructs were tested against the dependent construct of institutional commitment and personal growth to assess which constructs are more important to consider.

7.7.1 Factor Analysis

Similar to the Phase One stage of analysis, the first step of the data analysis for the Phase Two conceptual SEWDM involved a factor analysis performed on the data to identify if items clustered into patterns that were consistent with the overall model. "The measurement model analysis requires that each construct be evaluated on an individual basis. The covariance matrix of the indicators is examined to determine those variables that are highly related to each other. If the scales defined as measure of the constructs are

found to be highly related, then this relationship is seen as a reflection of their common link to the construct” (Nadeau, Heslop, O’Reilly, and Luk, 2008, p. 97). When items factor under multiple categories, the category that provides the most logical fit as determined by the items’ component number or overall congruency with the other items in the category should be selected. There were no issues with the overall fit of the model, as items did not form under multiple component numbers. All eight of the model categories had the related items group together as expected demonstrating there was a clear pattern to all of the factors. Thus, this exploratory process identified and confirmed the groupings of survey items for use in developing the constructs, which were included in the final regression models.

Of the 47 items used to test the conceptual models, the resulting eight-factor solution demonstrated that eight of the survey items loaded on one factor explaining 17.698% of the model variance (Table 7.4) with the other 39 items loading on the other seven factors explaining a further 21.62% of the total 39.318% variance.

Table 7-4 Model Variance Explained and Cumulative Percent

Component and Construct	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1 (Autonomy)	14.512	17.698	17.698
2 (Skill Variety)	4.512	5.503	23.201
3 (Institutional Commitment)	2.910	3.548	26.749
4 (Feedback)	2.320	2.830	29.578
5 (Customer Service)	2.260	2.756	32.334
6 (Task Significance)	2.129	2.596	34.930
7 (Task Identity)	1.968	2.400	37.330
8 (Personal Growth)	1.630	1.988	39.318

Table 7.5 includes a column that provides information about the factor loadings (factor pattern matrix). This information represents: 1) the variable weights for each factor and 2) the correlation between the variables and the factor within the possible value ranges from -1 to +1 (Bruin, 2006). Following the examination of the factoring outcome, a Cronbach’s Alpha analysis was used “to assess the degree to which all of the different items in these groupings measured the same attribute” (Bélanger and Longden, 2009, p. 9). Each of the clustered factors was assessed individually and the Cronbach Alpha score if the item was deleted from that clustered grouping was reviewed (Table 7.5).

Table 7-5 NSSE Data: Factor Analysis and Cronbach's Alpha of the Conceptual Model (SEWDM)

Construct and Definitions	Factor Loadings	Cronbach's Alpha if removed	Cronbach's Alpha
Autonomy			.877
Developing a personal code of values and ethics	.742	.850	
Understanding people of other racial and ethnic backgrounds	.714	.857	
Solving complex real-world problems	.688	.853	
Developing a deepened sense of spirituality	.684	.869	
Understanding yourself	.680	.857	
Contributing to the welfare of your community	.667	.858	
Voting in local, state, or national elections	.563	.877	
Learning effectively on your own	.514	.869	
Skill Variety			.859
Thinking critically and analytically	.665	.838	
Writing clearly and effectively	.655	.839	
Speaking clearly and effectively	.645	.831	
Using computing and information technology	.629	.851	
Analyzing quantitative problems	.610	.841	
Working effectively with others	.478	.841	
Acquiring a broad general education	.466	.850	
Acquiring job or work-related knowledge and skills	.436	.849	
Institutional Commitment			.784
Relationships with administrative personnel and offices	.707	.748	
How would you evaluate your entire educational experience at this institution?	.706	.743	
If you could start over again, would you go to the same institution you are now attending?	.701	.750	
Relationships with faculty members	.649	.738	
Overall, how would you evaluate the quality of academic advising you have received at your institution?	.620	.757	
Relationships with other students	.546	.770	
Feedback			.777
Discussed grades or assignments with an instructor	.707	.715	
Used e-mail to communicate with an instructor	.644	.756	
Talked about career plans with a faculty member or advisor	.559	.738	
Discussed ideas from your readings or classes with faculty members outside of class	.553	.732	
Received prompt written or oral feedback from faculty on your academic performance	.461	.761	
Asked questions in class or contributed to class discussions	.449	.760	
Customer Service			.840
Helping you cope with your non-academic responsibilities (work, family, etc.)	.737	.768	
Providing the support you need to thrive socially	.695	.782	
Encouraging contact among students from different economic, social, and racial or ethnic backgrounds	.645	.817	
Attending campus events and activities (special speakers, cultural performance, athletic events, etc.)	.619	.824	
Providing the support you need to help you succeed academically	.550	.823	
Task Significance			.688
Practicum, internship, field experience, or clinical assignment	.665	.653	
Made a class presentation	.596	.612	
Worked with other students outside of class to prepare class assignments	.571	.634	
Community service or volunteer work	.515	.664	
Participated in a community-based project (e.g. service learning) as part of a regular course	.465	.673	
Participate in a learning community or some other formal program where groups of students take two or more classes together	.462	.646	
Task Identity			.787
Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships	.733	.707	
Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	.692	.732	
Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions	.680	.733	
Applying theories or concepts to practical problems or in new situations	.647	.765	
Personal Growth			.737
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	.763	.615	
Examined the strengths and weaknesses of your own views on a topic or issue	.744	.618	
Learned something that changed the way you understand an issue or concept	.680	.656	
Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)	.469	.788*	

*Scale item retained in the model because of its relationship with the overall theory. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 16 iterations.

There was only one scale item under Personal Growth which reduced the overall Cronbach Alpha score of the construct; thus, it did not positively contribute to the final construct and could have been removed. However, as it was deemed of theoretical importance it was retained in the construct. Normally, alpha reliabilities above .70 are considered good when using large surveys. Alpha reliabilities in the range from .71 to .99 are considered to be exceptionally high (Gliem and Gliem, 2003). The Cronbach's Alpha ranges were high (.737 to .877) except for the .688 achieved for the task significance construct. It was determined that although this construct (task significance) fell somewhat below the recommended .70 reliability measure, there was theoretical support for retaining it in the final model. After testing for reliability, the factored variables from each variable grouping were transformed into construct variables consisting of the summed survey items for each variable category.

7.7.2 Regression

As regression is concerned with the nature and strength of the association between two variables, the use of this statistical method allows one to learn more about the relationships between the multiple independent variables and the dependent variable. Linear regression is when both the X variable (the predictor) and the Y variable (the response) are both continuous and linearly related. In this case, the response will increase or decrease at a constant ratio to the predictor - a set increase/decrease in the response for every unit increase in the predictor. For this study the "enter" method was used with all of the independent variables being entered at the same time as a single model.

7.8 Explaining Institutional Commitment

As stated, linear regression is concerned with the nature and strength of the relationship between two variables. Therefore, the use of this statistical method enables one to identify which constructs are most important in predicting institutional commitment. The results show the model was a good fit with the equation explaining a statistically

significant portion of the variability in the dependent variable ($F= 207.740$; $p < .05$). The adjusted R Square statistic (R^2) demonstrates that the model explains 36.8% of the variance in the dependent variable. In addition, four of the six indicator constructs achieved p-values less than .05 indicating significance. Therefore, four of the constructs can be used to understand institutional commitment.

As the predictors were factor scores, there were no multicollinearity issues with any of the constructs as the VIF statistics are all considered small (i.e. less than 5) for this study. All four Beta values (Table 7. 6) positively influenced the construct used to identify institutional commitment; Customer Service ($\beta = .337$; $p < .05$); Skill Variety ($\beta = .261$; $p < .05$); Autonomy ($\beta = .084$; $p < .05$) and Feedback ($\beta = .084$; $p < .05$). The discussion of the linear regression results have been ordered based on the independent variables' Beta size so the reader is cognisant of the variables' importance in predicting institutional commitment. The other constructs that tested the Institutional Commitment outcome that did not achieve p-values less than .05 were: Task Identity ($\beta = -.033$; $p > .05$) and Task Significance ($\beta = -.001$; $p > .05$). A brief discussion of the possible reasons why they did not prove to be significant is also included below.

Table 7-6 Regression of Factors on Institutional Commitment

Adj. R-Square	Std. Error	F	Sig. of F		
.368	.59438	207.740	.000		
Relationship	Std. Beta Coeff.	Std. Error	t	Sig. of t	Collinearity (VIF)
Autonomy	.084	.026	3.549	.000	1.901
Skill Variety	.261	.031	10.505	.000	2.086
Feedback	.084	.026	3.929	.000	1.541
Customer Service	.337	.022	15.705	.000	1.553
Task Significance	-.001	.024	-.068	.946	1.288
Task Identity	-.033	.024	-1.570	.117	1.492

As stated earlier, “Beta are the standardized coefficients. These are the coefficients that... would obtain if [one] standardized all of the variables in the regression, including the dependent and all of the independent variables, and ran the regression. By standardizing the variables before running the regression, [one has] put all of the variables on the same scale, [so they] can compare the magnitude of the coefficients to

see which one has more of an effect. [The observer] will also notice that the larger betas are associated with the larger t-values and lower p-values” (Bruin, 2006, para. 8).

7.8.1 Discussion of Institutional Commitment Linear Regression

Customer Service ($\beta = .337$; $p < .05$): The research study’s findings support the inclusion of customer services in the work design used for university students (Table 7.6). This independent variable had the largest Beta size so it was the most predictive of institutional commitment (dependent variable). This finding adds a new and important perspective to the work design literature and helps to support the co-creation of value approach to higher education. As mentioned earlier, students are different from employees in some fundamental ways. Unambiguously, students are customers regarding their use of residence lodging, cafeteria expenditures and other in-house university services (Bay and Daniel, 2001). They are paying for these university services through their tuition and have expectations about the service quality. The customer services identified in this study (for example support for non-academic responsibilities, social and academic support etc.) offer a better transition to university life so students are able to concentrate on their studies. Rocconi (2011) stated that students’ perceptions of the institutional environment are partially formed by students’ encounters with their peers, faculty members, their involvement in campus activities and the utilization of campus facilities and other opportunities provided by the university.

The Phase Two study offers support for these conclusions as campus activities, campus facilities and other opportunities provided by the university do help to predict students’ level of institutional commitment. Customer services influence satisfaction, evaluations of quality and repurchase opinions, so these services help to cement a sense of belonging – these are all desirable features when attempting to ensure students remain committed. Thus, administrators have a responsibility to ensure the successful delivery of support services promised during the university’s promotional process.

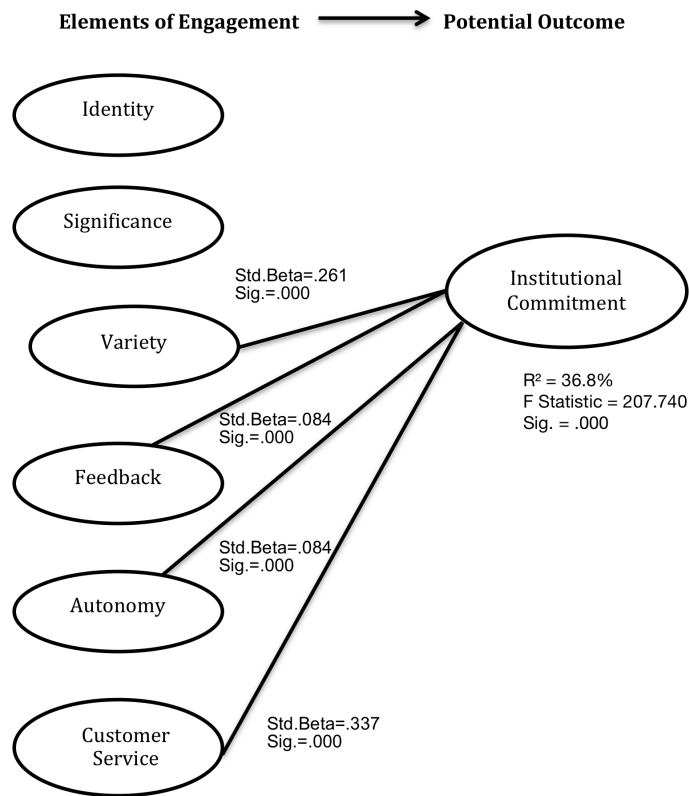
Skill Variety ($\beta = .261$; $p < .05$): This independent variable had the second highest Beta size so it also holds a prominent function within the regression equation (Table 7.6). This finding is not surprising and confirms prior research findings. Kass et al. (2011) found that skill variety (the extent jobs allow workers to use different skills or talents) was most highly related to school satisfaction. The skill variety construct, along with task identity (defined as the extent to which jobs allow workers to feel they complete a whole, identifiable product), also helped to explain the variance in course satisfaction. In addition, skill variety made a significant contribution to the regression equations of overall school satisfaction and educational experience outcomes. Students may need more variety (for example written, verbal, integration of technology, acquiring broad education and work-related knowledge, etc.) in order to not only combat boredom but also to form relationships fostered during group work and be able to identify the benefits of the skills they are learning. In addition to other goals, students pay to attend university so they can develop job related skills. By offering a greater span of possibilities through the development of a variety of skills students may evaluate their entire university experience and the relationships they have formed more positively.

Feedback ($\beta = .084$; $p < .05$): This independent variable had the same predictive value as the autonomy construct (Table 7.6). It is not surprising that this construct helped to predict institutional commitment. Oldham and Hackman (2010) discussed the importance of the social sources of motivation in employee work design, which include the degree the work requires working with people and also the amount of feedback received from others. This need for interpersonal confirmation of work quality is also required within the academic setting. Bowen (2003) noted that for students to stay motivated they need praise and feedback to confirm their accomplishments. This factor may be even more important in the current university environment. Millennials now make up a substantial portion of the university population and according to Mencl and Lester (2014) it has been well documented that these students require more timely and detailed feedback than previous generations. This research again supports the co-creation of value concept. It would appear that faculty members hold an important role in helping

to engage students in the learning process by providing not only academic challenge but also by being accessible and providing feedback through prompt guidance and critique of students' written and oral work.

Autonomy ($\beta = .084$; $p < .05$): This independent variable had the same predictive value as the feedback construct (Table 7.6). Hackman and Oldham (1976, 1980) and Morgeson and Humphrey (2006) found that autonomy held a key role in explaining selected outcomes such as retention, satisfaction, and training requirements. DeVaro et al. (2007) explored the JCM within the modern organizational environment and found worker autonomy had a positive association with labour productivity and product quality and was also associated positively with satisfaction. On the surface, the findings from the Phase Two study should add support and expand on these findings. Institutional commitment is founded on facets of satisfaction and has been connected to retention. Additionally, some of these studies have been developed using a more current workplace setting so they are applicable today. However, the definition for autonomy in the Phase Two study has been amended to reflect society's expectations for the university student population. As this definition of autonomy (in essence, learning effectively on one's own, understanding yourself, solving complex real-world problems, developing a personal code of ethics, spirituality and political awareness, etc.) has not been used before in the work design literature, it adds a new level of understanding to the current research. It would appear that students' freedom to express themselves ethically, politically, professionally and spiritually, without fear of discrimination, does help to predict students' commitment to their institution.

Figure 7-2 Linear Regression – Student Engagement Work Design Model - Institutional Commitment



Task Identity ($\beta = -.033$; $p > .05$): This independent variable was not significant (Figure 7.2) so it had no predictive value in explaining Institutional Commitment (dependent variable). This finding is interesting because Kass et al. (2011) had found that task identity (along with skill variety) helped to explain the variance in course satisfaction. It would appear that seeing the big picture or how each course fits within the whole (through the synthesizing and organizing of ideas, analyzing and making judgments regarding the value of information and applying theories) is not connected to building students' commitment to their university. This finding may be explained by students' impression that they can effectively evaluate their university experiences and develop a sense of belonging based on individual courses. Peters et al. (2005) stated that students do not have the depth of knowledge to be able to make informed choices regarding their curriculum. Thus, more control should lie in the hands of the university. The findings from the Phase Two research appear to fit with this viewpoint. First-year students

especially may be absorbed with fitting in and becoming more autonomous after being separated from their parents and their previous lifestyle resulting in them focusing on achieving a passing grade on a per course basis, without the background depth of knowledge to understand or the desire to ascertain how the courses fit together as a whole.

Task Significance ($\beta = -.001$; $p > .05$): This independent variable was not significant (Figure 7.2) so it had no predictive value in explaining institutional commitment (dependent variable). In some ways this finding is not surprising as this construct also had a lower Cronbach's Alpha, falling below the recommended .70 threshold. Despite the lower Cronbach's Alpha, it had been retained in the model because of its theoretical importance within the job design literature that related to employees. Yet, students are somewhat different from employee again in this context. Until students' graduate they will not learn how their "work" has the ability to impact others, which may be the reason why this aspect does not attain significance in this research study. Morgeson and Humphrey (2006) stated that task significance is "the external aspect of how the job influences the lives or work of others, whether inside or outside the organization – people in the jobs that have a significant effect on the physical and psychological well-being of others are likely to experience greater meaningfulness in the work" (p. 1323). It is logical that significance can only be assessed if the student participates in opportunities where they can see the impact of the knowledge they are obtaining through their studies, for example practicum, field experience, worked with professor outside of course or program requirements, community service or volunteer work, etc. However, even if there are interactions with others outside of normal classroom routines these students do not appear to see the future value of what they are learning. As they are still engaged in the learning process, task significance may not hold any importance to their institutional commitment because they are not able to make this connection yet. Just as students must rely on the university to determine the construction of the curriculum because they do not possess the depth of understanding needed to evaluate the importance of some factors of

their education until after they have completed their degree (Bay and Daniel, 2001), it appears they also may not be equipped to see the significance of it either.

7.9 Explaining Personal Growth

The results indicate the model was a good fit (Table 7.7), with the equation explaining a statistically significant portion of the variability in the dependent variable ($F= 153.026$; $p < .05$). The adjusted R Square statistic (R^2) demonstrates that the model explains 30.0% of the variance in the dependent variable which is lower than the Institutional Commitment model's R Square (R^2) of 36.8% but it is reasonable that external influences (family, friends and co-workers from the present and past) could account for more of the variance in someone's personal development. For this model, three of the six indicator constructs achieved p-values less than .05 indicating significance. Therefore, three of the constructs can be used to understand Personal Growth. Similar to the institutional commitment outcome, in this outcome's testing, Feedback ($\beta = .263$; $p < .05$) and Autonomy ($\beta = .145$; $p < .05$) were significant and positively related to the dependent construct and Task Significance ($\beta = .004$; $p > .05$) did not explain the variance in this outcome either. However, in contrast to the institutional commitment outcome, for the personal growth outcome, Task Identity was significant ($\beta = .263$; $p < .05$) with a high Beta value and Customer Service ($\beta = -.007$; $p > .05$) was not significant so it did not explain the variance in personal growth.

Table 7-7 Regression of Factors on Personal Growth

Adj. R-Square	Std. Error	F	Sig. of F		
.300	.54617	153.026	.000		
Relationship	Std. Beta Coeff.	Std. Error	t	Sig. of t	Collinearity (VIF)
Autonomy	.145	.024	3.549	.000	1.901
Skill Variety	.029	.028	10.505	.270	2.086
Feedback	.263	.024	3.929	.000	1.541
Customer Service	-.007	.021	15.705	.749	1.553
Task Significance	.004	.022	-.068	.836	1.288
Task Identity	.263	.022	-1.570	.000	1.492

As the predictors were factor scores, there were no multicollinearity issues with any of the constructs as the VIF statistics are all considered small (i.e., less than 5) for this study

(Table 7.7). The discussion of the linear regression results has again been ordered based on the independent variables' Beta size so the reader is cognizant of the variables' importance in predicting personal growth.

7.9.1 Discussion of Personal Growth linear regression

Task Identity ($\beta = .263$; $p < .05$): This independent variable had the same Beta size as the feedback construct (Table 7.7). Thus, it was more predictive of personal growth (dependent variable) than autonomy but has the same level of prediction as feedback. This discovery is contrary to Bloom et al.'s (2000) finding that task identity did not appear to contribute to the student outcomes of satisfaction or interest, among others, such as motivation, performance, absenteeism and desire to withdraw. The differences in the findings are logical as Bloom et al.'s (2000) research is focused on classroom content and the Phase Two study focuses on the whole university experience. In the classroom, greater task identity or big picture thinking, which requires students to build on their previous knowledge, could provoke negative reactions such as stress or anxiety. However, for the same reasons, it is logical that task identity would help to predict personal growth need. Task identity involves being able to see the "big picture" of how each element students are learning fits together through their ability to analyze problems, synthesize information, make judgments of value and apply theories to practical problems or in new situations. If one's desire is to reach his or her full potential, it is important to be able to identify how all of the accumulated knowledge comes together as a whole and being stifled from doing this would negatively impact students with a need for personal growth.

Feedback ($\beta = .263$; $p < .05$): This independent variable had the same Beta size as the task identity construct (Table 7.7). Thus, it was more predictive of personal growth (dependent variable) than autonomy but held the same level of impact in the regression equation as task identity. Feedback's significant and positive relationship to both the personal growth construct and the institutional commitment construct is interesting. In the co-creation of value (or collaborative creation) setting all of the stakeholders

cooperatively and reciprocally contribute to the valuation process (Fagerstrøm and Ghinea, 2013; Grönroos and Voima, 2013; Minkiewicz et al., 2014). It is logical that feedback would hold a substantial role in meeting students' personal growth needs. Feedback would be required in order to reach a heightened level of personal reflection and a deeper sense of the understanding of someone else's views. How could students begin to evaluate their understanding of topics themselves or comprehend another's perspective of a situation unless the dialogue is reciprocal? It is the give and take of analytical discussion with the challenging of stances and the exchange of ideas that impacts personal growth. Even initially, venturing down the wrong path often provides a benefit to learning. Connected to motivation, some of the best life and learning lessons come from failing the first time but persevering towards the final outcome.

Millennials or the 'me-generation' have been identified as wanting instant gratification and growing up in a culture where everyone, no matter the effort, gets a trophy (Mencil and Lester, 2014). As the majority of the survey participants in the Phase Two research were within this age grouping (born between 1979 and 2000), it is logical that feedback helped to explain both students' institutional commitment based on affective commitment through the development of relationships and their repurchase decisions and students' personal growth needs which were connected to self-actualization. Students would use the volume and quality of feedback they received as a measurement tool when determining if their expectations regarding quality and relationships were met and they would also require more detailed and varied forms of communication with faculty to help them grow as they are not accustomed to branching out on their own without confirmation of their accomplishments.

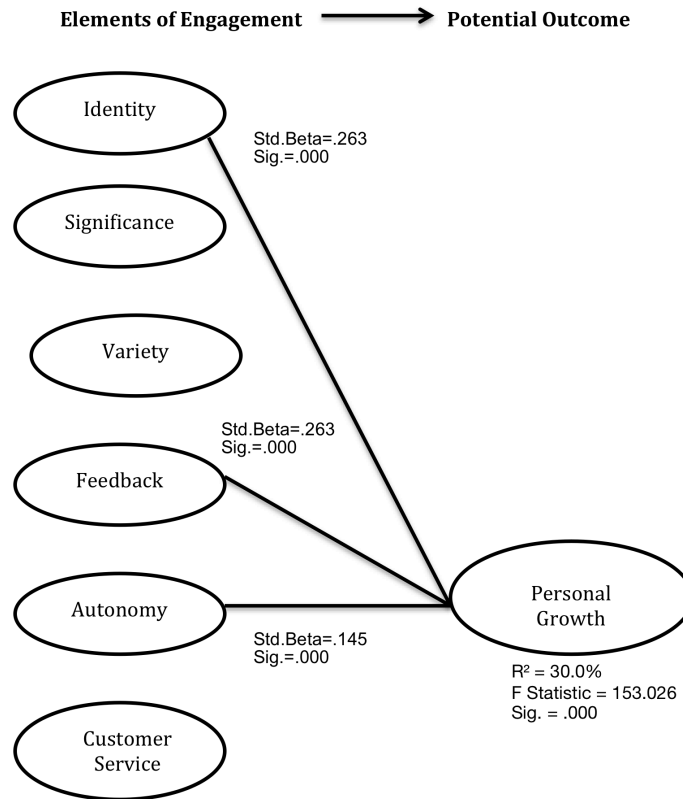
Autonomy ($\beta = .145$; $p < .05$): This independent variable had the lowest Beta size of the three significant constructs (Table 7.7). Thus, it was less predictive of personal growth (dependent variable) than task identity and feedback. This finding is somewhat similar to the results Bloom et al. (2000) achieved during their course enrichment study. Their

study also did not use the critical psychological states or the moderating influence of growth need and found university students operate differently than those on the job as each of the variables they tested impacted the outcomes directly, contrary to Hackman and Oldham's (1980) JCM. Bloom et al. (2000) found autonomy could be used directly to help predict satisfaction and students' desire to withdraw. These findings are relevant to the Phase Two study, as satisfaction has been combined with other factors to help predict students' desire to remain committed to their institution. Thus, this newly defined factor reacts as expected with similar outcomes to the traditional definition within a workplace environment. It is noteworthy that autonomy was significant for both outcomes, which highlights the new definition's fit within the educational setting.

Skill Variety ($\beta = .029$; $p > .05$): This independent variable was not significant so it did not help to predict personal growth (Figure 7.3). However, it was significant in the institutional commitment model so it does predict that outcome (Table 7.6). This finding was surprising. Although using the more limited situation of the classroom, similarly, Bloom et al. (2000) also found skill variety did not help to predict students' level of interest in their university courses. This study and the Bloom et al. (2000) findings are interesting as they are in contrast to other studies, which call for a change in university practices which allow students to rely on a simplified curriculum that uses rote memorization. Bowen (2003) claims it has been presented that students need to be able to engage in creative and critical methods of learning that provide various ways to process and apply information. As skill variety does not appear to predict personal growth, which would logically be connected to the building of skills and abilities, it is difficult to explain its lack of significance in the personal growth model. The only speculation that can be offered is based on the Bloom et al. (2000) proposal for the classroom level findings. Similar to the employees who found the expectation of expanded skills stressful or taxing, students may not be interested in challenging and active learning and the accompanying workload as part of their personal growth. With students working more, devoting less time to their studies and demonstrating less overall

motivation (Côté, 2007; Kuh, 2003; Natale and Doran, 2012), avoiding repetition and monotony may not be of interest to students.

Figure 7-3 Linear Regression – Student Engagement Work Design Model - Personal Growth



Customer Service ($\beta = -.007$; $p > .05$): This construct was not significant for personal growth (Figure 7.3) but it was significant for institutional commitment (Table 7.6). This may point to some key differences between the outcomes. Students who are interested in personal growth demonstrate internal motivation (the internal drive to learn) so it is logical that the personal growth outcome may not be linked to customer services. This does not imply that those who are committed to their institution are axiomatically motivated by only external rewards and supports. However, those interested in personal growth are motivated by learning so they may be more inspired to participate in the process and participate in practices which improve student success such as attending classes more regularly etc. These students may simply not need as many institutional

resources as a result of these behaviours. Obtaining feedback, developing an image of how their studies are allowing them to reach their goal of self-actualization (task identity) and the freedom to express themselves (autonomy) would hold more weight with them and could help to explain the lack of significance for the customer service aspect of students' work design.

Task Significance ($\beta = .004$; $p > .05$): Once again task significance was not significant. Similar results were discovered for both outcomes (Figure 7.2 and Figure 7.3). It could signify that the items used to develop this construct are not capturing the fundamental understanding of task significance. However, it is likely that it is more than just a lack of the constructs' ability to capture elements of the definition of task significance. Students are different from employees in a number of ways, as already outlined throughout the Phase Two study, this finding could lend credibility to the view that students react differently from employees due to the structure of their work. Students come to university to learn about themselves and potentially gain the skills needed for their future profession. Many students come to university without having previously determined their career path or change programs and departments as they advance in their studies. The lack of connection between task significance could be tied to the unsettled nature of higher education where students are building skills but do not know how they may impact others because they have not firmly established their route to future employment. They may see value in the courses but not be able to establish their impact until after the career aspect is settled and they are confident regarding which task and skills their eventual job requires.

7.10 Testing of the Hypotheses and theoretical contributions

The aim of this study was to explore the use of specific work design elements in order to help construct the work of students so institutional and personal goals could be met. To meet these aims, a number of hypotheses were developed. As hoped, all of the hypotheses were partially or fully supported in the Phase Two research study (Table 7.8).

Table 7-8 Hypotheses Testing and Results

Hypotheses	Results
H1. Inclusion of the customer service element of engagement will help to explain institutional commitment and personal growth outcomes.	Partially Supported
H2. If tasks and skills, autonomy, feedback, and customer service have been incorporated into students' work environment, this attempt to get students to be more engaged will positively influence their assessment of the quality of their education and commitment to their institution.	Partially Supported
H3. If tasks and skills, autonomy, feedback, and customer service have been incorporated into students' work environment, this attempt to get students to be more engaged will positively influence their personal growth.	Partially Supported
H4. Autonomy has a more in-depth meaning in the higher education sector than found in the traditional workplace setting and will help to explain both institutional commitment and personal growth outcomes.	Supported
H5. NSSE can be repurposed to test the conceptual Student Engagement Work Design Model (SEWDM) through the restructuring of the scale items into constructs that fit with the conceptual work dimensions and potential outcomes.	Supported

Hypothesis One (H1): This hypothesis was partially supported (Table 7.8). Exploration of this hypothesis was of particular importance as the inclusion of the customer service dimension was specific to the academic environment and added substantially new information to the job design research literature. This study's findings reveal a new factor that could account for some of the unexplained variability in some work design models used in the educational context. However, it should be noted that it helped to predict institutional commitment but not personal growth. This difference is of interest and worth exploration in future research.

Hypothesis Two (H2): Based on the study's findings this hypothesis was partially supported (Table 7.8). The study's aim was to provide information to universities regarding how they can design students' work to increase their institutional commitment, i.e., views of the quality of their education and relationships combined with the desire to repurchase. As expected, customer service, skill variety, feedback and autonomy did help to predict institutional commitment; however, contrary to this hypothesis, task identity and significance did not. Although some of the expected engagement elements were not predictive, being able to focus on specific aspects when designing students'

work allows universities to allot their limited budgets more wisely than if they took a shotgun approach.

Hypothesis Three (H3): This hypothesis was also partially supported (Table 7.8). The study aimed to provide information to universities regarding how they can design students' work to encourage students' personal growth, through an expansion of students' intellectual and interpersonal development. In contrast to the institutional commitment model, skill variety and customer services did not prove to be significant for the personal growth outcome. Still, the findings point to some benefits. Task identity had the highest beta size in the personal growth regression equation so incorporating this element is important. However, there were overlaps with some of the elements that predict both outcomes such as feedback and autonomy. Incorporating these elements in the work design of students creates synergy and can reduce the outlays encountered when attempting to stretch limited resources to match individual needs.

Hypothesis Four (H4): This hypothesis was fully supported as the newly defined element of autonomy and could be used to predict both institutional commitment and personal growth (Table 7.8). Indeed, the results for the autonomy variable suggest its importance in explaining both outcomes but its influence was strongest for personal growth. Exploration of this hypothesis was important because the autonomy construct definition had been modified to specifically fit the student population and higher education environment and had not been tested in any prior literature so these findings point to a new area of exploration in the future.

Hypothesis Five (H5): This hypothesis was supported as the NSSE could be used in the design of students' work (Table 7.8). Perhaps the most important findings of the Phase Two research were that the predictions of the conceptual model were able to be tested

using a large-scale secondary database (NSSE) and the tested model provided strong evidence of key outcomes (institutional commitment and personal growth). However, task significance's lack of predictive value for both the institutional commitment and personal growth outcomes could mean that further examination of the survey items may be needed so this element can be properly captured.

In conclusion, the conceptual model and its associated empirical findings help to expand the current job design theory in a number of ways: 1) the advancement of institutional commitment as an outcome in a work design model; 2) the successful restructuring of the measure of personal growth from a moderating factor to an outcome; 3) the incorporation of the customer service element of engagement into the work design model; 4) the creation of a new definition of autonomy for use in the academic sector; and 5) the repurposing of NSSE so it can be used to design university students' work providing a ready store of information collected over the past decade or longer. Additionally, based on empirical testing, the conceptual SEWDM provides a roadmap of how the engagement elements of autonomy, feedback, skill variety, task identity and customer services can be utilized by universities when attempting to predict institutional commitment and personal growth needs. There are still more areas to explore through future analysis and retesting needed but the findings do highlight some new and exciting avenues to investigate in the work design research.

7.11 Practical Implications

There is extensive evidence of the positive impacts on students when they become involved as co-creators of their university experiences, but universities do not appear to have the ability to use personal and institutional procedures and policies to make it happen (Axelson and Flick, 2010). An awareness of the specific occupation and characteristics of the population that the work is being designed for provides valuable information for improving the usefulness and efficiency of work design efforts at

universities. Included below are a few practical suggestions that could go a long way towards helping to narrow the gulf in current student work design practices.

There were some common elements between the two models. Feedback and autonomy could be used to predict both of the outcomes while task significance does not explain either. However, there were some differences too. Task identity was significant in the personal growth model but not for institutional commitment; skill variety and customer service were only predictive of institutional commitment. Depending on the specific choices made, the work design will take on a decidedly different character depending on what outcome is embraced. Thus, increasing task identity will produce a distinctly different work design than increasing skill variety and customer services. It is too multifarious to attempt to discuss every configuration possible so focusing on the most salient and common elements of the two outcomes may provide a more efficient use of the study's result so these elements will be discussed below.

The predictive quality of autonomy was stronger for personal growth than for institutional commitment. This knowledge is important because support for this new definition of autonomy is not offered in the prior literature but it is robustly supported in this study. Using an occupation-based definition of autonomy can provide universities with a better understanding of the importance of academic, political, ethical and spiritual freedoms embraced by members of the university population. As this construct was significant in both models, it demonstrates university students are buying into the historical understanding of what university study should obtain for society. Fostering these freedoms through active learning, the support of extra-curricular clubs, offering academic credit for community service activities and including more electives within programs so student have more variety and control could help to increase both students' institutional commitment and personal growth.

Feedback encompasses the quality of interpersonal-relations between students and the faculty members they meet during their studies. One important implication of the current findings is that faculty need to educate themselves about actual generational differences regarding the need for more detailed and frequent feedback for students from the millennial generation. The findings provide additional support for research into generational differences in order to facilitate stronger connections between students' and their professors. However, a problem often encountered when redesigning existing jobs is that some changes are simply improbable to make. For example, increasing feedback from professors is not always within the control of administrators. Faculty members are given autonomy to develop the course curriculum based on their expert knowledge. Administrators would not have enough specific knowledge to be able to determine the best way to approach a subject matter area or to match the learning outcomes to the best assessment methods that match the required course content, teaching style and topics raised during class discussions. An incorrect intervention could create work overload and decreased commitment from both faculty and students. Courses taught autocratically or those that provide only limited feedback can still produce high-performing students because of the other core engagement elements such as skill variety to combat boredom, customer service, such as tutoring, etc., the use of teaching assistants who can provide the level of feedback needed when faculty research projects restrict their time and teaching seminars to help faculty learn how to provide more effective feedback; however, there are additional financial costs created for these additional services and through training requirements for faculty.

The institutional commitment outcome construct included aspects of affective and calculative commitment. Therefore, while attempting to differentiate the university in the marketplace through institutional opportunities such as customer services and skill variety, etc., marketers need to strive to recruit students who mesh with the values and culture of the institution. Upper-year students who have stayed throughout their studies

or transferred into the university are more likely to express positive feelings about their university experience. Simple attrition would remove many discontented students by their final year. This places an important focus on increasing the probability of the good fit among first-year students and if there are issues with the transition, providing the proper support. Students are asked to leave their friends, family and prior communities to become a part of the new and unknown university culture and community based on their need for personal growth and/or future job opportunities. Marketing communications should be tailored to accurately portray the type of experience a first-year student is likely to have so as to not oversell or misrepresent the institution and its services. This may sound simple but it may be difficult to implement when universities are under increasing fiscal pressures and when the student's decision to attend a university may be driven by other factors (e.g., geographic proximity and credit transfers).

Task identity was strongly predictive of personal growth and skill variety was predictive of institutional commitment. Seeing the big picture and the development of a variety of skills could be facilitated by the use of courses with content that spans disciplines. Thus, more interdisciplinary courses where students have faculty that can draw connections spanning through disciplinary boundaries, may be beneficial. Klein and Newell (1997) defined interdisciplinary study as “a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession...and draws on disciplinary perspectives and integrates their insights through construction of a more comprehensive perspective” (p. 393 -394). Life is rarely tidy and absolute; it can be messy and not easily contained within the structure of one university class or discipline. The pursuit of heightened understanding of the broader societal questions can require the integration of different disciplines' methods of approaching the question and thinking about the production of new knowledge. This type of exploration can increase engagement and discourage the stifling of expansive thinking and skill development because students and faculty are too afraid to venture from their disciplinary comfort zones.

If it is not possible to change the task characteristics or skill variety, modifying how customer services are delivered may be worthwhile. Front-line workers can have a substantial impact on students' perceptions of quality. Providing more opportunities for social support can create the added benefit of students becoming more interested in the work they are performing as they are not struggling to understand the content and they are developing interpersonal connections which also fosters a sense of belonging and commitment. Thus, enhancing social support services is likely to yield both motivational and institutional commitment benefits. However, customer services can be costly in regards to time, effort and resources. There is another option available. Shifting the focus to relationships and personal growth through the use of task identity, autonomy and feedback may prove to be more actionable. Embracing community partnerships that provide greater exposure to students through internships, community projects or international exchanges could facilitate greater autonomy and feedback opportunities while also offering students a wider vision of how each course fits together. It requires relatively little time and effort to increase a students' contact with other stakeholders outside of the university but the benefits could be tremendous.

Task significance was not significant in either model. Task significance if viewed from the classroom level could be directly instilled with a sense of meaningfulness based on the instructor's passion for the topic and the self-contained nature of a course. It is logical that students may be attentive and engaged in the course content (the importance of what they are learning within the scheme of the classroom or the program) but not care about this element at the university level. Universities could help to increase the importance student place on this element while also attempting to improve task identify and skill variety by clarifying future career paths and the careful consideration of the order of courses through the use of prerequisites so learning outcomes and skills build as students progress.

In conclusion, the research findings will go a long way to creating better efficiency and improving the effectiveness of work design methods. However, although the implications outlined above provide ways for universities to develop policies that can make a direct and important contribution to the educational co-creation of value process, one must be cognisant of the fact that the goal of engaging students in the co-creation of value is one that is fundamentally outside of institutional control. Students have too much decision-making independence to be tightly control by administration and as evident by the strong support for the new definition of autonomy they are not about to give up that power. Consequently, institutions need to develop tactics encouraging, managing and enhancing student involvement without having ultimate control over the students and their behaviours. Rather than avoiding these concerns the time has come for universities to address them and this research has drawn attention to possible pathways.

7.11.1 Limitations

Some caution should be used when interpreting the results and some were mentioned previously; nevertheless, some additional ones will be highlighted here. The Phase Two study used the NSSE participants from a small northern Ontario university with satellite campuses in other areas of the province. The participants spanned a number of years; however, the SEWDM model and outcomes were tested on the narrow sample of a single institution. It would be hard to make general inferences about student behaviour or the SEWDM's predictive ability at another university until this study's results can be duplicated. Therefore, restraint is warranted before attempting to make generalizations about the SEWDM's fit with other institutions that may have participated in the NSSE but differ in size, location and program concentrations. This limitation is noteworthy; however, there is another.

This study also used a novel measure of autonomy, which may not fit outside the university setting. It would not be advisable to assume that this definition of autonomy

would fit within the traditional workplace setting or even be stretched for use in the tertiary vocational college environment. In Ontario, many vocational colleges are designed to teach students job specific skills and knowledge. Unlike the research expectations and the concentration of elective courses that are found within university study, colleges have a set curriculum with students advancing through their studies in block formation with little flexibility (staying with the same students throughout the term moving from class to class as a group). There may be some electives; however, they are normally restricted to only a few options offered on a short list of preselected possibilities; thereby, using the more traditional definition of autonomy may better represent the working environment found at college.

7.11.2 Future exploration

The current study supports the use of specific JCM characteristics in the design of students' work. It also identifies which core dimensions of the JCM and new aspects are most predictive of institutional commitment and personal growth. Yet, there may be other outcomes that should also be included. The research study looked into attitudinal outcomes from work design. Further research into job design for university students could provide additional insights by investigating behavioural outcomes such as attrition or performance. Performance outcomes that are also included in the NSSE or could be easily tracked by universities through linking NSSE participants to their student profiles. Including these additional outcomes to the conceptual SEWDM could produce more robust results.

Also, exploring other ways of approaching these findings through the use of a comparison of mean differences found in students from different backgrounds and demographic settings (age, entry point, living arrangement, enrolment status, academic standing, and rank i.e. first-year or senior standing etc.) could be helpful. Building on the current conceptual SEWDM through an expansion of the research into these areas would be beneficial.

8 Bringing it all together

8.1 Summary of research findings

There were many noteworthy findings from these two phases of research. This section is an attempt to offer answers to the most logical questions that arise when completing a research project of this size.

8.1.1 What was the Phase One research hoping to accomplish?

The goal of the first phase of research was to: 1) identify the factors that predicted institutional commitment, 2) explore the differences between groups based on entry point, age, proximity to permanent residence and living arrangements, and 3) develop interventions based on the factors that could be used to predict institutional commitment based on group differences.

8.1.2 How does the Phase One research relate to the design of Phase Two?

The first phase of research highlighted that studies were being conducted focusing on individual groups so an environment that best fulfill students' expressed needs and expectations can be constructed. These studies help universities develop intervention strategies that support students who are at risk of leaving – hopefully before the decision to leave has been fully formed. The Phase One research also offered new insight into some key areas that are emerging as meaningful such as: problems college transfer students may experience with their transition to university; the impact helicopter parenting practices may have on students in the 17-to-21-year-old category as well as how students in this category are not finding their classes intellectually stimulating; and issues with living off-campus and attending university too close to “home”, among others. However, what was also striking was the realization that the Phase One study's review of the literature and findings also point to universities attempting to solve

retention issues through a student customer service approach. It appears that there has been an emphasis on services over engagement – students work too much, stay too connected to prior networks, live at home and generally do not embrace higher education beyond a prosaic focus of customer services which can be ‘bought’. According to Kennett et al.’s (2011) research, the majority of students in both upper (95.24%) and lower years (84.06%) listed obtaining a career as influencing their decision to attend university, while giving back to society (1.45% of lower and 14.29% of upper year students) and the intrinsic value of higher education (2.9% of lower and 1.59% of upper year students) were not a consideration for most.

Universities offer detailed recruitment literature that is geared towards students’ declared area of interest, provide orientation programs and student service departments, as well as fund and encourage on-demand communication between students, administration, staff and faculty. However, many of these services are only tied to student satisfaction ratings, which were already discussed (please see the Phase One study for more information) as lacking the overall assessment needed for student success. It also drew attention to the use of a customer service focus within the retention literature. In order to get the most out of their academic experiences, students need to become meaningfully and psychologically involved with the university (Bowden, 2011). Tinto (2007) touches on this aspect when he discussed making students’ academic work more challenging.

Based on prior research (Tinto, 1987; Pascarella and Terenzini, 1991), there was a need to identify factors which affected student engagement beyond the first year of the student’s studies. Students were being presented as passive consumers of a product (education) with institutions attempting to increase student retention through the development of more resources and support systems and not the redevelopment of the actual job of students in the attempt to make their work more motivating. As an alternative to the customer service approach to retention, the NSSE had been developed to benchmark students’ engagement in the programs and activities schools had

implemented for students' learning and personal development. It did have measurement and comparison value through the use of the benchmarks by determining how students spent their time and what activities they participated in; however, there were questions about its reliability and validity.

Universities could fine-tune their services with these approaches but the lack of focus on student involvement in the retention literature and the limited exploration of outcomes and inconsistent results for the NSSE caused concern. A further examination of the literature eventually leads to Phase Two's use of the co-creation of value concept, work design theories and the utilization of the NSSE to help construct the 'work of students' which was an attempt to overcome some of the issues discovered in Phase One.

8.1.3 What theoretical contributions are provided by the two research phases?

Phase One: The two studies in Phase One explored institutional commitment, and their associated empirical findings help to expand the current student retention literature in a number of ways. First, the findings from the exploration of entry point are noteworthy. There is an assumption within much of the current literature that any inconsistencies between students entering university from high school and those entering from college can be explained by the differences in the students' ages. Axiomatically, students who had graduated from college would be entering university at a more advanced age than those who had just graduated from high school. The first phase of research found these two groups (entry point and age) have different needs and areas of concern so they could not be combined into one grouping – they were distinct from each other. This information adds new information to the current literature and proves timely as the government is applying pressure within the Ontario higher education systems for better degree completion paths and acceptance of prior learning to reduce the duplication of course content when transferring between higher education vocational and university systems.

Secondly, the findings from the first phase of research identified the involvement of significant others was negatively related to institutional commitment. Thus, the more involvement from parents and friends the less committed students were to their institution. This finding highlighted the importance of getting students more involved in the selection of their universities while encouraging less intervention by parents. As helicopter-parenting styles have become more common, this knowledge is helpful when developing marketing material.

Finally, if the first phase of research had overarching themes they would be separation and support. Separation and support does appear to increase the odds of first-year undergraduate students' commitment to their university. Separation is important vis-à-vis students' living arrangements and the distance students are from home as it impacts students' transition, academic and social integration, relationships with significant others and institutional commitment. The Phase One findings suggest separation is still an important stage in the "rites of passage" in the current generation. In fact, encouraging students to continue to rely on prior networks (helicopter parents) appears to have a negative influence on their institutional commitment. In addition, providing university support services that are matched to students' needs, depending on specific groupings, appears to be an important way to increase institutional commitment.

Phase Two: The conceptual model (SEWDM) and the empirical findings discovered as a result of the Phase Two testing help to expand the current job design theory in a number of ways; the advancement of institutional commitment as an outcome in a work design model; the restructuring of the measure of personal growth from a moderating factor to an outcome; and the creation of a new definition of autonomy for use in the academic sector. Additionally, the conceptual model provides a roadmap of how the engagement elements of autonomy, feedback, skill variety, task identity and customer services can be

utilized by universities when attempting to predict institutional commitment and personal growth need. There were other contributions too.

An unusual feature of the Phase Two research was that it used the NSSE to test the conceptual model instead of the development of new survey scales. This research now provides empirical support for the use of the NSSE scale items to determine the engagement elements needed when designing the job of a student. By modifying NSSE's original purpose, through restructuring the engagement scale items into constructs that fit with the conceptual Student Engagement Work Design Model (SEWDM), this research study found another use for the NSSE databases. Based on NSSE's high response rate and the decade long span of its influence across Canada (even longer in the United States), institutions can utilize prior NSSE collections to form generalizations of undergraduate university students across disciplines and years of study on a national level.

The findings have further contributions. Large-scale databanks were not easily obtained when the JCM was originally developed. The Phase Two research's findings, based on a large dataset, supported many of the underlying concepts contained in the original JCM model but also suggested the elimination and the addition of others. The removal of the CPS so the engagement dimensions' relationship with the outcomes could be tested directly supported prior research that recommended the simplification of the JCM. The findings also provided empirical support for the elimination of the task significance construct and the addition of the customer service element into the conceptual SEWDM so prior work design theory could be adapted to fit the university setting.

Finally, it may be desirable to combine all occupations into one model that can be used across industries but in the present work climate there are too many changes that could impact the consistency and validity of the models. An awareness of the specific

occupation in which the work is being designed has provided valuable information for improving the efficacy of the job design. Because of this focus, the work can be designed to take maximum benefit of the structural components and different society expectations that exist in the high education environment. However, although this study explored a specific job context and environment, its cross-section of participants from many different disciplines and combinations of major and minor degree programs offers a model which could be further refined at the departmental level.

8.1.4 What has been discovered after completion of the two phases of research?

There are inherent dangers in taking a ‘students as customers’ stance. First, students may not have the ability to make informed choices when they are just beginning in their studies and may not have enough breadth of knowledge to determine the courses and content needed or the value of the professor’ input until after the completion of the degree. Second, few students are aware that their tuition payments do not cover the full cost of their education so they may undervalue its worth. Third, there are multiple stakeholders involved in the educational system. Too great of a focus on keeping students satisfied may not fulfill the needs of the other stakeholders who help to fund higher education costs in the hopes of advancing research and attempt to meet human capital demands. Fourth, students when treated as customers of a product can start to view education as something to be achieved and endured resulting in them not becoming engaged in the learning process. Fifth, there are important differences between universities and businesses. Universities are assigned the role of providing students with the opportunity to attain their full potential during their studies; by contrast, business relies on costs to rationalize their services and terminate customers who become too expensive to develop. If students were customers the ones that required more support would be purged from the system. Sixth, the pressure to please the customer (student) can result in leniency with academic standards. Finally, if students are cast in the consumer’s role they may start to develop the attitude that it is the university’s responsibility to provide a degree to students and that they are not part of the co-creation process.

Considering the outlined dangers, why have many universities taken a customer service approach? These two phases of research provide the rationale for why student retention research and universities tend to gravitate towards the customer service focus. It is easier to concentrate on services as they are under the control of the university and appear to be the best way to generate growth and differentiation in the marketplace. A co-creation approach is harder to achieve because students are given a lot of autonomy both in how they decide to approach their studies and which university they decide to attend. Co-creation is definitely more complicated to promote and implement but it has the larger payback as costs can be lowered through the careful design of the students' work so it will be motivational - with students helping to create a better educational experience for their peers, faculty and the community resulting in more positive word-of-mouth promotions.

8.1.5 How can assorted stakeholders use this information?

Information about which factors help to predict post-secondary student institutional commitment and personal growth needs will assist with the development of targeted student recruitment strategies and the development of support systems. Being able to assess these outcomes could help to reduce funding outlays to lower impact areas so resources can be concentrated on the critical factors. This outcome is important by itself. However, this information has the potential to offer further benefits as it could also be used to assist with post-secondary retention rates.

The Phase Two study's findings can be explored further by assessing group differences. By being able to assess the predictive value of factors that influence post-secondary institutional commitment according to gender, entry point, year of study, among other groupings, universities can identify methods to ensure the transition to university is smoother for targeted student groups. Identifying ways to ensure students are retained

within the educational system (until the successful completing of their degrees) is an important part of the Human Capital equation. As stated earlier in the background of the problem section, university is a big step in a young adult's life and one that brings changes that the individual must cope with while simultaneously attempting to better their overall education. For this reason, it is common for students to change programs or schools before they finish their initial four-year degree, and many drop out completely. Data presented by Statistics Canada through its Youth in Transition Survey found that attrition is a major concern for post-secondary institutions in Canada (Freeman, 2009).

The two phases of research could give Ontario/Canadian governments, communities and universities the opportunity to identify potential needs of the student population as well as ways to design their studies so they are more motivational and engaging. Maintaining an adequate level of human capital does not exclusively reside with student enrolment rates – retention is also important as once the entrance barrier is breached it is important to retain the student until successful attainment of the credentials needed for employment. Retention is based on the construction of long-term relationships between the student and institution that last beyond the initial interval. Incompatibilities between the students' needs and what the institution provides can result in dissatisfaction with the university choice leading to a lack of commitment to the institution and a resulting increase in attrition (Wardley & Belanger, 2013). This is why this research's findings can be useful for multiple audiences.

On a macro level, the anticipated audience would include the international communities who are reviewing Canada's education policies in order to develop their own tertiary and vocational educational policies. Within Canada, federal politicians would be included in the range of audience members as they could use this information when reviewing government post-secondary funding and university policies. Provincial governments would benefit from this information as they attempt to offer on-campus support to students and review their post-secondary budget funding.

On a more micro level, this research could assist university administrators and local communities as they attempt to focus their spending and develop outreach and operating budgets. In addition, academic and government researchers can expand on the information obtained in this phase of the research study as a basis for their future research.

9 References

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