Who Chooses Windsor? A Student Profile

by

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ABSTRACT

The purpose of the present study was to determine students' reasons for choosing to attend a southwestern Ontario university and the extent to which the bases for their choice were similar to those of students at other institutions. Participants were 614 first-year university students enrolled in an introductory psychology course who completed a questionnaire. Factor analysis of students' reasons for attending revealed five factors: Skill Development, Personal Development, Socializing, Pressure from Others, and Advancement. Factor scores were subjected to cluster analysis, revealing five clusters of students attending for different reasons. The Well-Rounded cluster were motivated primarily by Socializing, Skill Development, and Advancement reasons. The primary motive of the Moratorium cluster was Personal Development. The Self/Goal Directed cluster had reasons of Personal Development, Skill Development, and Advancement. The Pressure cluster was motivated by Pressure from Others. Finally, the Disengaged cluster had no positive reasons for their attendance but a strong negative association with Personal Development. These clusters were described in terms of various demographic variables, parent and student attitudes toward education, and institutional characteristics. "Hot buttons," motives agreed to by 75% of the students across the majority of clusters, were found to be Career, Learning, and Personal Development. The relative advantages of factor, cluster, and "hot button" analyses are discussed in terms of student recruitment, retention, and satisfaction.

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CHAPTER I

Introduction

Why do students decide to go to university? What factors influence the choice of which universities to apply to and possibly attend? Are there certain types, or clusters, of individuals who have similar reasons for applying? In an increasingly competitive post-secondary education environment, these are important questions for university administrators who wish to maximize the success of their recruitment efforts.

Various researchers (e.g., Barnetson, 1997; Church & Gillingham, 1988; Paulsen, 1990) have explored these questions and concluded that a number of factors are important. Hossler and Gallagher (1987) outline a post-secondary decision-making (PSDM) model of student college choice with three stages: predisposition, search, and application to university. In the predisposition stage, characteristics including socioeconomic status (SES), student ability, amount of academic activity, and peer/parental influence are all related to the decision to apply. Higher SES, greater academic ability, emotional and/or financial support from parents and emotional support from friends all have a positive relationship with attending post-secondary education. Also, greater involvement in extracurricular activities is related both to the likelihood of application and the choice of universities applied to (Conklin & Daily, 1981; Hossler & Gallagher, 1987; Paulsen, 1990). Other factors positively related to the decision to apply include proximity to a university campus and difficulty of high school curriculum (Chapman, 1981; Paulsen, 1990). Gender has also been related to the decision to attend university, with women being more likely to intend to go (Carpenter & Fleishman, 1987).

At the predisposition stage, students may be classified as "nots" (students who never seriously considered going to university), "whethers" (students who may apply to a few institutions but not actually attend), or "whiches" (students who never seriously considered not attending university) (Jackson, 1978). While those in the first category move into other, non-educational, activities, the whiches and whethers enter the university search stage.

The search stage is characterized by the search for information about possible universities. Although this stage involves some interaction between students and universities, this contact does not necessarily mean a student's application decisions will be well-informed (Chapman, 1981). Various sources of information including parents, friends, high school guidance counsellors, and university publications may provide incorrect and/or conflicting information.

The predispositional characteristics of the students together with the universities' recruitment efforts may limit the student's options. Limiting factors also include geographical location, cost, programs offered, and the institutions' marketing strategies. Part of the difficulty for students in this stage is their inaccurate view of their options. For instance, students may not have an accurate view of the accessibility of financial aid or the true cost of attending university (Chapman, 1981). Also, Chapman (1981) believes that the academic demands of university and the nature of university life in general are not really understood by most secondary students. This knowledge gap, in addition to financial issues, may eventually cause student dissatisfaction with university and possibly lead to dropout or transfer.

Generally, students make a list of universities with which they are familiar, establish limits or parameters on the basis of which to make a decision, and attempt to gather more information. Once students believe that they have compiled a list of feasible options and that the cost of further searching will outweigh the benefits, they move onto the third stage of the PSDM model, the choice of which universities to apply to. According to the PSDM model, this decision is made based on an analysis of which universities, among the feasible options, best fulfill the student's desired outcomes (Barnetson, 1997).

Barnetson (1997) adds a fourth stage, admission and registration, to Hossler and Gallagher's PSDM (1987) model. During this stage, students must choose among those universities that have accepted them. This decision can be complicated by the timing of offers of admission and the student's relative ranking of the institution extending the offer, balancing security and going to their first choice. Once they have committed to attending a particular university, students then begin the registration process in order to start classes, generally in the fall.

Building on the work of Chapman (1981), Hossler and Gallagher (1987), and Paulsen (1990), several researchers have investigated why students go to university. In their literature reviews, both Barnetson (1997), and Stage and Williams (1988) reported that most studies examining student motivation have been quantitative, focussing on the degree of motivation but not the specific reasons for university attendance. Also, most of the research has examined only a small number of potential reasons for attending, although a few have used larger numbers of possible motivations to identify several

factors of reasons for students' attendance. Table 1 contains a summary of studies which were found in a comprehensive search of the literature related to students' reasons for attending university.

Most of the work in this area has been done in the United States, with some in the United Kingdom, and it is this research that will be considered first. Among the studies investigating a relatively small number of possible motives, the results are fairly consistent with certain motives recurring often. Croake, Keller, and Catlin (1973) investigated six possible reasons for university participation by home economics majors at nine universities in the United States. The participants were asked to indicate their primary reason for going to university from a list of options: to acquire vocational training, develop skills for career, develop knowledge and interest in community and world problems, help develop ethical standards, get a general education, and to prepare for a happy married and family life. Approximately half the respondents (52%) stated that developing skills related to their career was the primary motive for university attendance. This motive was followed by getting a general education (20%) and preparing for a happy married and family life (10%). While this last motive may not arise as a strong reason for university participation today, the first two are commonly indicated in more recent studies.

Lester (1982) examined motivation for university participation at a women's college in Indiana. She asked students to mark whether various motives were very important, somewhat important, or not very important for their attending college. The motives claimed to be very important by more than 60% of the respondents were:

Table 1

Reasons for Attending University: A Summary of Research

Study	Career/ Training	Learning/ Education	Pressure/ Escape	Social	Personal Develop't	Community Service
Few Motives Assessed						
Houle (1961)	✔	✔	✔			
Croake, Keller, & Catlin (1973)	✔	✔		✔		✔
Lester (1982)	✔	✔		✔		
Roscoe, Kennedy, & Brooks (1986)	✔	✔			✔	
Stage & Williams (1988)	✔	✔	✔	✔		✔
Merriam & Caffarella (1991)	✔	✔	✔	✔		✔
A. Council on Education (1997)	✔	✔			✔	
Many Motives Assessed						
Saunders & Lancaster (1980)	✔	✔	✔			
Church & Gillingham (1988)	✔	✔	✔		✔	
Barnetson (1997)	✔	✔	✔	✔	✔	
No. Studies Including Motive	10	10	6	5	4	3

meeting new and interesting people (84%), gaining a general education (83%), learning more about things that interest them (79%), and to help get a better job (68%).

Roscoe, Kennedy, and Brooks (1986) asked over 500 undergraduates enrolled in a Midwestern U.S. university to provide their reasons for attending and then categorized the responses into categories based on previous literature in the area. These categories were: career, job, or employment related reasons; desire to earn a baccalaureate degree; knowledge acquisition; personal growth; social development; pleasure/enjoyment; and other. Among first-year students, the largest number of participants (74%) stated career as a reason for attending university. The second most frequent reason was the desire to earn a baccalaureate degree (33%) followed by knowledge acquisition (17%) and personal development (13%) with each of the remaining reasons being cited by less than 10% of the sample.

Using the same categories, Roscoe et al. (1986) then asked the students what benefits they expected to obtain from their attendance at university. Based on Hossler and Gallagher's (1986) model, one would expect these benefits to correlate significantly with the students' reasons for attendance. This was not the case, however. Of the first-year students responding to the survey, only 35% expected to gain a job or career on the basis of their attendance. Knowledge acquisition was the most commonly cited expected benefit (37%), followed by career related benefits (35%), personal development (31%), and education or degree (28%). Although only 28% of the students stated that they expected to obtain a degree or receive an education from their university participation, this finding may be explained by the fact that open ended questions were used. Many

students may have simply assumed that benefit and not thought about mentioning it in their response.

A more recent survey (1997) was jointly conducted by the American Council on Education and the Higher Education Research Institute at the University of California. The data analysed by this group were from a national survey of first-year undergraduate students entering universities in 1996. The sample included 251,232 first-year students in almost 500 institutions. The reasons reported as being very important for deciding to attend university by more than half the respondents were: to be able to get a better job (77%), learn about more things that interest me (74%), to be able to make more money (72%), and to gain a general education and appreciation of ideas (62%).

An extensively researched area is the motivation of "adult learners" or mature students, those who attend university several years after finishing high school. Much of this research has used Houle's 1961 typology of adult education students, which describes adult learners as either goal-, learning-, or activity-oriented. These students participate in adult education to achieve a specific goal (e.g., certification for a job or promotion), for intellectual development, and to occupy their time or have something to do, respectively. This typology parallels two of the reasons commonly given by younger students for their participation in post-secondary education -- career/training and learning/education. Also, the third orientation in Houle's typology could be compared with a combination of the personal development and social motives often seen with more traditional age university students.

Using Houle's typology, Bosher (1985) developed the Education Participation

Scale (EPS) to examine the different orientations. Summarizing several studies using the EPS, Merriam and Caffarella (1991) described six motivational dimensions for adult learners. These dimensions were: social relations (make new friends and expand social network), external expectations (attendance due to pressures from another), social welfare (serving others or their community), professional advancement (job or career enhancement), escape/stimulation (alleviating boredom or escaping routines), and cognitive interest (learning for its own sake). Stage and Williams (1988) also used the EPS. They sampled first-year English classes at a U.S. university about their reasons for attending university and identified seven factors: Certification (job related reasons), Cognitive (learning), Community Service , Change (break in routine), Social Relationships, Recommendation (pressure from others), and Escape (to get away from other things).

This early work in the area of motivation may be helpful to indicate what university students wish to attain through their university attendance. In fact, two of the three orientations suggested by Houle (learning and goal-orientation) are matched by similar motives in nearly every study investigating student motivation. What differs, however, is the finding that some students are activity-oriented and primarily motivated to have something to occupy their time. This motive has been less common in the research on students who move directly from high school to university and may be replaced by the motives of pressure or socializing among this group.

Other, more sophisticated studies tend to look at a greater number of potential motives and to group those motives into factors. One example is the Stage and Williams

(1988) study mentioned previously. Several other studies have taken their investigations one step further and used cluster analysis to consider the interrelations of motives and how those motives manifest themselves in actual students. Table 2 presents a summary of the research using cluster analysis to group individuals based on their motivations for attending university rather than simply identifying reasons for students' attendance.

Saunders and Lancaster (1980) used cluster analysis to examine the responses of first-year students attending a university in England and to determine common reasons for attendance. They identified four distinct clusters, each with its own reasons for post-secondary attendance. Students in the first cluster (familiar interest oriented) were motivated primarily to study subjects in which they were already interested. These individuals were not as interested in career goals or long-term implications as they were in learning and tended to be Arts and Humanities students including many music majors. The motivations of the second cluster (escapists) were predominantly negative. They were more likely to be trying to get away from home or to be putting off a career decision than to be moving toward an objective or goal. Again these students were primarily Arts and Humanities students, but also Business students. Students in the third cluster (career oriented) had long-term goals, were interested in obtaining the necessary qualifications for a particular vocation, and were only interested in learning when it was appropriate to their career goals. This cluster was comprised primarily of Business, Education, or Catering students. Finally, security oriented students wanted to acquire the certifications and knowledge necessary to assure a secure future. Predominantly engineering students, these individuals, together with those in the career orientation cluster, seemed to see

Table 2

Reasons for Attending University: A Summary of Research Using Cluster Analysis

Study	Pressure/ Escape	Career	Learning/ Study Favourite Subject	Self Develop't	Security	Whole Experience Seekers
Saunders & Lancaster (1980)	✔	✔	✔		✔	
Barnetson (1997)	✔	✔		✔		✔
Church & Gillingham (1988)	✔	✔	✔	✔		
No. Studies Including Cluster	3	3	2	2	1	1

university as a means to an end, rather than a benefit in itself.

While these studies provide useful information, it is important to recognize that Canada's university system differs from that of the United States. For example, while Canada many of the community colleges in the United States are similar to Canada's technical colleges, there are also two-year colleges in the United States that essentially offer the first two years of university. These schools are designed to allow students to attend an institution in their home community and then transfer to a four-year institution for the final two years of their education and obtain their B.A. Further differentiating the two systems is the existence of private universities in the United States. Moreover, the funding structures and number of institutions available are different. Finally, while there may be pressure from American parents to attend their alma mater, this same pressure is less common in Canadian families.

The search for Canadian research yielded only four studies (Barnetson, 1997; Church & Gillingham, 1985; Church & Gillingham, 1988; Pain, 1986). Of these studies, Pain (1986) used only home economics students and Church and Gillingham (1985) examined the role of contextual factors in application decisions but did not ask students their reasons for attending. The two studies examining motivations for attending university among the general undergraduate population, Church and Gillingham (1988) and Barnetson (1997), provided the basis for the present study.

Church and Gillingham (1988) developed their methodology from marketing literature. In order to identify the benefits sought by undergraduates from their university education and to identify clusters of individuals based on those benefits, Church and

Gillingham (1988) collected in-class survey data from 427 full-time, first-year undergraduate students at Laurentian University in Sudbury. They then factor analysed those data and used cluster analysis to describe the groups found within those clusters. Barnetson (1997) had the same purpose as Church and Gillingham and used the same methodology with a much smaller sample. Mail-survey data were obtained from 77 full-time, first-year undergraduate students at the University of Calgary regarding the reasons they were attending university, important factors in deciding which universities to apply to, and demographic information. The reasons for attending were factor analysed and then subjected to a cluster analysis. The suggested ratio for participants to factor analysis items is 5:1 or greater. With only 77 participants and 26 items, the resulting ratio is less than 3:1. Also, it is generally suggested that factor analyses be done with a minimum of 100 cases (Tabachnick & Fidell, 1996). Despite these problems, the fact that Barnetson reported results quite similar to those found by Church and Gillingham (1988) lends some credibility to his research.

Five factors were identified in both studies, of which three were similar. The five reasons for university attendance identified by Church and Gillingham (1988) included: Personal Skill Development, Personal Advancement, Social Pressures, Learning and Discovering, and Intellectual Development (see Appendix A for more detailed information). Barnetson's (1997) five factors included: Connection, Self-Awareness, Advancement, Learning, and Relationships (see Appendix B for more detailed information). The three matching reasons were "Personal Skill Development" and "Self-Awareness" (development of desired skills and competencies), "Personal Advancement"

and "Advancement" (improvement of the future financial and/or social standing of the respondents), and "Learning and Discovery" and "Learning" (development of career plans and the learning of new things).

The two factors found only in Church and Gillingham were "Social Pressure" (pressure to attend university that was either internal, e.g., to get away from home, or external, e.g., for others to see them as educated) and "Intellectual Development" (increasing understanding, learning, and being allowed to study a favourite subject). The two reasons found only in Barnetson were "Connection" (making social links to the university community by meeting people and participating in social activities) and "Relationships" (wanting to improve interpersonal skills or feeling pressure from friends to go to university).

Following their factor analyses, the authors of both studies subjected factor scores to a cluster analysis in order to group students based on their reasons for going to university. Although Barnetson's (1997) descriptions of the clusters he found were not as detailed as Church and Gillingham's (1988), there were many similarities between the results of the two studies. Barnetson found four clusters, each accounting for approximately the same number of students, ranging from 27% to 21% of the sample. Church and Gillingham (1988) identified six clusters ranging from 24% to 9% of their sample.

Three clusters were common to both studies. Church and Gillingham's largest cluster, "Self Improvement," contained 24% of the students, who are primarily motivated by a combination of intellectual and personal advancement benefits. One of Barnetson's

two largest clusters, 27% of his sample, was also primarily motivated by these reasons for attending university. Church and Gillingham describe these students as embodying the "traditional" view of ideal, well-motivated students; in their sample, these individuals were more likely to be female, and have good grades, and parents with relatively high incomes who provide financial help. Emphasis is placed on the quality and reputation of the institutions to which they apply, and these individuals were most likely to be in Nursing and Translation programs.

The only cluster found in Barnetson not directly linked to one in Church and Gillingham could be called "Well-Rounded" and included 27% of the students in the study. These students were seeking three main benefits from their university attendance: financial security, academic stimulation, and social contact. These three benefits cover the range of benefits offered by university attendance and this group wants them all. They are similar to Church and Gillingham's Self-Improvement cluster but also include socializing as a reason for attending university. If Church and Gillingham had included more social motive items in their questionnaire, perhaps these two clusters would have been paired together. Institutional characteristics seen as important by this group were quality of education, friendliness of the campus, and academic flexibility.

"Career" was another cluster in Church and Gillingham and included 21% of the students. This cluster was similar to one of Barnetson's clusters which included 23% of those students. Personal or professional advancement was important to these students with little emphasis placed on intellectual or personal development. Young, single males with higher income parents dominated this cluster. Relatively little importance was

placed on academic quality, cost, size of classes, meeting people, or attending with friends, and most of these students were in Commerce, Sciences, and Translation.

Church and Gillingham found another cluster that they called "Pressure" with 12% of the students. Student motivation focussed on social pressure as a motive to attend university, and there was little concern for personal development. This group felt pressure from parents, a concern for future financial standing, and the desire to meet new people. These individuals tended to be younger, single males, came from rural areas, were academically lower achieving students, and showed less motivation to achieve beyond a Bachelor's degree. They spent a long time deciding on a program and were influenced by the opinions of others. Cost and funding were a concern, as were university and class size, and meeting new people. These students were predominantly in Arts, Engineering, and Physical Education. Barnetson found a similar cluster consisting of 21% of his sample.

Church and Gillingham found three clusters that were not matched by Barnetson. Their unmatched clusters were as follows: Church and Gillingham's cluster of "Self Development" (22% of the students) included students interested in skill development and life experience but not intellectual development or personal advancement. They were primarily males placing importance on reputation and attending with people they knew. The majors most favoured by this cluster were Teaching and Sports Administration.

"Learning" was the title of another cluster found by Church and Gillingham and was composed of 11% of the students. Learning for its own sake, without thought of advancement, was the primary factor in the decision to attend university. These students

were more likely to be females with high academic achievement and objectives. Less importance was placed on institutional reputation and suitability of location. This group's preferred areas of study were Arts and Social Work.

The smallest cluster in Church and Gillingham's study (9% of the students) was "Continue to Study Favourite Subject." These students were interested in pursuing a favourite subject and intellectual development. They were not motivated by broad based learning, personal advancement, personal growth or development, career related factors, improvement of standard of living, pressure, or meeting new people. They were more likely than those in the other clusters to have high academic goals and tended to be older, married women who were attracted by the location of the institution and who preferred large class sizes. The most common programs among this group were Social Work, Teaching, and Physical Education.

While the differences in results were minor, one possible reason for the discrepancies between Church and Gillingham (1988) and Barnetson (1997) results could be the different items used. Church and Gillingham asked students to respond to 19 possible motives for applying to university while Barnetson used 26 items. The greatest difference between the two sets are the items relating to pressure for the student to attend university. In Church and Gillingham, there was only a single item related to the pressure felt by the student to attend university, "Not keen to go but felt pressure to go to university." Barnetson, however, divided that item into several others, asking students about the influence of pressure from friends, pressure from parents, and pressure from teachers. Other differences between the two sets included the additional elements of

participation in various activities, social motives, and improvement of self-sufficiency or confidence.

The similarities of the results from the two studies are even more striking when the differences in location, institution, and time are considered. Laurentian is located in northern Ontario, sharing the province with almost 20 other universities. It is a relatively small school with fewer than 6000 undergraduate students as of February, 1999. It also has 35 of its 51 undergraduate programs available in French or both French and English. The University of Calgary is a much larger institution (more than 24 000 students in 1999) and is one of only a few universities in Alberta. The Church and Gillingham study examined students attending Laurentian University in the mid- to late 1980's while Barnetson's sample was drawn from the University of Calgary in the mid-1990's. It is possible that the university environment and relative importance of reasons for student attendance are different now than they were more a decade ago. The results of these two studies, however, would suggest that any differences are minor.

Barnetson goes one step further than Church and Gillingham in his discussion of student motivation. He suggests that a useful strategy may involve finding commonalities, or "hot buttons" of motivation, between clusters and focussing on those in student recruitment efforts. From the perspective of the university administrators, the development and delivery of four or five distinct recruitment strategies, one for each of the major clusters, may not be the best use of resources. While the knowledge of clusters could help direct student retention efforts, for recruitment purposes this may be impractical. Since students are not identifiable as belonging to a particular cluster when

they are targeted for recruitment efforts, it is impossible to ensure that the various messages directed at particular clusters would actually reach them.

As an alternative, Barnetson suggests that the use of "hot buttons" can maximize the impact of the message the university is trying to deliver to potential students. In his study, Barnetson (1997) identified two hot buttons, financial security and intellectual benefits. The motivations of increasing career opportunities, obtaining a degree, achieving a higher standard of living, university education required for career, and becoming self-sufficient, all had over 85% agreement as being related to the participants' decision to apply to university. Also, increasing understanding, learning new things, and studying favourite subject had over 75% agreement. Summarizing these eight motives suggests that the most effective recruitment strategy for the University of Calgary to adapt would be a two pronged approach, emphasising both the financial security and the intellectual benefits resulting from a university education, since such an approach would address the motivations of most students.

Each of these three motive identification methods, factor analysis, cluster analysis, and "hot buttons," has particular advantages. Grouping motives by factors is useful for describing the kinds of motivations people have for attending university. Factor analysis does not indicate, however, the relationships of the factors or how they manifest themselves in actual students. Using the results of a factor analysis, cluster analysis can group students together who show similar patterns of motivations for attending university. Clusters can be used by the university to understand not only why students are deciding to attend university, but also who is deciding, for what reasons, and

how different motives may be related. For example, if a university knows that 40% of their students are going to university to get a better job, 25% are there to socialize, and 30% are there to learn more about their favourite subject, they may conclude that these groups are distinct. However, it may be that some students are there for both socializing and career motives, that others are there for learning and socializing, and that a third group is there only for the chance at a better job. By using cluster analysis, a better understanding can be obtained about the interrelations of motives and the characteristics of people who hold that combination of motives. This information is useful for university administrators in that it gives them a sense of what students are looking for from their education, the relative importance of the various motivations, and the proportions of people attending for different reasons. By using this information, the administration can try to minimize attrition due to student dissatisfaction. In other words, they can attempt to match what they are offering, as much as can reasonably be done, to what the students are seeking.

Compared to cluster analysis, Barnetson's "hot buttons" (1997) would seem to be the more useful approach to aid recruitment efforts. By finding commonalities across clusters, and centring recruitment messages around those "hot buttons," universities could maximize the effectiveness of their efforts and not overburden their resources trying to come up with different marketing materials for each cluster. This would allow for the main goals of each cluster to be emphasized but does so using a more feasible strategy.

The primary purpose of the present study is to determine why students choose to attend the University of Windsor and whether the factors, clusters, and "hot buttons"

identified for University of Windsor students will parallel those found in previous research with a particular focus on Church and Gillingham (1988) and Barnetson (1997). A secondary purpose is an examination of student and parent attitudes toward a university education and their impact on university attendance. Generally, the existing research has focussed on parental attitudes, parental encouragement, and the likelihood of the child going to university (e.g., Dillman, 1989; Majoribanks, 1998; Oliver & Etcheverry, 1987) or on the relationship between parental attitudes and the amount of motivation the student feels to go (e.g., Flint, 1992). One area not studied has been how parental attitudes affect the reasons for a student's decision to attend university. It might be that students who go to university for different reasons may themselves have different attitudes regarding the value of education. The same may be true for their parents. For example, if a parent stresses the importance of the intrinsic value of education (i.e., learning and education as important for their own sake), their children may be more likely to attend for reasons related to learning or self-development. Alternatively, if parents feel that education is important primarily for the beyond the career benefits it provides, their children may tend to go to university to get a better job. It might also be expected that students identified in previous studies as attending university due to external pressure would not value education but that their parents would. Perceptions of the intrinsic value of education could also play a significant role in what institutional characteristics are important to a student. The present study seeks to investigate these possibilities.

Finally, the present study was designed to investigate the relationship between the reasons people give for deciding to attend university and levels of academic success once

they arrive. This was done to see if any relationship exists between the reasons why students decide to go to university and their subsequent performance once they arrive. If there are differences among students attending university for different reasons then identifying those differences could help direct efforts to prevent the academic failure of students who are at greater risk of flunking out.

Based primarily on the findings of Church and Gillingham (1988) and Barnetson (1997), as well as the other studies investigating reasons for deciding to attend university, the following hypotheses are advanced:

Hypothesis 1: Analysis of the reasons given by University of Windsor students for attending university will yield factors similar to those identified in previous research: Career and Training, Learning and Education, Personal Development, Pressure, and Socializing.

Hypothesis 2: Analysis of participating students' reasons for attending university will yield clusters of students similar to those identified in previous research: Career, Learning, Self-Improvement, and Pressure to Attend.

Hypothesis 3: Common reasons for participation in post-secondary education, or "hot buttons," will be found across all clusters. The expected "hot buttons" are Career and Learning.

Hypothesis 4: The marks of students whose reasons for attending suggest a learning or goal-orientation will be higher than those of students who are attending due to pressure from others.

Hypothesis 5: Both parent and student beliefs in the intrinsic value of education will be positively related to Learning and Personal Development reasons for deciding to attend university. Parent and student beliefs in the intrinsic value of education will be negatively related to Career related reasons. Finally, parent attitudes toward education will be positively related to Pressure from Others while student attitudes will be negatively related to this reason.

CHAPTER II

Method

This study is planned as the initial phase of a larger research project that will examine the recruitment and retention of undergraduates at the University of Windsor over a period of several years. The first step in this research project involved the administration of a test battery to introductory psychology students in September, 1999. This group will be surveyed again at several points throughout their university careers. Efforts will also be made at later testings to identify those students in the original sample who are no longer attending the university so they can be compared with those still enrolled. This study involves the examination of factors influencing university choice based on the data collected in September.

Participants

Participants included all students enrolled in the introductory psychology courses who were present for the Department of Psychology Mass Testing Sessions in September, 1999. A total of 1101 students participated in the Mass Testing. Of those, 791 identified themselves as first-year students and thus were included in the analyses.

Measures

The total test battery for this study consisted of 55 items, including 13 demographic items and 42 items measuring reasons for choosing to attend a university, university characteristics considered when deciding where to apply, and student and parent attitudes toward education. A copy of all measures used in this study are available in Appendix C.

Demographic Information. The demographic information collected included sex, age, academic major, year in university, number of psychology courses taken, full- or part-time status, and ethnic group membership. Participants were also asked where they had last attended high school, their current living arrangements, father's and mother's levels of education, their own educational aspirations, and where the University of Windsor had ranked in their choice of universities to which to apply.

Choosing to Attend University Scale. The Choosing to Attend University Scale (CAUS) was adapted by the author from a measure used, in somewhat different forms, in both Church and Gillingham (1988) and Barnetson (1997). The CAUS presents a series of 19 questions about the importance of various reasons in the participant's decision to attend university. All items use a five-point Likert-scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Fifteen of the items on this scale had strong factor loadings in both studies. Of these fifteen items, fourteen are included in the present study. The only one eliminated was "I wanted to obtain a university degree." While it is true that not all students go to university to obtain a degree, it was felt that a sample of first-year students would not show much variability in their responses to this item.

The Church and Gillingham article had only a single item asking about the pressure students felt to go to university, while Barnetson had several. Two of the pressure questions from Barnetson (pressure from parents and pressure from friends) were used here as both had high factor loadings in his study.

The remaining three items all had high loadings in the Barnetson study, but were not part of the Church and Gillingham study. These were items 11 (I wanted to

participate in social activities), 18 (I wanted to become more self-sufficient), and 19 (I wanted to improve my self-confidence). These particular items were included because they seemed potentially relevant to the motives of socializing and personal development found in other studies.

Important University Characteristics. This scale (IUC) consisted of thirteen items asking how important certain institutional characteristics were in the students' decision regarding which universities to apply to. This scale used the same characteristics as Barnetson (1997) but excluded "political leanings" and "modernity" as it was not clear what these terms meant. A 5-point Likert-scale from 1 (Strongly Disagree) to 5 (Strongly Agree) was used.

Parent and Student Attitudes Toward Education Scales. These two measures, Parent Attitudes Toward Education Scale (PATES) and Student Attitudes Toward Education Scale (SATES), were developed for the present study to assess parents' and students' attitudes about education. Each scale included five items, and the mean item scores for each scale were computed as a summary value (parent or student) for that student. As with other measures, the participants used the same 5-point Likert-scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Student Grades. Final grades from the course in which students were surveyed, Introduction to Psychology, were obtained as a performance measure thirteen weeks after the other data were collected. The grades are presented as percentages.

Procedure

The procedure followed the Psychology Department's Mass Testing protocol. Participants in various introductory psychology classes were asked to respond on computer scanning sheets to a package of questionnaires during their class time in the first month of the fall semester. Grades were obtained by matching the students' introductory psychology grades with the data previously obtained after they had been at university for one term (13 weeks later). Student numbers from the original mass testing data were paired with student numbers and grades from the introductory psychology class by the introductory psychology instructor. These student numbers were then deleted leaving only the mass testing data and introductory psychology grades.

CHAPTER III

Results and Discussion

Data Screening

The original data file consisted of 1101 students. Of these, 791 stated that they were first year students, 137 were second year, 47 were third year, 39 were fourth year or beyond, and 87 did not indicate which year they were in. All non-first-year students were removed from further analyses and the data from the remaining 791 students were examined for missing information. Seventy-seven individuals were missing all non-demographic data and were removed. This resulted in 714 valid cases.

The data were screened to ensure that students were genuinely engaged in answering the questions, and 38 cases were subsequently removed because those individuals had not disagreed with any of the items on the scale. In order to ensure that the sample included only students attending university directly from high school, an upper age limit of 21 was selected, resulting in the elimination of a further 62 students. The result was a total of 614 cases used for further analyses with an average age of 18.96 (SD=.72).

Because the PATES and SATES had been created for this study, the reliability of each scale was assessed. Both the PATES and SATES show high reliability, Cronbach's alpha = .80 and .76, respectively.

Description of the Sample

Table 3 shows frequencies and percentages of demographic characteristics of the students, as well as the means and standard deviations for age, introductory psychology

Table 3

Means, Standard Deviations, Frequencies and Percentages for the Entire Sample

Variable	Freq	%		Variable	Freq	%	
Sex	454	73.9	Female		160	26.1	Male
Academic Major	96	15.6	Psychology	Choice Position of the University of Windsor	52	8.5	Only One
	289	47.1	Other Arts/H. Sci.		323	52.6	1st Choice
	138	22.5	Science		155	25.2	2nd Choice
	39	6.4	Business/Ed./Law		58	9.4	3rd Choice
	52	8.5	Undeclared		26	4.2	Below 3rd
Ethnicity	455	74.1	White	Location of Last High School Attended	158	25.7	Windsor
	58	9.4	Black		110	17.9	Essex County
	38	6.2	South Asian		125	20.4	SW. Ontario
	28	4.6	East Asian		202	32.9	Other Ontario
	17	2.8	Other		18	2.9	Out of Province
Living Arrangements	267	43.5	In Residence	Educational Goals	32	5.2	Bachelors
	257	41.4	With Parents		266	43.3	Honours B.A.
	59	9.6	With Friends		88	14.3	Masters
	16	2.6	Alone		75	12.2	Doctorate
	15	2.4	Other Family		151	24.6	Prof. Degree
Father's Education	117	19.1	Not HS	Mother's Education	77	12.5	Not HS
	193	28.2	HS Grad		199	32.4	HS Grad
	135	22.0	College		193	31.4	College
	83	13.5	Bachelors		82	13.4	Bachelors
	98	16.0	Grad. or Prof.		59	9.6	Grad. or Prof.

Variable	Mean	SD
Parent Attitudes Toward Education (PATES)	4.31	0.71
Student Attitudes Toward Education (SATES)	4.33	0.62
Final Mark in Introductory Psychology Course (percentage)	68.25	10.68

grades, the PATES, and the SATES. The students in the sample were 454 females (73.9%) and 160 males (26.1%), a division similar to Barnetson (1997; 70% females) but differing from Church and Gillingham (1988), whose sample contained an equal number of males and females.

The ethnic distribution of this sample is consistent with Canada's increasing cultural diversity. Contained within this sample were 455 white students (74.1%), 58 Black/Caribbean/African students (9.4%), 38 South Asian/East Indian/Pakistani students (6.2%), 28 East Asian/Chinese/Japanese students (4.6%), and 17 Other, e.g., First Nations, students (2.8%).

The majority (61.1%) cited the University of Windsor as their only (8.5%) or first choice (52.6%) of university applied to. These figures suggest two possibilities. The first is that Windsor is important as an institution of choice to which people are drawn, and that it is not a "last chance university." The second is that many of the students who choose to attend the University of Windsor are from the surrounding area and feel that other universities are not as accessible to them. The extent to which each of these two possibilities is at work here is not known. Also interesting to note are the high educational aspirations of the students. Only 5.2% of the students were interested only in a three year Bachelor's degree. The modal response for this variable was an Honours or four year degree (43.3%), followed by a Professional Degree (24.6%), while both Masters (14.3%) and Doctoral (12.2%) graduate degrees were also each cited by a sizeable portion of the students. This finding is especially striking when considered in conjunction with the educational levels of the parents. Almost half the students (47.3%) had fathers with

only a high school education or less, and a similar percentage (44.9%) had mothers who had only high school or less. When these two variables are combined, 29.8% of the participants in this study are first-generation university students, that is neither their mother nor father had completed any post-secondary education.

Table 4 presents the means and standard deviations of the relative importance of different institutional characteristics for the students when selecting which universities to apply to, listed in descending order of importance for the entire sample. Quality of Education had the highest mean of all institutional characteristics, M=4.25, SD=.82, followed by Location, M=4.02, SD=1.12. It is interesting to note that, for female students, Quality of Education, M=4.33, SD=.75, was significantly higher than Location, M=4.04, SD=1.08, $t(451)$=5.06, p<.001, but for male students there was no difference, M=4.02, SD=.93, M=3.96, SD=1.22, respectively, $t(159)$=.53, p>.05. International Activities, M=2.75, SD=1.01, was judged as least important to the students in deciding where they wished to apply, although a comparison of white students and students of colour indicates that international activities were significantly more important to the latter group, $t(612)$=2.48, p<.05, M=2.92, and 2.69, for white students and students of colour, respectively. Both females and males had nearly identical orders of characteristics. One notable exception to this was Student Involvement, which was seventh in importance for females, M=3.49, SD=.95, but tenth out of thirteen in importance for males, M=3.07, SD=1.04. Finally, females consistently rated each institutional characteristic as more important in their decision of where to apply to university than males.

One potentially useful way of considering the institutional characteristics is to

Table 4

Important Institutional Characteristics for Female Students, Male Students, and All Students

Institutional Characteristic	Females Mean (SD)	Males Mean (SD)	Total Mean (SD)
Quality of Education **	4.33 (.75)	4.02 (.93)	4.25 (.82)
Location	4.04 (1.08)	3.96 (1.22)	4.02 (1.12)
Friendliness **	3.87 (1.00)	3.49 (1.05)	3.77 (1.03)
Academic Flexibility **	3.79 (.85)	3.49 (.96)	3.71 (.89)
Cost	3.65 (1.20)	3.59 (1.23)	3.63 (1.21)
Reputation	3.67 (1.03)	3.49 (1.12)	3.62 (1.05)
Academic Rigour **	3.47 (.80)	3.26 (.85)	3.41 (.82)
Student Involvement **	3.49 (.95)	3.07 (1.04)	3.38 (.99)
Selectivity *	3.42 (.83)	3.26 (.92)	3.38 (.86)
Size *	3.36 (1.11)	3.12 (1.16)	3.30 (1.12)
Appearance	3.13 (1.14)	3.08 (1.15)	3.11 (1.14)
Simplicity of Regulations	3.13 (.90)	3.06 (.93)	3.11 (.91)
International Activities **	2.85 (.98)	2.48 (1.03)	2.75 (1.01)

Note. N=614 for the total sample, 454 females, 160 males.

* Indicates females significantly higher than males using T-tests, $p<.05$.

** Indicates females significantly higher than males using T-tests, $p<.01$.

look at how important students rate them based on where they placed the University of Windsor in their choice of university to attend. Reputation, for instance, was rated significantly lower for those students who had the University of Windsor as their first, M=3.55, or only, M=3.62, choice when compared to those who placed the University of Windsor as their second, third, or below third choice, M= 3.81, 3.74, and 4.15, respectively, F(4,609)=6.51, p<.001. Size and Appearance showed a pattern similar to that for Reputation. Both were significantly less important to those who had Windsor as their only choice of university, M=2.62 and 2.42, respectively, than those who had the University of Windsor as their first choice, M=3.30 and 3.08, respectively, second choice, M=3.53 and 3.34, respectively, or third choice, M=3.36 and 3.29, respectively; Size, F(4,608)=6.79, p<.001 and Appearance, F(4,609)=6.91, p<.001, respectively. Neither Size nor Appearance showed a difference between those who indicated Windsor as their only choice of university as compared to those who placed it below their third choice.

Location showed a different pattern, in that it was more important for those who placed the University of Windsor as their first, M=4.10, or only choice, M=4.29, as compared to their third choice, M=3.57, of university, F(4,609)=4.31, p<.01. As the University of Windsor decreased in the choice position, Location decreased in importance. The only students who did not fit this pattern were those who ranked Windsor below their third choice (M=4.23 for Location). These students regarded Location as almost as important as did those who ranked Windsor as their only choice. It could be that location was important to these students in that they wanted to get away from Windsor. In fact, the students who placed Windsor below their third choice of

university were much more likely to have gone to high school in Windsor, 57.7% as compared to 22.8%, or Essex County, 25.0% versus 17.3%, and were more likely to living with their parents, 84.6% and 47.3%, respectively, than those who placed the University of Windsor higher.

Sex Differences.

One way in which to investigate the student population is to look for differences between males and females. The sample contained 454 females and 160 males. Of the nineteen possible reasons for deciding to attend university, males and females differed significantly on only two in terms of percent agreement with the reason: "I felt pressure from my parents/family to go," 45.0% for females as compared to 30.4% for males, $X^2(1, N=614)=11.21$, $p<.01$, and "I wanted to improve my ability to express myself," 33.1% for females and 47.4%for males, $X^2(1, N=614)=9.74$, $p<.01$.

In terms of the thirteen important institutional characteristics in deciding where to apply, females had significantly higher ratings than males on eight: Quality of Education, Friendliness, Academic Flexibility, Student Involvement, Academic Rigour, International Activities, Selectivity, and Size. With the exception of Friendliness, all these characteristics were related to the desire to have a high quality education rather than the social environment.

The idea that females are more concerned with the quality of education they want to receive is further supported by the sex differences on the PATES and SATES. Again, females had significantly higher scores than males on both PATES, $M=4.36$, $SD=.65$ versus $M=4.18$, $SD=.84$, $t(612)=2.69$, $p<.01$, and SATES, $M=4.44$, $SD=.52$ versus

M=4.06, SD=.78, t(612)=6.92, p<.01. Overall, these findings would suggest a stronger orientation toward academics for females as compared to males. This difference is not reflected in the reasons students decided to attend university but may be related to what is important either once they arrive at university or even after they decided to attend.

Location Differences.

Another useful consideration for student recruitment is the differences between local and non-local students. These differences were assessed by asking students where they last attended high school. If they indicated that they had attended in either Windsor or Essex County they were labelled as local students (N=268); if they had gone to high school in any other area, they were categorized as non-local (N=345). Table 5 indicates that many of the differences found are not unexpected. Part-time students were significantly more likely to be from a local high school than a non-local high school, 7.8% for local and 1.2% for non-local, $X^2(1, N=611)=17.05$, $p<.001$. Living arrangements were also significantly different for local and non-local students with 76.2% of the non-local students living in university residence and 1.5% of the local students, 15.7% of the non-local students living with friends and 1.9% of the local students, and 91.3% of the local students living with their parents as compared to 3.2% of the non-local students, $X^2(4, N=610)=201.30$, $p<.001$.

Some less predictable, but not surprising findings include the differences in institutional characteristics considered to be important when deciding where to apply. Specifically, local students were significantly more concerned with Location and Cost, whereas non-local students were significantly more interested in Appearance,

Table 5

Means (SD) and Percentages for Differences Between Local and Non-Local Students

Variable	Level	Local (%)	Non-Local (%)
Academic Major	Psychology	19.4	12.8
	Other Arts/H. Sci.	37.7 --	54.2 ++
	Science	28.7 ++	17.7 --
	Business, Ed., Law	6.0	6.7
	Undeclared	8.2	8.7
Enrollment Status	Part-Time	7.8 ++	1.2 --
Ethnic Group Membership	White	85.3	69.3
	Black	1.9 --	15.8 ++
	East Asian	5.4	4.2
	South Asian	3.9	8.3
	Other	3.5	2.4
Living Arrangements	In Residence	1.5 --	76.2 ++
	With Friends	1.9 --	15.7 ++
	Alone	2.6	2.6
	With Parents	91.3 ++	3.2 --
	With Other Family	2.6	2.3
University of Windsor Choice Position	Only One Applied to	16.0 ++	2.6 --
	First Choice	56.0	50.1
	Second Choice	19.8	29.3
	Third Choice	6.0 --	12.2
	Below Third Choice	2.2	5.8
To participate in social activities. (% Agreement)		44.0 --	60.6
		Mean (SD)	Mean (SD)
Appearance		2.94 (1.09)	3.25 (1.16)
Friendliness		3.59 (1.04)	3.92 (1.00)
Size		3.00 (1.06)	3.54 (1.12)
Cost		3.81 (1.19)	3.51 (1.20)
Location		4.39 (.97)	3.74 (1.13)
Introductory Psychology Grades		70.34 (11.11)	66.58 (10.03)

Note: Differences on percent agreement evaluated using Chi-Square and were significant, $p<.001$ (--/++ indicates result below/above expected value, i.e., standardized residuals larger than 1.9). Differences between means evaluated using T-tests, all variables significant, $p<.01$.

Friendliness, Size of the institution, and Student Involvement. The finding that local students are interested in location is further supported by their being significantly more likely (16%) than non-local students (26%) to state that the University of Windsor was the only university to which they applied, $X^2(4, N=613)=49.13$, $p<.001$. All of these results suggests that the students from local high schools attend Windsor largely due to their perception that the University of Windsor is their best or only choice for either financial or convenience reasons.

Local students are also significantly less likely than non-local students to be black (1.9% and 15.8%, respectively), $X^2(4, N=595)=39.32$, $p<.001$. These figures suggest that Windsor is attractive to black students from other locations.

Another interesting difference between the local and non-local students is academic major. The results show that local students are more likely to be in Science, 28.7% as compared to 17.7%, and non-local students are more likely to be in Arts and Human Sciences, 54.2% and 37.7%, $X^2(4, N=613)=21.35$, $p<.001$. Finally, local students had significantly higher Introductory Psychology grades than non-local students, $M=70.34$, $SD=11.11$ and $M=66.58$, $SD=10.03$, respectively, $t(554)=4.18$, $p<.001$. One possibility which may explain this pattern of results is that the local students are attending because they feel that the University of Windsor is their only option for either financial or convenience reasons whereas the non-local students are attending Windsor because it was the only university that accepted them. Again, in order for this possibility to be verified, further research must be done.

Ethnic Differences.

Ethnic group membership differences were also assessed and are presented in Table 6. In the sample there were 455 white students, 58 black students, 38 South Asian students, 28 East Asian students, and 17 others. The differences found related primarily to location and academics. In the comparison between local and non-local students it was found that local students were more likely to be white while non-local students were more likely to be black. More specifically, as compared to other ethnic groups, white students were more likely have attended high school in Essex County (21.1%) and less likely to have attended a high school outside Southwestern Ontario (25.8%) or out of province (1.3%), $X^2(16, N=595)=121.72$, $p<.001$. Black students were less likely to have attended in Windsor (6.9%) or Essex County (1.7%) but more likely to have attended outside Southwestern Ontario (72.4%). South Asian, East Asian, and Other students were all less likely to have attended a high school in Southwestern Ontario but not in Essex County (5.3%, 3.6%, and 0.0%, respectively), and East Asian students were more likely to have attended high school from outside of Ontario (18.4%). The living arrangements of the different ethnic groups reflected their location pattern. In particular, as compared to others, black students were more likely to be living in residence (62.1%), with friends (24.1%), or alone (6.9%) but less likely to be living with their parents (6.9%). Furthermore, white students were less likely to be living with friends (6.2%) while East Asian students were more likely to be doing so (34.2%), $X^2(16, N=593)=79.12$, $p<.001$.

The choice position of the University of Windsor also showed differences between the different ethnic groups. East and South Asian students both were more

Table 6

Percentages and Means (SD) for Differences Between Ethnic Groups

Variable	Level	White %	Black %	S. Asian %	E. Asian %	Other %
Location of Last High School	Windsor	27.5	6.9 --	21.1	39.3	47.1
	Essex County	21.1 ++	1.7 --	5.3	10.7	5.9
	SW Ontario	24.2	15.5	5.3 --	3.6 --	0.0 --
	Other Ontario	25.8 --	72.4 ++	50.0	42.9	41.2
	Out of Province	1.3 --	3.4	18.4 ++	3.6	5.9
Living Arrangement	In Residence	43.4	62.1 ++	28.9	35.7	35.3
	With Friends	6.2--	24.1 ++	34.2 ++	7.1	5.9
	Alone	2.0	6.9 ++	2.6	7.1	0.0
	With Parents	45.6	6.9 --	31.6	46.4	58.8
	Other Family	2.9	0.0	2.6	3.6	0.0
University of Windsor Choice Position	Only Choice	10.1	1.7	10.5	3.6	0.0
	First Choice	55.4	50.0	26.3 --	32.1	70.6
	Second Choice	24.0	27.6	31.6	32.1	23.5
	Third Choice	7.9	13.8	15.8	17.9	5.9
	Below Third	2.6	6.9	15.8 ++	14.3 ++	0.0
Educational Goals	BA/BSc	6.2	1.7	2.6	3.6	0.0
	HBA/HBSc	49.0 ++	24.1 --	21.1 --	32.1	23.5
	MA/MSc	12.1	24.1 ++	21.1	17.9	23.5
	Ph.D.	10.6	17.2	23.7 ++	7.1	17.6
	Prof. Degree	22.1	32.8	31.6	39.3	35.3
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Introductory Psychology Grades		69.25 (10.24)	64.13 (10.23)	62.05 (11.81)	69.31 (12.12)	68.21 (9.47)

Note: Other variables listed were assessed using Chi-square analyses, $p<.001$ (--/++ indicates a result well below/above expected value, i.e., standardized residuals larger than 1.9). Groups differ significantly on Introductory Psychology grades, $F(4, 535)=5.906$, $p<.001$. Tukey's HSD post-hoc analysis revealed that white students had higher grades than South Asian students, $p=.001$.

likely to state that the University of Windsor was below their third choice of institution to attend, 15.8% and 14.3%, respectively, while East Asian students were also less likely to claim the University of Windsor was their first choice of universities to attend (26.3%), $X^2(16, N=596)=46.02$, $p<.001$.

With respect to the educational goals of the different groups, white students were more likely to want only an Honours BA or BSc (49.0%), black students were more likely to want to obtain a Master's level degree (24.1%), and South Asian students were more likely to be aiming for a Ph.D. (23.7%), $X^2(16, N=594)=40.41$, $p<.001$. Furthermore, both black and East Asian students were less likely to want only an Honours BA or BSc (24.1% and 21.1%, respectively). A final difference between the ethnic groups was found in Introductory Psychology grades. White students, $M=69.25$, $SD=10.24$, performed significantly better than East Asian students, $M=62.05$, $SD=11.81$, $F(4, 535)=5.91$, $p<.001$.

Factor Analysis

The Hypothesis 1 prediction was that University of Windsor students' reasons for deciding to attend would yield factors relating to Career and Training, Learning and Education, Personal Development, Socializing, and Pressure. This hypothesis was confirmed. Replicating Church and Gillingham (1988) and Barnetson (1997), principle components factor analysis with orthogonal rotation was used to determined the factor structure. Using eigenvalues greater than one, a five factor structure was found accounting for 56.1% of the variance. Table 7 presents the entire solution with the items in each factor, the item loadings, and the percent of variance accounted for by each factor.

Table 7

Factor Analysis Results (* Item repeated on more than one factor)

Factor Name (% Variance)	Reason For Attending	Factor Loading
1. Skill Development (27.6%)	I wanted to improve my ability to express myself.	0.77
	I wanted to improve my interpersonal skills.	0.74
	I wanted to develop my creativity.	0.68
	I wanted to improve my problem-solving skills.	0.65
	I wanted to improve my self-confidence.	0.50
	I wanted to develop greater personal insight. *	0.61
2. Personal Development (9.0%)	I wanted to open up career opportunities for myself.	0.64
	I wanted others to see me as an educated person.	0.63
	I wanted more time to plan my career.	0.57
	I wanted to improve my understanding.	0.57
	I wanted to learn about new things. •	0.51
	I wanted to develop greater personal insight. *	0.50
	I wanted to continue to learn about favourite subject. •	0.43
3. Socializing (7.6%)	I wanted to meet new people.	0.85
	I wanted to participate in social activities.	0.68
	I wanted to become more self-sufficient.	0.49
	I wanted to learn about new things. •	0.44
4. Pressure (6.2%)	I felt pressure from my friends to go.	0.74
	I felt pressure from my parents/family to go.	0.67
	I wanted to continue to learn about favourite subject. *	-0.49
5. Advancement (5.4%)	A university education required for my chosen career.	0.78
	I wanted to achieve a higher standard of living.	0.49

The items included in the factors were those with loadings greater than .40, either positive or negative. The only negative loading that was strong enough to be included was "I wanted to continue to learn about my favourite subject" on the fourth factor.

The solution found with this factor analysis was fairly simple, with only three of the nineteen items loading strongly on more than one factor. These items were: "I wanted to develop greater personal insight" (factors 1 and 2), "I wanted to learn about new things" (factors 2 and 3), and "I wanted to continue to learn about my favourite subject" (factor 3 and negatively on factor 4).

The factors were as follows: Skill Development, accounting for the most variance (27.9%), included items relating to the development of various skills and proficiencies. The items referring to the development of personal insight and improvement of self-confidence also loaded on this factor. It seemed similar to "Personal Skill Development" (Church & Gillingham, 1988) and "Self-Awareness" (Barnetson, 1997).

Personal Development, accounting for 9% of the variance, included items relating to intellectual development, personal growth, or future social standing. This factor was a combination of Barnetson's (1997) "Self-Awareness" and "Learning" factors and Church and Gillingham's (1988) "Learning" and "Intellectual Development" factors. Accounting for 7.6% of the variance, the Socializing factor included items related to social activities while others related to learning new things and becoming more self-sufficient. None of the factors from Church and Gillingham (1988) directly matched this factor but Barnetson's (1997) "Connection" was quite similar.

The Pressure factor (6.2% of variance) included the only negatively loading item

(wanted to continue to learn about my favourite subject). The other two items in this factor both related to pressure from family and friends to attend university. This factor was most closely matched to Church and Gillingham's (1988) "Social Pressure" factor but did not really match any from Barnetson (1997). Lastly, the Advancement factor (5.4% of variance), dealt with career or status; specifically, a university education was required for chosen career and in order to achieve a higher standard of living and was most closely matched to "Personal Advancement" (Church and Gillingham, 1988) and "Advancement" (Barnetson, 1997).

Cluster Analysis

The Hypothesis 2 prediction was that a cluster analysis would reveal groups of students attending university for Career, Learning, Self-Improvement, or Pressure to Attend reasons, and this hypothesis was also largely confirmed. Based on the methodology from Church and Gillingham (1988) and Barnetson (1997), factor scores obtained from the factor analysis described previously were used as the basis to cluster individuals together based on their reasons for deciding to attend university. In order to ensure a reliable cluster solution, the 614 students were randomly divided into six groups and a cluster analysis was conducted separately on each group using factor scores. Hierarchical cluster analysis was used along with Ward's grouping procedure. From these analyses similar clusters were found across the six groups allowing them to be merged again. The results show a five cluster solution with clusters ranging from 29.6% to 6.0% of the sample. Table 8 shows the size along with the factor score means and standard deviations for each of the clusters. Factor scores are standardized scores and so

Table 8

Cluster Label, N-size, Percentages, and Factor Score Means (Standard Deviations) for the Five Clusters

Cluster	N (%)	Skill Development	Personal Development	Socializing	Pressure	Advancement
1. Well-Rounded	182 (29.6)	.33 (.81)	.04 (.74)	.44 (.67)	-.13 (.81)	.22 (.83)
2. Moratorium	166 (27.0)	-.49 (1.15)	.18 (.94)	.09 (.84)	-.21 (.91)	-.48 (1.00)
3. Self/Goal Directed	141 (23.0)	.18 (.87)	.19 (.87)	-.80 (1.07)	-.34 (.43)	.42 (.84)
4. Other Directed	88 (14.3)	.09 (.75)	.06 (.85)	.30 (.92)	1.17 (.90)	.02 (.90)
5. Disengaged	37 (6.0)	-.32 (1.21)	-1.90 (1.23)	-.20 (1.14)	.05 (1.20)	-.60 (1.39)

Note: Scores represent factor score means and standard deviations with means of zero and standard deviations of one across the entire sample.

have means of zero and standard deviations of one across the entire sample.

The largest cluster has been called "Well-Rounded" and consists of 29.6% of the sample. The students in this cluster had high factor loadings for the items related to Advancement, Socializing and Skill Development. In general, these students could be described as the picture of the "ideal" student. Their motives for deciding to attend university are varied (social, developmental, advancement related), they have high educational aspirations, strong positive attitudes toward education as valuable in itself, and are primarily concerned with the quality of education they will receive when deciding where to apply. Barnetson's (1997) Whole Experience Seeker cluster most closely matches this one, although there is more focus on skill development in this cluster in the current study and more focus on intellectual development for Barnetson's Whole Experience Seekers. If socializing were added to Church and Gillingham's (1988) Self Improvement cluster, it would be very similar to this cluster.

The next largest cluster, Moratorium, including 27.0% of the students, is characterised by strong negative loadings on the Skill Development, Pressure, and Advancement factors. These students feel no pressure to attend university, no need for development, and have relatively little concern for advancement. They also have only moderate positive loadings on the Personal Development factor. This cluster may consist of students who had been expected, but who did not feel pressured, to attend university and have simply not decided what they wanted to do yet. This cluster has a high proportion of students wanting to spend time planning their career and a low proportion of students thinking that university is required for what they want to do. This profile

would suggest that these students may use the beginning of their university careers to help decide where to direct their focus. It is this delaying of a decision that gives this group their name. No clusters in either Church and Gillingham (1988) or Barnetson (1997) focussed only on personal development to the exclusion of learning and/or advancement related motives as with this one.

The Self/Goal Directed cluster, 23.0% of the students, were high on the factors related to Advancement, Skill Development, and Personal Development with strong negative loadings on Socializing and moderate negative loadings on Pressure. To summarize this group, they seem to have a keen sense of the direction they want their education and career to take. They see their university attendance as helping them with their career and their future. They are not interested in other aspects of university, e.g., socializing, and are perhaps more directed than the other clusters in that they have a specific goal they wish to achieve through their participation in university. The Church and Gillingham (1988) and Barnetson (1997) clusters most closely related to this one are the "Career" clusters focussing on personal development and advancement.

Cluster four, with 14.3% of the students, was called Other Directed and is easily matched by the "Pressure" clusters found in both Church and Gillingham (1988) and Barnetson (1997). This cluster had very positive loadings on the items from the Pressure factor and moderate loadings on Socializing. The individuals in this cluster could be described as students who do not want to be here and who have been pressured into attending university by others. With the largest proportion of undeclared students and the highest rate of agreement with "felt pressure from parents/family," it seems clear that

they are at university primarily to satisfy others. In contrast to the Moratorium students, this Other Directed group does not seem to be simply putting off the decision of what they want to do but rather to have decided not to make it at all.

Finally, Disengaged (6.0% of the students) had extremely low factor score means on Personal Development, very low scores on Advancement, and moderately low scores on Skill Development and Socializing. There were no clusters which matched this one from either Barnetson (1997) or Church and Gillingham (1988). This cluster is difficult to interpret since these students do not have any positive intrinsic or extrinsic reasons for attending university. Also, compared to the other clusters they did not place much weight on any institutional characteristics when deciding where to apply.

Description of Clusters

A summary of age, PATES scores, SATES scores, and introductory psychology grades for each cluster is presented in Table 9. Table 10 shows frequencies and percentages of demographic variables for each cluster. Table 11 presents the percent of agreement, how frequently the students responded either agree or strongly agree, for the different reasons for attending university by cluster and across all clusters. Also, Table 12 shows the comparative means and standard deviations for the importance of different institutional characteristics in the students' decision to apply to university. The order of motives, based on percent agreement, from the Choosing to Attend University scale by each cluster and in total is available in Appendix D.

The descriptions for the clusters in both Church and Gillingham (1988) and Barnetson (1997) considered the differences between a single cluster and all others

Table 9

Means and Standard Deviations of Age, PATES, SATES, and Introductory Psychology Grades

Variable		Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged
Age [1]	Mean	18.90	18.90	19.16	18.80	19.14
	Std. Dev.	0.66	0.72	0.80	0.66	0.75
PATES [2]	Mean	4.41	4.32	4.33	4.31	3.69
	Std. Dev.	0.53	0.69	0.64	0.82	1.14
SATES [2]	Mean	4.44	4.33	4.38	4.28	3.88
	Std. Dev.	0.50	0.62	0.62	0.59	0.99
Introductory Psychology Grades	Mean	67.47	68.39	68.74	68.69	68.56
	Std. Dev	10.49	10.75	10.50	10.29	12.95

Note: Differences between clusters were evaluated using ANOVA's. Age, PATES, and SATES results showed significant differences, $F(4, 609)=5.14$, 8.48, and 6.86, respectively, $p<.001$. Post-hoc analyses used Tukey's HSD, p's$<.01$.

1- Self/Goal Directed higher than Well-Rounded, Moratorium, and Other Directed.
2- Disengaged lower than all others.

Table 10

Demographic Frequencies (Percentages) by Cluster

Variable	Level	Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged
Sex	Female	146 (80.2)	121 (72.9)	105 (74.5)	55 (62.5)	27 (73.0)
	Male	45 (19.8)	45 (27.1)	36 (25.5)	33 (37.5)	10 (27.0)
Enrollment	Full-Time	172 (94.5)	164 (98.8)	131 (92.9)	84 (95.5)	36 (97.3)
	Part-Time	9 (4.9)	2 (1.2)	10 (7.1)	3 (3.4)	1 (2.7)
Ethnicity	White	132 (72.5)	124 (74.7)	101 (71.6)	69 (78.4)	29 (78.4)
	Black	22 (12.1)	13 (7.8)	12 (8.5)	7 (8.0)	4 (10.8)
	South Asian	11 (6.0)	10 (6.0)	13 (9.2)	3 (3.4)	1 (2.7)
	East Asian	7 (3.8)	6 (3.6)	8 (5.7)	5 (5.7)	2 (5.4)
	Other	4 (2.2)	6 (3.6)	4 (2.8)	2 (2.3)	1 (2.7)
Academic Major	Psychology	31 (17.0)	21 (12.7)	24 (17.0)	15 (17.0)	5 (13.5)
	Arts/H. Science	84 (46.2)	91 (54.8)	57 (40.4)	38 (43.2)	19 (51.4)
	Science	42 (23.1)	28 (16.9)	39 (27.7)	21 (23.9)	8 (21.6)
	Bus., Ed., Law	12 (6.6)	12 (7.2)	11 (7.8)	3 (3.4)	1 (2.7)
	Undeclared	13 (7.1)	14 (8.4)	10 (7.1)	11 (12.5)	4 (10.8)
Choice Position of the University of Windsor	Only One	11 (6.0)	13 (7.8)	19 (13.5)	6 (6.8)	3 (8.1)
	1st Choice	90 (49.5)	93 (56.0)	79 (56.0)	44 (50.0)	17 (45.9)
	2nd Choice	53 (29.1)	42 (25.3)	26 (18.4)	26 (29.5)	8 (21.6)
	3rd Choice	22 (12.1)	12 (7.2)	8 (5.7)	8 (9.1)	8 (21.6)
	Below 3rd Choice	6 (3.3)	6 (3.6)	9 (6.4)	4 (4.5)	1 (2.7)
Living Arrangements	In Residence	91 (50.0)	78 (47.0)	37 (26.2)	49 (55.7)	12 (32.4)
	With Parents	70 (38.5)	67 (40.4)	70 (49.6)	28 (31.8)	19 (51.4)
	With Friends	15 (8.2)	14 (8.4)	22 (15.6)	4 (4.5)	4 (10.8)
	Alone	1 (0.5)	4 (2.4)	5 (3.5)	5 (5.7)	1 (2.7)
	Other Family	4 (2.2)	3 (1.8)	6 (4.3)	1 (1.1)	1 (2.7)

Table 10

Demographic Frequencies (Percentages) by Cluster (Cont'd)

Variable	Level	Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged
Location of Last High School Attended	Windsor	50 (27.5)	25 (15.1)	51 (36.2)	22 (25.0)	10 (27.0)
	Essex County	23 (12.6)	43 (25.9)	25 (17.7)	9 (10.2)	10 (27.0)
	SW Ontario	34 (18.7)	30 (18.1)	27 (19.1)	24 (27.3)	10 (27.0)
	Other Ontario	70 (38.5)	62 (37.3)	33 (23.4)	30 (34.1)	7 (18.9)
	Out of Province	4 (2.2)	6 (3.6)	5 (3.5)	3 (3.4)	0 (0.0)
Educational Goals	Bachelors	7 (3.8)	10 (6.0)	8 (5.7)	5 (5.7)	2 (5.4)
	Honours	75 (41.2)	85 (51.2)	50 (35.5)	41 (46.6)	15 (40.5)
	Masters	22 (12.1)	29 (17.5)	16 (11.3)	14 (15.9)	7 (18.9)
	Doctorate	28 (15.4)	13 (7.8)	25 (17.7)	6 (6.8)	3 (8.1)
	Prof. Degree	50 (27.5)	27 (16.3)	42 (29.8)	22 (25.0)	10 (27.0)
Father's Education	Not Finish HS	31 (17.0)	31 (18.7)	23 (16.3)	23 (26.1)	9 (24.3)
	HS Graduate	54 (29.7)	44 (26.5)	41 (29.1)	21 (23.9)	13 (35.1)
	College	36 (19.8)	44 (26.5)	29 (20.6)	19 (21.6)	7 (18.9)
	Bachelors	31 (17.0)	23 (13.9)	13 (9.2)	15 (17.0)	1 (2.7)
	Grad/Prof	29 (15.9)	21 (12.7)	31 (22.0)	10 (11.4)	7 (18.9)
Mother's Education	Not Finish HS	27 (14.8)	18 (10.8)	15 (10.6)	14 (15.9)	3 (8.1)
	HS Graduate	59 (32.4)	53 (31.9)	54 (38.3)	22 (25.0)	11 (29.7)
	College	60 (33.0)	61 (36.7)	33 (23.4)	25 (28.4)	14 (37.8)
	Bachelors	18 (9.9)	17 (10.2)	25 (17.7)	18 (20.5)	4 (10.8)
	Grad/Prof	16 (8.8)	16 (9.6)	13 (9.2)	9 (10.2)	5 (13.5)
Psychology Course Taken	1st Taken	172 (94.5)	160 (96.4)	126 (89.4)	87 (98.9)	33 (89.2)
	One Other	9 (4.9)	6 (3.6)	7 (5.0)	1 (1.1)	3 (8.1)
	3-5 Others	1 (0.5)	0 (0.0)	6 (4.3)	0 (0.0)	0 (0.0)
	More Than 5	0 (0.0)	0 (0.0)	2 (1.4)	0 (0.0)	1 (2.7)

Table 11

Percent Agreement on Choosing to Attend a University Scale by Cluster and In Total (Organized by Factors)

Reason	Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged
To improve my ability to express myself.	56.6 ++	33.7 --	43.3	45.5	21.6 --
To improve interpersonal skills.	57.7 ++	30.1 --	47.5	50.0	24.3
To develop my creativity.	59.3 ++	40.4	51.8	40.9	27.0
Improve problem-solving skills.	61.0 ++	30.7 --	58.2	48.9	35.1
To improve my self-confidence.	70.9 ++	44.6 --	56.0	73.9 ++	27.0 --
Develop greater personal insight.	81.9 ++	59.6	73.0	70.5	32.4 --
To open up more career opportunities for myself.	98.9	96.4	98.6	96.6	51.4 --
I wanted others to see me as an educated person.	72.0	69.3	74.5	76.1	24.3 --
For more time to plan my career.	46.2	57.8 ++	51.1	52.3	8.1 --
To improve my understanding.	88.5	82.5	92.9	78.4	37.8 --
To learn about new things.	97.3	92.2	90.1	87.5	67.6
To meet new people.	96.2	89.8	66.7 --	98.6	70.3
To participate in social activities.	71.4 ++	54.2	24.8 --	63.6	45.9
To become more self-sufficient.	94.0 ++	73.5	78.7	84.1	54.1
I felt pressure from friends to go.	1.6 --	3.6	0.7 --	22.7 ++	16.2 ++
Pressure from parents/family.	25.8	31.9	27.0	71.6 ++	24.3
To continue learning about my favourite subject.	75.8	75.9	84.4	58.0	45.9 --
A university education was required for my chosen career.	84.6	62.0 --	85.1	67.0	62.2
To achieve a higher standard of living.	81.9	67.5	87.9	85.2	37.8 --

Note: Items evaluated using Chi-square Analyses (df=4), significant $p<.001$ (--/++ indicates a result below/above expected value, i.e., standardized residuals larger than 1.9).

Table 12

Importance of Important University Characteristics When Deciding Where to Apply

Characteristic	Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged
Quality of Education [1]	4.41 (.64)	4.21 (.84)	4.31 (.79)	4.17 (.83)	3.65 (1.16)
Location	3.92 (1.12)	4.10 (1.09)	4.04 (1.10)	4.18 (.99)	3.70 (1.47)
Friendliness [2]	4.02 (.88)	3.72 (1.03)	3.63 (1.03)	3.91 (1.04)	2.95 (1.20)
Academic Flexibility [3]	3.93 (.70)	3.63 (.96)	3.64 (.95)	3.68 (.86)	3.38 (.98)
Cost	3.79 (1.16)	3.57 (1.24)	3.62 (1.21)	3.49 (1.17)	3.51 (1.37)
Reputation	3.70 (1.00)	3.58 (1.07)	3.63 (1.13)	3.72 (.93)	3.19 (1.15)
Academic Rigour [3]	3.62 (.74)	3.35 (.89)	3.31 (.80)	3.40 (.70)	3.11 (.97)
Student Involvement [4]	3.67 (.84)	3.32 (1.02)	3.06 (1.04)	3.52 (.95)	3.11 (1.10)
Selectivity	3.51 (.81)	3.29 (.89)	3.42 (.86)	3.35 (.76)	3.03 (1.04)
Size [5]	3.51 (1.05)	3.19 (1.12)	3.06 (1.19)	3.57 (.98)	3.05 (1.29)
Appearance [6]	3.32 (1.02)	3.01 (1.19)	2.95 (1.19)	3.31 (1.11)	2.73 (1.19)
Simplicity of Regulations	3.23 (.81)	3.01 (.97)	3.01 (.90)	3.28 (.88)	2.95 (1.08)
International Activities [3]	3.04 (.92)	2.69 (1.04)	2.57 (1.03)	2.70 (.97)	2.43 (1.01)

Note: Differences between clusters were evaluated using ANOVA's, significant results all showed p's<.001. Tukey's HSD post-hoc analyses p's<.05.

1- Disengaged lower than all others.

2- Well-Rounded higher than all but Other Directed, Disengaged lower than all others.

3- Well-Rounded higher than all but Other Directed.

4- Well-Rounded higher than all but Other Directed, Other Directed higher than Self/Goal Directed.

5- Self/Goal Directed higher than Well-Rounded and Other Directed.

6- Well-Rounded higher than Self/Goal Directed and Disengaged.

combined. The descriptions for the clusters in the present study used a different approach in that all clusters were evaluated separately. This strategy was seen as more useful for understanding each cluster, how it compared to the others, and how the findings may be used for recruitment purposes. Results comparing each cluster and all others combined are available in Appendix E.

Beyond significant differences, comparisons of the clusters also considered meaningful differences. These meaningful differences were either findings consistent with previous studies or differential patterns of results across the clusters. Specifically, highest or lowest proportions, or where the pattern of results within a cluster do not reflect the pattern found across other clusters. Significant differences are stated where appropriate but unless it is otherwise noted mentioned differences are meaningful rather than significant,.

Cluster 1: Well-Rounded.

Size and Description of Motivations

This cluster consisted of 182 students (29.6%) and was characterized by the positive influences from Socializing, Advancement and Skill Development as reasons for why they were attending university. The order in which the factors for attending were associated with this cluster was Socializing, M=.44, SD=.67, Skill Development, M=.33, SD=.81, Advancement, M=.22, SD=.83, Personal Development, M=.04, SD=.74, and Pressure, M=-.13, SD=.81.

The specific reasons for deciding to attend university that were most important to this group were "to open up more career opportunities" (98.9% agreement), "to learn

about new things" (97.3%), "to meet new people" (96.2%), and "to become more self-sufficient" (94.0%). Least important were pressure from parents (25.8% agreement), pressure from friends (1.6%), and "wanted others to see me as an educated person" (24.3%).

Meaningful Differences

Students in this cluster were higher on both the PATES, M=4.41, SD=.53, and SATES, M=4.44, SD=.50, than all other clusters. This would indicate that both the students and their parents had more positive attitudes toward the intrinsic value of education than students in any other cluster.

Demographically, students in the Well-Rounded cluster were more likely to be female than the other clusters (80.2% as compared to 72.9%, 74.5%, 62.5%, and 73.0% for clusters 2 through 5, respectively). It is also interesting to note that this cluster had a greater proportion of Black/Caribbean/African students (12.1%) than any other cluster (7.8%, 8.5%, 8.0%, and 10.8% for clusters 2 through 5, respectively).

This group showed greater interest in looking elsewhere for their education. They had the lowest proportion of students saying the University of Windsor was their only choice (6.0%), and second lowest proportion who had it as their first choice (49.5%). In addition to this, Location was ranked fourth for this group as an institutional variable important in deciding where to apply but was second for the sample as a whole.

These individuals were more likely to agree with each of the nineteen reasons as being important in deciding to attend university. As evident from Table 11, they were significantly more likely to agree with eight of the nineteen CAU items compared to the

other clusters and less likely to agree with only one, "I felt pressure from friends to go." Also, students in this cluster tended to rate all institutional characteristics as more important to them in deciding where to apply than students in other clusters. As evident from Table 12, this cluster was significantly higher than at least one other cluster on seven of the thirteen institutional characteristics.

Finally, this cluster was least likely of all the clusters to be interested only in obtaining a bachelor's degree (3.8%) as well as having the greatest proportion of its membership looking to attend some form of education (professional, 27.5%, or graduate school, 27.5%) beyond their undergraduate degrees.

Cluster 2: Moratorium.

Size and Description of Motivations

The second largest cluster consisted of 166 students, or 27.0% of the sample. Without any strong positive influences, this group is characterized by strong negative influences of Advancement and Skill Development as decidedly not being reasons for their attending university. The order of factors related to this cluster was Personal Development, M=.18, SD=.94, Socializing, M=.09, SD=.84, Pressure, M=-.21, SD=.91, Advancement, M=-.48, SD=1.00, and Skill Development, M=-.49, SD=1.15.

The reason most commonly cited by this cluster for why they decided to go to university were "to open up more career opportunities" (96.4% agreement). While there was a very high proportion of students endorsing this motive, this cluster had the second lowest proportion of students agreeing with it as a motive for their attendance. Other motives commonly agreed to by these students were "to learn about new things" (92.2%),

and "to meet new people" (89.8%). "Pressure from friends" was least likely (3.6%) to have been considered a reason for university attendance followed by "to improve interpersonal skills" (30.1%) and "to improve my problem solving skills" (30.7%).

Meaningful Differences

The Moratorium cluster was less likely than the others to be going to university part-time (1.2%) and to have attended high school in Windsor (15.1%) but were most likely to have gone to high school in Essex County (25.9%). Also, they tended to rank the University of Windsor fairly high as their university of choice. Almost two-thirds, 63.8%, of the students had the University of Windsor as their first or only choice while only 10.8% had it as third or lower. While not statistically different, this group rated Location relatively high as an institutional characteristic important to them when deciding where to apply.

With the highest proportion of students interested only in a Bachelor's degree (6.0%), this cluster was also significantly less likely to want to obtain a Professional degree (16.5%). Considering the education of their parents, this cluster came from relatively well educated families, with 53.1% of fathers and 56.5% of mothers having some form of post-secondary education (either college or university).

Relative to other clusters, this group was more likely to use university to have more time to plan their career (57.8%) and were less likely to agree that a university education was required for their chosen career (62.0%). Also, they tended to have lower rates of agreement with reasons relating to improving skills, competencies, or confidence.

Cluster 3: Self/Goal Directed.

Size and Description of Motivations

The third largest cluster could be described as self- or goal-directed due to the positive influences of Advancement, M=.42, SD=.84, Personal Development, M=.19, SD=.87, and Skill Development, M=.18, SD=.87, along with negative influences for Socializing, M=-.80, SD=1.07, and Pressure, M=-.34, SD=.79. There were 141 students in this cluster or 23.0% of the sample.

The reasons most likely to have been agreed to by this cluster about why they decided to go to university were: "to open up more career opportunities" (98.6%), "to increase understanding" (92.9%), and "to learn about new things" (90.1%). The reasons least likely to have been agreed to are: "pressure from parents/family" (27.0%), "to participate in social activities" (24.8%), and "pressure from friends to go" (0.7%).

Meaningful Differences

This cluster was significantly older than all other clusters except Disengaged, M=19.16, SD=.80 for the Moratorium cluster and M=18.90, SD=.66 for the Well-Rounded cluster, M=18.90, SD=.72 for the Moratorium cluster, M=18.80, SD=.66 for the Other Directed cluster, and M=19.14, SD=..75 for the Disengaged cluster; F(4, 607)=9.218, p<.001. They were also most likely to be part-time students (7.1%). There was a strong tendency for them to be from the surrounding area, 36.2%, having attended high school in Windsor and only 23.4% were from areas of the province outside Southwestern Ontario. With this group largely being local, it may not be surprising that they were most likely to have applied only to the University of Windsor (13.5% and least

likely to be living in a university residence (26.4%). In all but this and the final cluster, the ratio of students living with their parents versus living in residence favours the latter. For this cluster, the ratio is reversed, favouring the students living with their parents by almost two to one. Also, a high proportion of them are living with friends (15.6%).

This cluster is the most ethnically diverse, with the lowest proportion of white students (71.6%) and the highest proportions of East and South Asians (5.8% and 9.2%, respectively). Students in this cluster were more likely than those in the other clusters to not be in Arts or Human Sciences (42.6%) and had the lowest proportion of undeclared students (7.1%).

The students themselves have high educational aspirations, specifically in wanting to obtain a Ph.D. (17.7%). Their parents, however, show an interesting pattern. The fathers of these students were most likely, compared to other clusters, to have either graduate or professional degrees (22.0%) but their mothers were more likely than the other groups to not have continued their education past high school (48.9%).

Relative to the other clusters, this group were much less likely to be interested in the social aspects of university: "to meet new people," 66.7%, or "to participate in social activities," 24.8%. Also, pressure from friends was less likely to be agreed to as a reason for going to university by this group than any other (0.7%). Finally, these students were most likely to agree that a university education was required for their chosen career (85.1%). Though this percentage was not significantly different from the other clusters combined, the Well-Rounded cluster was the only other cluster that had as high a percent agreeing with that motive.

Cluster 4: Other Directed.

Size and Description of Motivations

The second smallest cluster was the Other Directed Cluster, representing 14.3% of the sample or 88 students. The strongest characteristic of this group was the almost overwhelming importance of Pressure, M=1.17, SD=.90, as the factor most related to why they were going to university. This reason was distantly followed by Socializing, M=.30, SD=.92, Skill Development, M=.09, SD=.75, Personal Development, M=.06, SD=.85, and Advancement M=.02, SD=.90. The importance of these last three in the decision to apply to university would likely have been negligible. The reasons most strongly related to their decision to participate in university were "to open up more career opportunities" (96.6%), "to meet new people" (88.6%), and "to learn about new things" (87.5%).

Meaningful Differences

Relative to other clusters, the students in this cluster were younger, M=18.99, SD=.73,, and more likely to be male (37.5%). Though not significantly different, they had a less positive attitude toward the value of a university education than any other cluster but the fifth one. They were also tied with cluster five for the highest proportion of whites (78.4%) and had the highest rate of undeclared students (12.5%). These students were most likely to be living in residence (56.3%) or alone (5.7%. These individuals were the cluster most likely to have a father (26.1%) or mother (15.9%) who had never completed high school.

Perhaps the most distinguishing characteristic of this cluster is the basis for their

university attendance. For this group, improving their self-confidence (73.9%), pressure from parents/family (71.6%), and pressure from friends (22.7%) were all much more related to their decision to attend university than they were for the other clusters.

Cluster 5: Disengaged.

Size and Description of Motivations

This last and smallest cluster consisted of only 37 individuals, or 6.0% of the sample. This cluster is unusual because they have virtually no positive scores on the reasons for university attendance factors. From most negative to most positive, the influences of why they went to university are Personal Development, M=-1.90, SD=1.23, Advancement, M=-.60, SD=1.39, Skill Development, M=-.32, SD=1.21, Socializing, M=-.20, SD=1.14, and Pressure, M=.05, SD=1.20.

The reasons most likely to have been agreed to by this group are "to meet new people" (70.3%), "to learn about new things" (67.6%), and that "a university education was required for my chosen career" (62.2%). The reasons least likely to have been agreed to were "pressure from friends" (16.2%) and "to have more time to plan my career" (8.1%).

Meaningful Differences

This interesting and small cluster is unique in several ways. Firstly, they tended to have relatively low ratings for both the Choosing to Attend University scale and the Important University Characteristics scale. They were also significantly lower than all other clusters on both the PATES, M=3.69, SD=1.14 for the Disengaged cluster versus M=4.41, SD=.53 for the Well-Rounded cluster, M=4.32, SD=.69 for the Moratorium

cluster, M=4.33, SD=.64 for the Self/Goal Directed cluster, and M=4.31, SD=.82 for the Other Directed cluster; F(4, 609)=4.06, p<.001, and the SATES, M=3.88, SD=.99 for the Disengaged cluster and M=4.44, SD=.50 for the Well-Rounded cluster, M=4.33, SD=.62 for the Moratorium cluster, M=4.38, SD=.62 for the Self/Goal Directed cluster, and M=4.41, SD=.53 for the Disengaged cluster; F(4, 609)=6.86, p<.001. This finding of relatively negative parental attitudes toward a university is confusing when one considers that they had the highest proportion of mothers who had attended either university or college (62.1%) and who had the greatest proportion of graduate or professional degrees (13.5%). The education level of the fathers of these students was split between the highest proportion of high school educated or less (59.4%) and a relatively high proportion of graduate or professional degrees (18.9%).

Though not significantly different, students in the Disengaged cluster tended to be older, white, full-time students who were relatively more likely to have undeclared majors (10.8%) or be in Arts or Human Sciences (64.9%). They were also least likely to state the University of Windsor as either their first or only choice of university (54.0%) and were most likely to be living with their parents (51.4%). Though Location was not significantly different for this cluster compared to the others, it did rank first for them and they also had the highest proportion of students from Windsor and Essex County (54.0%). Also, Friendliness had ranked third overall in importance but was eleventh for this cluster.

Relative to other clusters, these students were less likely to agree to eleven of the nineteen items of the Choosing to Attend University scale. The only one they were more

likely to agree to with was "felt pressure from friends to go" (16.2%).

Several possible explanations exist for this cluster. It could be that they wanted to go to university somewhere else but were only accepted to Windsor. It could also be that this cluster could not afford to go away to university elsewhere and so were forced to go to Windsor and live at home to save money. A third potential explanation could be that they were only motivated to attend Windsor because their friends or partners were going here. That is, they did not really want to attend university at all but also did not want to be the only one in their circle of friends who was not going. A final potential explanation is simply that this group is a diffuse group of individuals who do not cluster with any of the other groups and come together by default. All of these possibilities have support in the results but it may be that more students would need to be found for this cluster before a clear picture emerges.

Hot Buttons

"Hot buttons," or commonalities across clusters, were hypothesized to be Learning and Career as found in Barnetson (1997) and this hypothesis was confirmed. However, an additional "Hot Button" was Personal Development. These "Hot Buttons" were selected by identifying motives with 75% agreement across the majority of the clusters and then grouped together. This majority method was used because the Disengaged cluster did not have a single motive with more than 75% agreement. A list of these motives along with the percent agreement for each cluster is presented in Table 13. Also in Table 13 are the "Hot Buttons" for the institutional characteristics deemed important when deciding where to apply.

Table 13

"Hot Buttons" and Percent Agreement Across Clusters

Motive or Institutional Characteristic	Well-Rounded	Moratorium	Self/Goal Directed	Other Directed	Disengaged	All
To open up more career opportunities	98.9	96.4	98.6	96.6	51.4	94.9
To achieve a higher standard of living	91.9	67.5	87.9	85.2	37.8	77.2
To learn about new things	97.3	92.2	90.1	87.5	67.6	91.1
To increase understanding	88.5	82.5	92.9	78.4	37.8	83.4
Learning about favourite subject	75.8	75.9	84.4	58.0	45.9	73.5
To become more self-sufficient	94.0	73.5	78.7	84.1	54.1	81.1
To meet new people	96.2	89.8	66.7	88.6	70.3	85.0
Quality of Education	93.9	86.1	90.0	86.4	70.3	88.4
Location	72.5	78.9	77.3	84.1	73.0	77.0

Reasons for Deciding to Attend University.

In the present study, using a cut-off of 75% agreement, three hot buttons were identified. For the entire sample, in order of frequency of agreement, students came to university because they wanted to open up more career opportunities for themselves (94.9%), wanted to learn about new things (91.1%), wanted to meet new people (85.0%), wanted to increase their understanding (83.4%), wanted to become more self-sufficient (81.1%), wanted to achieve a higher standard of living (77.2%), and to continue to learn about a favourite subject (73.5%).

These reasons could be grouped into three categories: personal advancement or career (open more career opportunities and achieve a higher standard of living), learning (learn about new things, increase understanding, and continuing to learn about favourite subject), and personal development (meet new people and become more self-sufficient). It is noteworthy that these "hot buttons" relate closely to Houle's (1961) typology of adult education students. Two of the orientations, goal and learning, have matches in the "hot buttons" of personal advancement and learning, respectively.

Important Institutional Characteristics in Deciding Where to Apply.

Based on the same criteria, institutional characteristics commonly agreed to be important were Quality of Education (88.4%) and Location (77.0%), indicating aspects that students were highly likely to consider when deciding where they wanted to attend.

Academic Performance

Hypothesis 4 predicted that the marks of students whose reasons for attending suggest learning or goal-orientation will be higher than those students who are attending

due to pressure from others. This hypothesis was not supported. The results show that the students in the different clusters was not differentiated at all. The marks across all clusters were nearly identical. The range spanned from 67.47 (SD=10.49) in the Well-Rounded cluster to 68.74 (SD=10.75) in the Moratorium cluster, a difference of less than 1.3 percentage points. One possible explanation for this lack of differentiation is that the grades from one course only during the students' first academic term are not sufficient to show existing differences. If grades for each of the students' courses were available for an entire year, or even longer, then perhaps the expected differences would be found. Considering how the Pressure cluster was only at university because someone else thought they should be there, and how there was virtually no positive motivation at all for the Disengaged, it is these clusters who may be at greatest risk for dropping- or even flunking-out. The Pressure and Disengaged clusters, who lack reasons of their own for their university attendance, may not be able to maintain their current level of academic success over time. If students were tracked over time then perhaps the predicted differences would be found.

Relationship Between PATES, SATES, and Choosing to Attend University Subscales

The final hypothesis considered parent and student attitudes toward education. It was predicted that both parent and student beliefs in the intrinsic value of education, i.e., high PATES and SATES scores, would show positive relationships with Learning and Personal Development reasons for deciding to attend university and negative relationships with Career related reasons. It was also predicted that parent attitudes toward education would show a positive relationship with Pressure from Others while

student attitudes would be negatively related. These predictions were only partially supported.

The first step in the test of these predictions was the creation of a subscale for each of the reasons for attending university. These subscales were created by computing the mean item response for the items on each factor, resulting in five subscale scores, one for each factor: Skill Development, Personal Development, Socializing, Pressure, and Advancement. Reliabilities for each of the subscales were calculated and are presented in Table 14 along with the correlations between PATES, SATES, and each of the five subscales. All subscales except pressure had significant positive correlations with both the PATES and SATES. The reliabilities for both the Advancement and Pressure subscales are below the .70 level generally used for acceptable internal consistency. Due to the fact that the Learning related reasons did not load on a factor of their own, no evaluation of the relationship between PATES, SATES and learning was done. Also, the predicted Career factor was replaced by the observed factor of Advancement.

Parent and student beliefs in the intrinsic value of education did correlate positively with Personal Development as a reason for attending university, $r=.26$ and .37, respectively, $p<.01$. However, the correlation was also positive for Advancement (Career) reasons, $r=.23$ and .27, respectively, $p<.01$, rather than negative. Finally, the negative correlation between Pressure from Others and SATES was as predicted, $r=-.13$, $p<.01$, but the predicted positive correlation between Pressure from Others and PATES was not found, $r=.03$, $p>.05$.

While the hypothesis was only partially supported, it is evident from Table 14 that

Table 14

Means, Standard Deviations, and Correlations Between PATES, SATES, and Choosing to Attend University Subscales (Reliabilities Along Principle Axis)

Variable	1	2	3	4	5	6	7
1. Skill Development	.81						
2. Personal Development	.62**	.74					
3. Socializing	.58**	.62**	.72				
4. Pressure	-.08 *	-.09 *	-.10 *	.42			
5. Advancement	.20**	.31**	.19**	.03	.24		
6. PATES	.09 *	.26**	.15**	.03	.23**	.80	
7. SATES	.23**	.37**	.28**	-.13**	.27**	.52**	.76
Mean	3.40	3.94	3.97	2.14	4.05	4.31	4.34
Standard Deviation	0.75	0.59	0.66	0.91	0.84	0.71	0.62

* $p<.05$, ** $p<.01$.

some of the subscales are more closely related to parent and student attitudes than others. For instance, both the Parent and Student scales had the strongest relationship with the Personal Development subscale. This finding would suggest that students interested in attending university for reasons relating to that motive, along with their parents, feel that education is important beyond the extrinsic benefits it can give. Alternatively, students who are here due to pressure from others do not feel that way. The greater the belief in the intrinsic value of education, the less likely students are to be attending university due to pressure from others. Finally, the relationship between the PATES and SATES and the Skill Development subscale show that students who come to university for that reason feel very positive about the value of education in itself, but the ratings they give for their parents are not as strong.

The correlation between the SATES and PATES might also be important. It might be reasonable to expected that the two would be strongly related considering that parental attitudes are often indicative of their child's attitudes. The correlation between the two scales does, in fact, show a very strong positive relationship, $r=.52$, $p<.001$. This result suggests that students whose parents encourage or pressure them to attend for the intrinsic benefits university can offer may themselves feel that education is valuable beyond the external rewards often perceived as being related to a university education.

The relationships between the different clusters and the PATES and SATES scales were also considered. From Table 9 it may be seen that the cluster whose students showed the highest scores on both the PATES and SATES was the Well-Rounded cluster whose students were motivated by the Socializing, Advancement, and Skill Development

factors. Considering that this cluster was not interested in Personal Development as a reason for deciding to attend university, it is striking that the factor most positively related to the two Scales was Personal Development. These results may make sense, however, when it is considered that the Well-Rounded cluster is the one most closely resembling "traditional" well-motivated students. They are positively motivated by several factors and also tend to show a greater degree of motivation than the other clusters. Therefore, it would make sense that they, themselves, as well as their parents, would have strong positive attitudes about the value of education. Three other clusters, Moratorium, Self/Goal Directed, and Other Directed, had similarly high scores on the PATES and SATES, indicating no differentiation of these clusters on these scales. Disengaged was the only cluster significantly lower on both the PATES and SATES than each of the other clusters, $F(4,609)=8.48$ and 6.86, respectively, $ps<.001$, Tukey's post-hoc analyses all p's$<.01$. This cluster was comprised of students not positively motivated by any factor and who show less motivation than the others, showed less positive attitudes toward the value of education in and of itself.

CHAPTER IV

Conclusions

The reasons for attending university identified in the present study -- Skill Development, Personal Development, Socializing, Pressure, and Advancement -- are very similar to those found in previous research, with one exception. The Personal Development factor found in previous studies, generally consisting of skills, competencies, and self-esteem issues, was separated in the present study into the distinct factors of Skill Development and Personal Development, the latter factor also containing items similar to those previously found in Learning factors. This consistency of reasons strongly suggests that students in the United States, England, and Canada attend university for much the same reasons. Further, these reasons seem to have remained consistent over time, at least for the past quarter century.

The clusters found in the present study also demonstrate a similar consistency with past research. The Well-Rounded reflect the traditional notion of the well-motivated student attending for Skill Development, Socializing, and Advancement. The Moratorium cluster are likely to be those who have always expected to go to university but have yet to decide on a particular direction for their education, attending for Personal Development. The Self/Goal Directed cluster is specifically focussed on attaining a particular goal from their university attendance as evidenced by their Development and Advancement related reasons but a lack of interest in Socializing. The Other Directed cluster are almost exclusively attending because of pressure from others. Finally, the reasons for the Disengaged cluster's attendance are currently unknown. The cluster

predicted, but not found, was Learning, however, the individuals in the Well-Rounded and Self/Goal Directed clusters did include Learning as a reason for their university attendance. The hot buttons identified in the present study were Learning, Career, and Personal Development. As with the factors and clusters, these results are consistent with those found in previous studies over time and from different countries. Also, these hot buttons are well represented in the three largest clusters, namely, Well-Rounded, Moratorium, and Self/Goal Directed.

The results from the different methods of factor analysis, cluster analysis, and hot buttons all support the importance to students of learning, career, and development reasons for attending university. While these methods result in similar findings, each has its own benefits and drawbacks. It is important for university administrators to assess which of these methods constitute the most effective and efficient strategy. Factor analysis is the method most commonly found in the literature. However, it does not inform administrators about the actual students under investigation, as it groups variables, or in this case reasons for deciding to attend university, rather than people. Rather than creating a better understanding of students, which is presumably the goal of any university studying student recruitment and retention, it only creates a better understanding of the reasons students have for deciding to attend university.

Cluster analysis, on the other hand, allows investigators to create groups of students who present similar profiles of reasons for deciding to attend university. This technique can present pictures of actual students, and, once clusters are identified, group membership may be used to identify how clusters differ from one another. While this

approach does create a better understanding of the people under investigation, it is not without problems of its own. Cluster analysis is a time consuming and tedious analysis. In order to ensure that consistent and meaningful results are obtained, repeated measurement, a variety of clustering methods, and different techniques altogther should be used Considering the sophistication of the technique and its time consuming nature, it would be wise to consider whether the benefits of this strategy warrant the effort it takes to ensure reliable and valid results. If the costs of ensuring valid results are too great for the benefits, then other methods ought to be considered.

Barnetson (1997) used what he called "hot buttons" to identify specific reasons for attending university which are commonly found across the majority of students. By determining the reasons agreed to by 75% of the students, he was able to suggest a two pronged strategy of recruitment for the University of Calgary. The results of the current study would suggest a three pronged strategy of recruitment as most effective and relevant for the University of Windsor. In other words, when presenting itself to potential students, the university should highlight the benefits of career preparation and opportunities, learning, and personal development. By focussing on these benefits, the university would likely attract the most students and encourage them to attend the University of Windsor in order to obtain these benefits.

Compared to both factor analysis and cluster analysis, this is a very quick and easy strategy to use. It would be possible to collect and analyse data regularly to determine the current reasons why students are attending university with little effort on the part of administrators. Compared with the time consuming nature of a proper cluster

analysis, the difficulty of understanding the different clustering techniques, and the difficulty of interpreting cluster analysis results, hot buttons may be a very attractive strategy. All that is needed is the frequencies of the students' responses to the different reasons. Furthermore, with the consistent finding of strong career and learning related reasons in virtually every study to date, it may not even be necessary to collect these data. Administrators could assume that these two reasons, and only these two, will continue to be the ones which drive students to attend university.

In terms of recruitment of university students, this may be valid. However, considering the ease with which hot buttons may be obtained and the knowledge of what current students are saying, the regular collection and tracking of data regarding students' reasons for attending university could be a valuable piece of information for university administrators. Also, this would allow for other reasons to possibly emerge over time, increase the possibility of detecting trends toward either career or learning, and allow for quick modification of recruitment efforts to best attract new students.

For student recruitment, then, it would seem that the collection of data regarding the reasons students give for their university attendance and subsequent frequency analyses to generate hot buttons would be a beneficial strategy. This information, however, may not do much to help the university retain students once they begin their education at the University of Windsor. The match between student expectations and their experiences once they arrive at university has been found to be related to student retention (Tinto, 1987). The closer the match, the greater the chance students will remain at university until graduation. Without an understanding of student expectations, the

university would be less able to offer experiences to the student which match those expectations. Simply using hot buttons may not provide a picture of student reasons detailed enough for this match to be facilitated. Using techniques like cluster analysis could help to provide that detail. The reasons of the different clusters, being more specific than hot buttons, would provide a deeper and more detailed understanding of the students, allowing for greater specificity in efforts to avoid unnecessary attrition. Once the university has enticed students to attend university, it could then try to ensure that the specific goals and benefits sought by the students in the different clusters are satisfied. Through this satisfaction, the university would be able to hold on to the students it has and minimize the number who leave due to dissatisfaction with their educational experiences. While eliminating attrition altogether would not be realistic, or even entirely desirable, it may be possible to reduce attrition by ensuring that what the students want from their university experience is being met. This could be done by matching student reasons for attending university to what is being offered and thus facilitating the achievement of the students' objectives. This matching would necessarily be restricted and programs or departments may not be able to change as quickly as student goals might. However, by creating the best fit possible, both students and the university could benefit. Students would benefit by receiving the kind of experiences that they desire from their education and the university could increase their retention rate by satisfying the needs of those students.

Possibly the clusters who would be most difficult to satisfy in this way are those without specific personal goals, namely the Pressure and Disengaged clusters. The

students in the Pressure cluster are almost exclusively attending university because they feel pressure from others. By reinforcing the benefits to a university education, offering interesting and informative classes, and helping them to find their place at university, they could be inspired into a program or given some direction. If, once they arrive at university, they are able to develop goals for themselves, they might be more likely to continue their university participation through graduation. The Disengaged cluster, however, may be more difficult to retain. Why this group has decided to attend university is still unknown and more investigation would be required before their reasons could be discerned. What happens to these students, as well as those in the Pressure cluster, as they progress through their education would be interesting to know. Future studies need to be conducted to track these individuals and see if, when, and why they leave. It could be that the Pressure and Disengaged clusters show the highest attrition rates. Also, by following the progression of students through their education, differences may later be revealed with regard to academic success.

A compromise between the ease of the hot buttons approach and the benefits of cluster analysis could be a program for the collection of different data in different years. The present study requested academic majors using the following options: Psychology, Other Arts/Human Sciences, Sciences, Business/Education/Law, and Undeclared. No differences across the clusters were found which may be due to the fact that these options were not very specific. Future investigations could provide participants with a more appropriate and detailed selection of academic majors, so that any differences between the clusters could be revealed. Also, surveying a more diverse set of academic areas, not

just psychology, would be beneficial. Nearly two-thirds of the students (62.7%) stated their major as Arts or Human Sciences. It is possible that including more students from other academic areas would reveal different clusters. Considering the similarity between the present results and those from previous studies, however, it may be more likely that the proportion of students in each cluster would be different if the sample was more representative of the university population. Particularly, by specifically surveying the areas of Engineering, Business, and the sciences, in addition to Introduction to Psychology classes, a more complete picture could be revealed.

Future research could include surveying each entering class about their reasons for attending university and the data could be analysed using the hot buttons approach. This data would be easy to collect, with students completing a questionnaire that would only take a few minutes, along with their registration, on their reasons for attending. Also, once every five years, entering students could be given a more detailed survey which could be analysed using the cluster analysis approach. This particular group of students could then be followed through their university careers to see who stays, who leaves and why, and periodically be asked to provide information regarding their satisfaction with their experiences at university. If the clusters found in the present study were confirmed, and future research finds differences between the clusters with respect to attrition or academic performance, strategies could then be developed to help students who may be at risk. This could help to maximize student achievement and minimize unnecessary attrition.

The benefits of this approach would include the easy and continuous tracking of

trends for why students decide to attend university as well as a periodic closer look at the students' reasons for attending. Also, by following student progression through their programs, it could be discovered what they are looking for from their education, how that could change as they progress, and why students may leave university. This approach would not be too cumbersome for the university yet would provide a deep understanding of the students the university is trying to serve.

The reasons students have for attending university could inform the institution about why their students are willing to spend their money and invest their time into their education. By knowing these reasons, the universities can help to ensure that what they are offering meets the needs of the students and may help them to direct their recruitment efforts. Ensuring that the university is offering a quality service and by matching what is being offered by the university to what is desired by the students could help improve student retention as well. Having satisfied graduates who feel their time and money were well spent on their education is also a benefit to the university. Without the knowledge of what students are seeking through their education, universities run the risk of offering a service that leaves students feeling as though their needs were not met, regardless of the quality of education being offered. From a student's perspective, being provided with the opportunity to voice their reasons for attending university, and feeling that their voices were heard, may help them feel good about their education, better about how prepared they are to enter the next stage of their lives, and feel that they got what they wanted from their education.

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APPENDIX A

CHURCH AND GILLINGHAM (1988) FACTOR ANALYSIS RESULTS

Factor Name (% variance)	Reason for Attending	Factor Loading
1. Personal Skill Development (21.2%)	To develop skills in interpersonal situations.	0.89
	To develop skills in expression and communication.	0.87
	To develop skills in intellectual and problem solving.	0.84
	To develop competencies and skills in creativity.	0.79
	To develop skills in leadership and organization.	0.78
	To develop greater personal insight.	0.50
2. Personal Advancement (11.5%)	To achieve an improved financial standard of living.	0.77
	To open up a much larger number of career opportunities.	0.77
	University education required for, or beneficial to, chosen career	0.63
	To obtain a degree.	0.56
3. Social Pressure (10.4%)	Not keen to go but felt pressure to go to university.	0.71
	To get away from home.	0.63
	Wanted others to see me as an educated person.	0.57
4. Learning and Discovering (8.3%)	Wanted more time to formulate interests and to plan for a career.	0.73
	To develop greater personal insight.	0.55
	Simply enjoy learning about new things.	0.55
	To meet new and interesting individuals.	0.47
5. Intellectual Development (7.8%)	To continue studying my favourite subject.	0.84
	To increase my knowledge and understanding.	0.59
	Simply enjoy learning about new things.	0.37

APPENDIX B

BARNETSON (1997) FACTOR ANALYSIS RESULTS

Factor Name (% variance)	Reason for Attending	Factor Loading
1. Connection (21.5%)	Wanted to participate in social activities.	0.83
	Wanted to expand social circle.	0.79
	Wanted to meet new people.	0.69
	Wanted to become part of a new community.	0.62
	Wanted to participate in sports.	0.53
	Wanted to have fun.	-0.73
	Wanted to participate in recreational activities.	-0.79
2. Self-Awareness (12.4%)	Wanted to develop creativity.	0.71
	Wanted to improve self-confidence.	0.67
	Wanted to improve problem-solving skills.	0.65
	Wanted to learn about new things.	0.65
	Wanted to develop greater personal insight.	0.59
	Wanting more time to plan career.	0.45
	Wanted to improve interpersonal skills.	-0.47
	Wanted to improve ability to express oneself.	-0.66
	Wanted to increase understanding.	-0.72
3. Advancement (8.5%)	Wanted to achieve a higher standard of living.	0.69
	Wanted to obtain a degree.	0.48
	Wanted to become self-motivated.	-0.43
	Wanted to open up more career opportunities.	-0.47
	University education required for a job.	-0.51
	Wanted to be seen as educated.	-0.71
4. Learning (6.5%)	Felt pressure from family.	0.61
	Wanted to study favourite things.	0.52
	Wanted to learn about new things.	0.51
	Wanted to more time to plan career.	-0.51
	Wanted to obtain degree.	-0.57
5. Relationships (5.4%)	Felt pressure from friends.	0.73
	Wanted to improve interpersonal skills.	0.50
	Wanted to participate in sports.	-0.51

APPENDIX C

QUESTIONNAIRE MEASURES

Psychology Department Participant Pool Demographic Items

Age (entered in the 'Date' area of the computer scan sheet)

1. Are you?
   - **A)** female
   - **B)** male

2. Your Major is
   - **A)** Psychology
   - **B)** in other Arts or Human Science (e.g., Sociology, English, Human Kinetics)
   - **C)** in Science (e.g., Nursing, Biology, Economics)
   - **D)** in Business, Education, or Law
   - **E)** undeclared

3. Your year in university
   - **A)** first
   - **B)** second
   - **C)** third
   - **D)** fourth
   - **E)** other

4. How many psychology courses have you taken so far (including this course)?
   - **A)** this is my first psychology course
   - **B)** I have taken one other psych course
   - **C)** I have taken between 3 other psych courses
   - **D)** I have taken more than 5 psychology courses

5. Are you?
   - **A)** full time
   - **B)** part time

6. What is your ethnic group membership?
   - **A)** White/European/Caucasian
   - **B)** Black/African/Carribean
   - **C)** East Asian/Chinese/Japanese
   - **D)** South Asian/Indian/Pakistani
   - **E)** Other (for example, First Nations)

DEMOGRAPHIC & DESCRIPTIVE INFORMATION

1. Where was the last high school you attended?
   A) in Windsor
   B) in Essex County but outside Windsor
   C) in Southwestern Ontario but another county
   D) in another area of Ontario
   E) out of province

2. What best describes your current living arrangements?
   A) in university residence
   B) with other students or friends off-campus
   C) alone, off campus
   D) with parents
   E) with other family

3. What is the highest educational goal you expect to obtain within the next ten years?
   A) Bachelor of Arts or Science
   B) Honours B.A. or B.Sc.
   C) MA or MSc
   D) Ph.D.
   E) Professional Degree (law/medical/dental degree)

4. What is your father's highest level of education?
   A) did not finish High School
   B) High School graduate
   C) College Diploma
   D) B.A./B.Sc.
   E) Graduate or Professional Degree

5. What is your mother's highest level of education?
   A) did not finish High School
   B) High School graduate
   C) College Diploma
   D) B.A./B.Sc.
   E) Graduate or Professional Degree

6. Was the university of Windsor:
   A) your 1st choice of university to attend
   B) your 2nd choice of university to attend
   C) your 3rd choice of university to attend
   D) below your 3rd choice of university to attend
   E) the only university to which you applied

Choosing To Attend A University

Think back to when you were choosing whether or not to attend university. Please indicate how much each factor influenced that decision using the following scale:

A = Strongly Disagree
B = Disagree
C = Not sure/Neutral
D = Agree
E = Strongly Agree

1. I wanted to improve my interpersonal skills.
2. I wanted to achieve a higher standard of living.
3. I felt pressure from my friends to go.
4. I wanted to improve my ability to express myself.
5. I wanted to open up more career opportunities for myself.
6. I wanted more time to plan my career.
7. I wanted to increase my understanding
8. I felt pressure from my parents/family to go.
9. A university education was required for my chosen career.
10. I wanted to improve my problem-solving skills.
11. I wanted to participate in social activities.
12. I wanted to develop my creativity.
13. I wanted to continue learning about my favourite subject.
14. I wanted others to see me as an educated person.
15. I wanted to develop greater personal insight.
16. I wanted to learn about new things.
17. I wanted to meet new people.
18. I wanted to become more self-sufficient.
19. I wanted to improve my self-confidence.

Important University Characteristics

When you were deciding which universities to apply to, how much do you agree that the following characteristics were important in your choice? Use the following scale:

A = Strongly Disagree
B = Disagree
C = Not sure/Neutral
D = Agree
E = Strongly Agree

1. Appearance:
2. Friendliness:
3. International Activities:
4. Student Involvement:
5. Size:
6. Academic Flexibility:
7. Simplicity of Regulations:
8. Reputation:
9. Quality of Education:
10. Cost:
11. Academic Rigour:
12. Selectivity:
13. Location:

Parental Attitudes Toward Education

The following questions ask about your parents' attitudes regarding the importance of education. Please answer with respect to what they feel about your education and education in general using the following scale:

A = Strongly Disagree
B = Disagree
C = Not sure/Neutral
D = Agree
E = Strongly Agree

1. My parents stressed to me the importance of education from an early age.
2. My parents regularly showed interest in my school work and classes.
3. My parents told me that education was important for being successful in life.
4. My parents stressed the importance of education for its own sake apart from other benefits it may give.
5. My parents supported my decision to attend university.

Personal Attitudes Toward Education

The following questions ask about your own attitudes regarding the importance of education. Please answer with respect to what you feel about your education and education in general, using the following scale:

A = Strongly Disagree
B = Disagree
C = Not sure/Neutral
D = Agree
E = Strongly Agree

1. School was important to me from an early age.
2. I am willing to work hard to do well in school.
3. I think education is important for being successful in life.
4. Education is important for its own sake apart from other benefits it may give.
5. I always wanted to attend some form of higher education.

APPENDIX D

PERCENT AGREEMENT WITH CHOOSING TO ATTEND UNIVERSITY

SCALE ITEMS FOR THE ENTIRE SAMPLE AND BY CLUSTER

Cluster	Reason for Deciding to Attend University	Percent Agreement
All Clusters	To open up more career opportunities.	95.0
	To learn about new things.	90.1
	To meet new people.	85.0
	To increase my understanding.	83.4
	To become more self-sufficient.	81.1
	To achieve a higher standard of living.	77.2
	University education required for chosen career.	74.8
	To continue learning about my favourite subject.	73.5
	I wanted others to see me as an educated person.	69.5
	To develop greater personal insight.	69.2
	To improve my self-confidence.	58.1
	To participate in social activities.	53.4
	To improve my problem-solving skills.	48.9
	To develop my creativity.	47.9
	To have more time to plan my career.	46.7
	To improve my interpersonal skills.	44.8
	To improve my ability to express myself.	43.6
	Pressure from parents/family.	34.2
	Pressure from friends to go.	5.9
Well-Rounded	To open up more career opportunities.	98.9
	To learn about new things.	97.3
	To meet new people.	96.2
	To become more self-sufficient.	94.0
	To increase my understanding.	88.5
	University education required for chosen career.	84.6
	To achieve a higher standard of living.	81.9
	To develop greater personal insight.	81.9
	To continue learning about my favourite subject.	75.8
	To participate in social activities.	71.4
	To improve my self-confidence.	70.9
	To improve my problem-solving skills.	61.0
	To develop my creativity.	59.3
	To improve my interpersonal skills.	57.7
	To improve my ability to express myself.	56.6
	To have more time to plan my career.	46.2
	Pressure from parents/family.	25.8
	I wanted others to see me as an educated person.	24.3
	Pressure from friends to go.	1.6

Cluster	Reason for Deciding to Attend University	Percent Agreement
Moratorium	To open up more career opportunities.	96.4
	To learn about new things.	92.2
	To meet new people.	89.8
	To increase my understanding.	82.5
	To continue learning about my favourite subject.	75.9
	To become more self-sufficient.	73.5
	I wanted others to see me as an educated person.	69.3
	To achieve a higher standard of living.	67.5
	University education required for chosen career.	62.0
	To develop greater personal insight.	59.6
	To have more time to plan my career.	57.8
	To participate in social activities.	54.2
	To improve my self-confidence.	44.6
	To develop my creativity.	40.4
	To improve my ability to express myself.	33.7
	Pressure from parents/family.	31.9
	To improve my problem-solving skills.	30.7
	To improve my interpersonal skills.	30.1
	Pressure from friends to go.	3.6
Self/Goal Directed	To open up more career opportunities.	98.6
	To increase my understanding.	92.9
	To learn about new things.	90.1
	To achieve a higher standard of living.	87.9
	University education required for chosen career.	85.1
	To continue learning about my favourite subject.	84.4
	To become more self-sufficient.	78.7
	I wanted others to see me as an educated person.	74.5
	To develop greater personal insight.	73.0
	To meet new people.	66.7
	To improve my problem-solving skills.	58.2
	To improve my self-confidence.	56.0
	To develop my creativity.	51.8
	To improve my interpersonal skills.	47.5
	To improve my ability to express myself.	43.3
	To have more time to plan my career.	51.1
	Pressure from parents/family.	27.0
	To participate in social activities.	24.8
	Pressure from friends to go.	0.7

Cluster	Reason for Deciding to Attend University	Percent Agreement
Other Directed	To open up more career opportunities.	96.6
	To meet new people.	88.6
	To learn about new things.	87.5
	To achieve a higher standard of living.	85.2
	To become more self-sufficient.	84.1
	To increase my understanding.	78.4
	I wanted others to see me as an educated person.	76.1
	To improve my self-confidence.	73.9
	Pressure from parents/family.	71.6
	To develop greater personal insight.	70.5
	University education required for chosen career.	67.0
	To participate in social activities.	63.6
	To continue learning about my favourite subject.	58.0
	To have more time to plan my career.	52.3
	To improve my interpersonal skills.	50.0
	To improve my problem-solving skills.	48.9
	To improve my ability to express myself.	45.5
	To develop my creativity.	40.9
	Pressure from friends to go.	22.7
Disengaged	To meet new people.	70.3
	To learn about new things.	67.6
	University education required for chosen career.	62.2
	To become more self-sufficient.	54.1
	To open up more career opportunities.	51.4
	To continue learning about my favourite subject.	45.9
	To participate in social activities.	45.9
	To increase my understanding.	37.8
	To achieve a higher standard of living.	37.8
	To improve my problem-solving skills.	35.1
	To develop greater personal insight.	32.4
	To improve my self-confidence.	27.0
	To develop my creativity.	27.0
	To improve my interpersonal skills.	24.3
	Pressure from parents/family.	24.3
	I wanted others to see me as an educated person.	24.3
	To improve my ability to express myself.	21.6
	Pressure from friends to go.	16.2
	To have more time to plan my career.	8.1

APPENDIX E

SIGNIFICANT DIFFERENCES BETWEEN EACH CLUSTER AND ALL OTHERS COMBINED

Significant Differences Between Well-Rounded and Other Clusters

Variable	Well-Rounded	Other Clusters
Parent Attitudes Toward Education	4.41 (.53)	4.27 (.77)
Student Attitudes Toward Education	4.44 (.50)	4.30 (.66)
Quality of Education	4.41 (.64)	4.19 (.87)
Friendliness	4.02 (.88)	3.66 (1.07)
Academic Flexibility	3.93 (.70)	3.62 (.94)
Cost	3.79 (1.16)	3.57 (1.22)
Student Involvement	3.67 (.84)	3.26 (1.03)
Academic Rigour	3.62 (.74)	3.33 (.83)
Size	3.51 (1.05)	3.21 (1.14)
Selectivity	3.51 (.81)	3.32 (.88)
Appearance	3.32 (1.02)	3.03 (1.18)
Simplicity of Regulations	3.23 (.81)	3.06 (.94)
International Activities	3.04 (.92)	2.63 (1.02)
Sex Female	80.2%	71.3%
To become more self-sufficient.	94.0%	75.7%
To develop greater personal insight.	81.9%	63.9%
To participate in social activities.	71.4%	46.8%
To improve my self-confidence.	70.9%	52.8%
To improve my problem-solving skills.	61.0%	43.8%
To develop my creativity.	59.3%	43.1%
To improve interpersonal skills.	57.7%	39.4%
To improve my ability to express myself.	56.6%	38.2%
Pressure from parents/family.	25.8%	37.7%
I felt pressure from friends to go.	1.6%	7.6%

Note: N=182 for Well-Rounded cluster, 431 others. Differences between means were evaluated using t-tests, $p<.05$. Percentages were evaluated using Chi-square, $p<.05$.

Significant Differences Between Moratorium and Other Clusters

Variable		Moratorium	Other Clusters
Enrollment Status	Full-Time	98.8%	94.8%
Location of Last High School	In Essex County	25.9%	15.0%
	In Windsor	15.1%	29.8%
Educational Goals	Prof. Degree	16.5%	27.7%
For more time to plan my career.		57.8%	42.6%
University education required for chosen career		62.0%	79.5%
To improve my self-confidence.		44.6%	63.2%
To develop my creativity.		40.4%	50.7%
To improve my ability to express myself		33.7%	47.3%
To improve my problem-solving skills.		30.7%	55.6%
To improve interpersonal skills.		30.1%	50.2%

Note: N=166 for Moratorium cluster, 448 for all others. Differences between percentages were evaluated using Chi-square analyses, $p<.05$.

Significant Differences Between Self/Goal Directed and Other Clusters

Variable		Self/Goal Directed	Other Clusters
Age		19.16 (.80)	18.90 (.69)
Student Involvement		3.06 (1.04)	3.48 (.96)
Size		3.06 (1.19)	3.37 (1.09)
International Activities		2.57 (1.03)	2.81 (1.00)
Enrollment Status	Part-time	7.1%	3.2%
Educational Goals	Ph.D.	17.7%	10.6%
University of Windsor Choice	Only One	13.5%	7.0%
Location of Last High School	In Windsor	36.2%	23.4%
	Other Ontario	23.4%	35.8%
Living Arrangements	With Friends	15.7%	7.9%
	In Residence	26.4%	48.8%
Psychology Courses Taken	3-5	4.3%	0.2%
To improve my problem-solving skills.		58.2%	46.1%
To meet new people.		66.7%	90.5%
Pressure from parents/family.		27.0%	36.4%
To participate in social activities.		24.8%	61.9%
I felt pressure from friends to go.		0.7%	7.4%

Note: N=141 for Self/Goal Directed cluster, 473 for all others. Differences between means were evaluated using t-tests, $p<.05$. Percentages were evaluated using Chi-square analyses, $p<.05$.

Significant Differences Between Other Directed and Other Clusters

Variable		Other Directed	Other Clusters
Age		18.80 (.66)	18.99 (.73)
Size		3.57 (.98)	3.26 (1.14)
Sex	Male	37.5%	24.1%
Living Arrangements	In Residence	56.3%	41.6%
	Alone	5.7%	2.1%
To improve my self-confidence.		73.9%	55.5%
Pressure from parents/family.		71.6%	27.9%
I felt pressure from friends to go.		22.7%	3.0%
To continue learning about my favourite subject.		58.0%	76.0%

Note: N=88 for Other Directed cluster, 526 for all others. Differences between means were evaluated using t-tests, $p<.05$. Percentages were evaluated using Chi-square analyses, $p<.05$.

Significant Differences Between Disengaged Cluster and All Others

Variable	Disengaged	Other Clusters
Parent Attitudes Toward Education	3.69 (1.14)	4.35 (.65)
Student Attitudes Toward Education	3.88 (.99)	4.37 (.58)
Quality of Education	3.65 (1.16)	4.29 (.77)
Academic Flexibility	3.38 (.98)	3.74 (.88)
Reputation	3.19 (1.15)	3.65 (1.04)
Academic Rigour	3.11 (.97)	3.43 (.80)
Selectivity	3.03 (1.04)	3.40 (.84)
Friendliness	2.95 (1.20)	3.82 (1.00)
Appearance	2.73 (1.19)	3.14 (1.14)
International Activities	2.43 (1.01)	2.77 (1.01)
I felt pressure from friends to go.	16.2%	5.2%
To open up more career opportunities for myself.	51.4%	97.7%
To continue learning about my favourite subject.	45.9%	75.2%
To increase my understanding.	37.8%	86.3%
To achieve a higher standard of living.	37.8%	79.7%
To develop greater personal insight.	32.4%	71.6%
To improve my self-confidence.	27.0%	60.1%
To develop my creativity.	27.0%	49.2%
I wanted others to see me as an educated person.	24.3%	72.4%
To improve my interpersonal skills.	24.3%	46.1%
To improve my ability to express myself.	21.6%	45.1%
For more time to plan my career.	8.1%	49.2%

Note: N=37 for Disengaged cluster, 577 for all others. Differences between means were evaluated using t-tests, $p<.05$. Percentages were evaluated using Chi-square analyses, $p<.05$.

VITA AUCTORIS

Ryan E. Stanga was born on August 23, 1973 in Etobicoke, Ontario, moving shortly thereafter to London, Ontario. He graduated from Regina Mundi College in 1992 and from the University of Western Ontario with his Bachelor of Arts (Hons.) in Psychology in 1996. Since 1997, he has been enrolled in the Doctoral Program in Applied Social Psychology at the University of Windsor.