ABORIGINAL TRANSITIONS:
Undergraduate to Graduate

PHASE I
FINAL REPORT

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AT U2G

The Thunderbird Talking Stick was designed and carved by Musqueam artist Joe Becker

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Phase I Final Report

Contents

Appendices (Not published)

  Appendix A: Institutional Scan

  Appendix B: Case Studies

  Appendix C: Secondary Data Analysis

  Appendix D: Survey, Focus Group, and Interview Consent Forms

  Appendix E: Focus and Interview Questions

  Appendix F: Aboriginal Graduate Student Survey

  Appendix G: Recruitment Posters

  Appendix H: Undergraduate Student Questionnaire

  Appendix I: Ministry of Education Research Agreement

  Appendix J: Advisory Committee Representation

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1 EXECUTIVE SUMMARY

Introduction

Aboriginal Transitions: Undergraduate to Graduate Studies (AT:U2G) focused on the undergraduate-to-graduate transition theme by 1) conducting a rigorous examination of graduate program/mentoring models in BC, across Canada, and internationally, with particular attention to those that serve Aboriginal graduate students, 2) conducting a critical analysis of existing post-secondary student data and literature on the topic, and 3) conducting a comprehensive research project, which includes individual interviews, focus groups, and surveys, the outcomes of which provided a new, evidence-based and provincially transportable model for U2G educational transition.

An existing province-wide Aboriginal graduate initiative served as a focal point of examination: Supporting Aboriginal Graduate Enhancement (SAGE). Established by the Faculty of Education at UBC in 2005, SAGE is BC's first provincially coordinated, inter-institutional, and multi-disciplinary peer support and mentoring framework designed to increase the numbers of Aboriginal graduate students in BC. Located in four regions of BC (Vancouver, Vancouver Island, Okanagan, and Prince George), SAGE facilitates graduate study access, recruitment, and retention, and offers cultural, emotional, intellectual, and social supports for prospective Aboriginal graduate students.

> What are the critical components that would comprise a successful transition framework for Aboriginal learners?

Research Questions

AT: U2G's guiding research questions were:

1. What factors facilitate and hinder Aboriginal undergraduates' access and admission to graduate programs?
2. How can the facilitating factors be strengthened and the hindering factors mitigated?
3. What are the critical components (e.g. governance structures, human and financial resources, communications structures, institutional proximity, values, culture and Indigenous knowledge, etc.) that would comprise a successful transition framework for Aboriginal learners? Why are they important? How can they be incorporated?

Methodology

The research team approached the study of Aboriginal undergraduate to graduate student transitions using multiple research methods that, in addition to an extensive literature review, included administrator interviews; focus groups; a survey of graduate students; a survey of undergraduate students; secondary data analysis; and a case study based environmental scan. Behavior Research Ethics Board approval was granted by the University of British Columbia (principal investigator) and Simon Fraser University (co-investigator).

A wholistic (circular) Indigenous framework informed all aspects of the research project. Using this framework, researchers explored Aboriginal student transitions from the perspective of emotional, intellectual, spiritual, and physical factors that facilitate and hinder Aboriginal undergraduate transition to graduate study. The conceptual framework was inclusive of individual,

family, and community aspects that reflect the interrelationships between structural, individual, and social and cultural factors associated with individual aspirations, intentions, and actions. Kirkness and Barnhardt's (1991) framework of respect, relevance, responsibility, and reciprocity, commonly referred to as the 4Rs, provided an additional conceptual framework that complemented the wholistic Indigenous circle. The 4Rs speak to Respect for students' Indigeneity, culturally Relevant learning programs and student services, institutional Responsibility to facilitate access and retention of Indigenous learners, and fostering Reciprocal teaching and learning relationships all of which provided a philosophical foundation for this study.

A review of the literature began with a focus on studies related to postsecondary education in British Columbia and Canada, and was later expanded to studies undertaken in North America, particularly the United States, and internationally. A dearth of research specifically on Indigenous learners in all jurisdictions meant that the search was expanded to include minority groups such as African American and Latino/Latina peoples. Topics covered in the literature review included theories of student retention, barriers to and success factors for undergraduate retention and attrition; recruitment into graduate school; and transition and adjustment to graduate school.

Focus groups were conducted with SAGE members at universities from each of the four regional sites across British Columbia. A total of six focus groups involving 35 students were conducted. Focus group transcriptions were analyzed for common themes across the four domains of the wholistic and 4Rs framework. Where possible, direct quotations are used in this report, but in order to safeguard the confidentiality and anonymity of respondents, no names are used and any details that may identify an individual have been excluded. Focus groups were conducted at five universities: The University of British Columbia-Vancouver, University of British Columbia-Okanagan, Simon Fraser University, University of Victoria, and University of Northern British Columbia.

Focus group data were used to develop a questionnaire that was then administered to Aboriginal graduate students in British Columbia. The survey was administered via the World Wide Web. A total of 60 students completed and submitted usable questionnaires, representing a response rate of approximately 30%. Because the size of the Aboriginal graduate student population is unknown, the response rate is an estimate only; this estimate is based on official university enrolment figures, SAGE participation numbers, and knowledge of university based Aboriginal community members.

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Formal and informal interviews were conducted with six administrators of Indigenous programs in universities in BC, Manitoba, and New Zealand. The interviews focused on how these programs addressed student transitions from undergraduate to graduate studies and the barriers and successes regarding student recruitment, admissions, and retention that have been observed.

To help place this study within the local provincial context, a secondary analysis of available administrative student data was undertaken. The aim was to identify various pathways into graduate education. A life-course perspective recognizing that each educational transition is related to antecedent factors was adopted. For this reason, it was proposed to incorporate an analysis of K-12 and adult education pathways into postsecondary education prior to examining the undergraduate to graduate studies transition stage. Due to limitations of the secondary data, a series of questions addressing student pathways into graduate study were added to the graduate student survey.

An environmental scan of existing graduate programs across Canada and in selected sites in the United States was undertaken. Programs that offered some type of transition support were then explored in more detail in order to identify and learn from strengths and potential gaps in existing programs.

The final data collection phase of the study involved feedback from Aboriginal undergraduate students. Data from the other components of this study, particularly from the graduate student survey and focus groups,

were used in the development of an undergraduate student questionnaire. This questionnaire was piloted with Aboriginal undergraduate students and it was administered and analyzed by the end of May 2009. There were a total of 38 responses from undergraduate students. 18 undergraduate students also participated in either focus groups or one-on-one interviews.

Organizational Partners

Throughout the research project, an eleven member Advisory Committee offered feedback and advice on data collection, methodology, data interpretation, knowledge mobilization, and framework development. These members were mainly from the University of British Columbia and were faculty members, student service coordinators, department head, and graduate students.

SAGE (Supporting Aboriginal Graduate Enhancement) was a research partner. Even though SAGE is administered through the UBC Faculty of Education, it is a province-wide initiative that is student-run.

The following universities gave ethical approval for the study to be conducted at their sites: University of British Columbia (Vancouver and Okanagan campuses); Simon Fraser University (and a research partner); University of Victoria; and the University of Northern British Columbia.

Key Results

The discussion of findings was organized around these four major phases of graduate education that had relevance to transitioning from undergraduate to graduate study: the decision to pursue graduate study; access and admission experiences; first year graduate experiences; and completion of a graduate (master's) program. The following major themes emerged from an examination of helping and hindering factors experienced by many of the study participants:

- Mentoring and supportive relationships make a difference
- Individual responsibility to plan and to prepare for graduate school makes a difference
- People make institutions user and Aboriginal friendly, and relevant

- Depersonalized and colonial institutional barriers still exist
- Navigating different learning expectations in graduate studies is challenging
- Navigating racism is a critical challenge
- Working with and providing communication about university student services are important
- Sharing Aboriginal Knowledge and Aboriginal methodology for graduate education is necessary

Fellow undergraduate students and graduate students were very influential in helping individuals make the decision to pursue graduate studies. Faculty members who encouraged and assisted undergraduate students with applications to graduate programs were the second most important influence. Relationships in the forms of peer support and mentoring from graduate students and faculty were key success indicators in this initial phase of thinking about and making a decision to pursue graduate education. Those who took the initiative and found both graduate information and people to talk to also experienced more success with their access and admission to graduate school.

University personnel such as departmental secretaries, graduate advisors, and faculty members often made a difference as to whether one chose to submit an application to that university or not. Often potential applicants who did not receive personal help from a faculty member did not know what questions to ask or did not know what decisions needed to be made during the application process.

SAGE was a major success indicator for providing role models to undergraduate students, for providing access and admissions assistance, for facilitating a sense of belonging to a community of learners, and for providing a social, academic, and cultural network of graduate students.
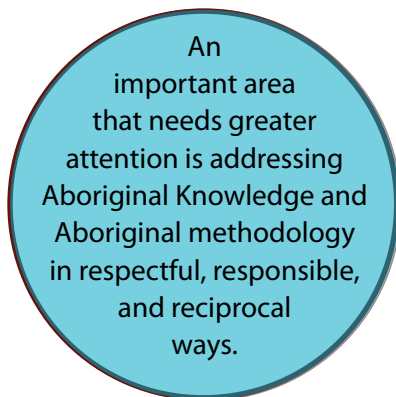
Racism and a perceived depersonalized and colonial institutional attitudes continue to present barriers to students in all phases of graduate education. These too are key findings that must be addressed in a transitional framework. The study participants shared many personal stories of experiencing these difficulties but they also shared many experiences where they took personal re-

sponsibility to navigate various bureaucratic procedures and racist encounters, and to use family and peer support networks. Their lived experiences and consequent understandings of how to access and complete graduate education are also success indicators that can be built upon in a transitional framework.

Graduate students seemed fairly satisfied with academic services provided by their universities such as libraries and book stores, but there were services that they did not use such as university residences or disability services. Students may not need these services, or they may not be eligible, or they may not know they exist. A transitional framework could assist with providing information on types of student services that are available.

An important area that needs greater attention is addressing Aboriginal Knowledge and Aboriginal methodology in respectful, responsible, and reciprocal ways. This area is gaining momentum in academe and many participants noted the importance of Indigenous programs and faculty as factors for choosing their graduate program. Survey responses indicate that while there is satisfaction with these areas, it could be better. A transitional framework could enhance the sharing of Aboriginal methodologies and sharing Aboriginal Knowledge understandings and resources.

AT:U2G Transitional Framework

The key findings above were used to develop three major framework components:

1. Access initiatives and experiences in the form of discrete sessions such as workshops or graduate education orientations, and research experiences will be offered. Sessions will be video-recorded or audio-recorded for future use and put on a web portal. Material such as handbooks or other resources will be developed based on topics identified by students and faculty.

2. Relationships through peer/faculty support and mentoring will be developed based on the programs Supporting Aboriginal Graduate Enhancement (SAGE) initiative, which is province-wide, inter-institutional, and multi-disciplinary. For now, it will be called SAGE-Undergrad. Undergraduate students and faculty will also be involved in developing mentoring resources through this network and through specific symposia organized for this purpose.

3. Digital technology and Web 2.0 approaches allow for provincial applicability and sustainability. The various activities and resources that are developed through the access and mentoring initiatives will be archived in a web portal so that anyone can access and use them, much like open source material. As well, the uses of Web 2.0 approaches will facilitate social networking, individual and group engagement, and continuing/sustainable development and refinement of the resources.

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2 INTRODUCTION

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3 REVIEW OF LITERATURE

The journey of Aboriginal peoples through the Canadian educational systems of public schools and post-secondary institutions can be told from many perspectives. When Aboriginal students tell their own stories about their perseverance and success, they frequently emphasize the interconnections between themselves and their families, communities, nations, and geographical locations. This powerful sense of interconnection with people and place – what is called the wholistic framework[1] – is key to understanding Aboriginal student persistence from undergraduate studies on to graduate and post-graduate education.

If Aboriginal peoples are to make full and rewarding use of opportunities in Canadian universities, we must listen to these stories to find ways of making education more accessible and supportive. To that end, research about Aboriginal post-secondary student experiences in Canada is only just beginning and remains on the margins of the literature on student persistence and minority student retention. In Canada, one of the seminal pieces on the Aboriginal student experience is "Honoring what they say: Post-secondary experiences of First Nations graduates." In this study, Archibald et al. (1995) surveyed and interviewed Aboriginal graduates of both a university and college in British Columbia to learn more about their post-secondary experiences. They found that students relied on other Aboriginal people, institutions, and agencies for support, a result consistent with the importance of relationships in Aboriginal student persistence to be discussed further in this report. Writing from an American perspective, Martin (2005) suggests that this is an example of cultural relevance: "Culturally relevant programs can improve contemporary American Indian students' chances for academic success. Cultural relevancy has implications for curriculum, instruction (teaching methods adapted to students' learning styles), evaluation (not limited to standardized tests), and governance" (p. 79). Unfortunately, Aboriginal students in Canada continue to face racism as part of their post-secondary experiences, a barrier that still resonates in their contemporary educational experiences (Archibald, Bowman, Pepper, Urion, Mirehouse, & Shortt, 1995; Holmes, 2006; Mendelson, 2006).

Despite these examples, the available literature on student retention and transition exhibits a clear shortage of Indigenous perspectives globally, particularly from students at the graduate level. Therefore, to provide opportunities for contrast and comparison, the literature search includes minority student issues more generally at the undergraduate and graduate levels. The experiences of other marginalized groups, such as African American and Latino/Latina peoples, provide insight into experiences similar to those of Aboriginal students in higher education. For example, all three groups have encountered specific institutional and systemic barriers in accessing education. Although experiences in any of these groups are not homogeneous, the literature permits a parallel comparison that broadens one's understanding of retention issues for minority peoples in higher education.

The purpose of this literature review is to discuss various aspects of retention of Aboriginal students in post-secondary educational institutions, specifically focusing on the transition from undergraduate to graduate school. The first section explores current retention theories that attempt to identify the factors that hinder or help per-

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1 Wholistic is spelled with a "w" on purpose to reflect the interconnections and interrelationships that are an important component of Indigenous epistemologies (see Archibald et al, 1995; Pidgeon, 2008a).

sistence through undergraduate education, noting that these theories often exclude Indigenous perspectives on persistence and success. The second section provides an overview of some of the barriers and supports affecting the retention of undergraduate students. The remaining sections discuss the challenges and successes in recruiting Aboriginal and other minority students into graduate programs, helping them to adjust to their new demands, and supporting them through doctoral and post-doctoral studies.

It should be noted that educational success for Aboriginal peoples may not mean financial gain resulting from improved salaries following graduation. Pidgeon (2008a), in her examination of the literature on Aboriginal student success in higher education, articulated that Indigenous understandings of success were related to the view of education as a tool of empowerment for Aboriginal peoples. Not only do Aboriginal peoples benefit economically but they can use their university credentials to advance goals of self-determination. Self-determination is a

> goal of social justice which is expressed through and across a wide range of psychological, social, cultural, and economic terrains. It necessarily involves the processes of transformation, of decolonization, of healing and of mobilization as peoples. (Smith, 1999, p. 116)

Indigenous understandings of success in higher education are therefore related to self-determination, social justice, decolonization, and empowerment. The challenge of incorporating these perspectives into institutional structures aimed at student success and persistence is evident in the disconnections between retention theories and Indigenous students.

Retention Theories and Indigenous Students[2]

Astin's involvement theory (1978, 1993) and Tinto's theory of persistence (1975, 1986, 1988, 1993, 1999) are frequently used to explain retention and success (i.e., graduation) in higher education (cited in Pidgeon, 2008).

2 This section is based on the work of Pidgeon (2008a). Please refer to the original document for further discussion of the literature.

Astin's input-environment-output (I-E-O) model can be translated into notions of valued capital in terms of high school credentials (input) which affect the type of post-secondary institution to which one has access, students' social experiences during university, and type of academic program entered. The chosen program and institution (environment) in turn relates to the probability of degree completion (output).

The purpose of the I-E-O model is to assess the impact of various environmental experiences by determining whether students grow or change differently under varying conditions (Astin, 1978, 1993). Students from high socio-economic status (SES) families compared to low SES families have more positive outcomes in university regardless of ability, academic preparation, or other characteristics (Astin, 1984). Astin developed his I-E-O model with a student body that was predominately White, middle-class, male, and less than 21 years of age. Consequently, Aboriginal students do not fit easily within this model for several reasons. Public systems (K to 12) often fail to prepare Aboriginal students to meet academic entrance requirements of universities (Royal Commission on Aboriginal Peoples, 1996). As well, Aboriginal university students tend to be older than the average student age of 21 and may have dependents and other familial and community responsibilities that influence their experiences in university (Mendelson, 2006). Their experiences and, more importantly, successes in higher education are not immediately considered in Astin's model (Pidgeon, 2008b).

Researchers often rely on Tinto's theory of persistence to explain student retention and experiences. Several scholars have written in support of this theory, including Terenzini, Lorang, and Pascarella (1981) and Terenzini and Wright (1987a) who found support for Tinto's notion of institutional and goal commitments although they were less certain of his views on student-faculty relations. Braxton, Miliem, and Sullivan (2000) found that faculty teaching practices influenced active learning and decisions regarding the departure process, consistent with Tinto's view of factors that influenced students' engagement with their learning experiences. However, other scholars have found shortcomings in

Tinto's theory. Hawkey (2004), who described the academic integration process as multidimensional, found that, over time, senior students benefited from social integration with faculty. (The role of faculty in the mentorship of Aboriginal undergraduate students will be explored later in this report.) Additionally, Tinto's theory of departure has been critiqued on the grounds that it does not account for prior experiences of the students (Renn & Arnold, 2003); and that the theory does not consider racial-ethnic backgrounds and experiences (Tierney, 1992). These critiques are important considerations when applying Tinto's model to Aboriginal students.

One striking example of Tinto's failure to consider racial-ethnic background occurs when he rationalizes that the differences between White and non-White students' rates of degree completion are partially due to differences in average ability test scores and SES (Tinto, 1993). Given that dominant culture lies at the core of the hidden education curriculum, Apple (1995) argues that students from lower social strata often do not relate to the material being taught and thus face a systemic barrier to success. Instructors assume students have certain prior knowledge, and the educational system presumes students come to school already possessing the cultural capital to receive, understand, and internalize the material being taught (Andres, 1994; Driessen, 2001; Dumais, 2002). This presumption of the types of knowledge students have when entering a university creates a barrier to further participation for those who do not have the types of knowledge validated within the university curriculum.

Tinto (1993) contends that students must reject the attitudes and values from their previous communities to negotiate successfully the separation process and integrate into their new college environment. Integration means embodying the values and attitudes of their college environment. Elkins et al. (2000) also support Tinto's theory, noting that students who are members of racial-ethnic minorities receive less financial and personal support while attending college and consequently find separation from their previous communities, whether social networks or family support, difficult. This particular aspect of Tinto's work is contentious because it assumes that stu-

dents coming from varying cultural backgrounds will experience the mainstream educational system differently, according to how their own forms of habitus and capital "integrate" into the university setting (Pidgeon, 2008b). Elkins et al. (2000), Huffman (2001), and Tierney (1992) argue that within Tinto's theoretical structure there is no room for those who do not wish to relinquish their own identity (e.g., racial, ethnic, or cultural) to assimilate into the cultural norms of the dominant society. The assimilationist nature of Tinto's work has also been criticized by Andres and Finlay (2005), Kuh and Love (2000) and Tierney (1992) for placing too much responsibility on the students to adapt, while the institutions are absolved of their responsibilities to modify policies and practices to meet the felt needs of students. Andres (2005) further states,

> Students can not be examined in isolation from the multiple contexts within which they operate; in other words, it is critical that individuals, environments, and situations remain conceptually and analytically intact. Also, it is important to embrace the complexity of post-secondary institutions and the multiple societal institutions in relation to the quality of students' experiences within post-secondary institutions (p. 3).

No group should give up their cultural distinctiveness, language, or values in the process of gaining full access to higher education and full social and economic participation in society (Astin, 1984; Astin et al., 1984; Deloria, 1995; Harker, 1990a, 1990b).

Another critique of the retention theories of Astin and Tinto is the fact that these theories draw upon the perspective of students, not from those of the administrators, faculty, or staff involved in developing policies, programs, and practices that impact student retention (Guillory & Wolverton, 2008). To address this limitation, Guillory and Wolverton (2008) employed the Model of Institutional Adaptation to Student Diversity (MIASD) by Richardson and Skinner (1991) in their research because MIASD considers retention issues from a policy perspective and consists of a series of developmental stages: reactive, strategic, and adaptive. Unfortunately, in their article, Guillory and Wolverton (2008) failed to demonstrate clearly how they applied these institutional

development stages as a point of evaluation which were only revisited briefly in the discussion and implications. Consequently, more work is needed to understand retention from multiple perspectives which include those of administrators, faculty, and staff.

Retention theories are still based on the premise that the students must develop "strategies" to succeed within mainstream institutions. Aboriginal students in coming to university or college "must first acquire and accept a new form of consciousness, an orientation that not only displaces but often devalues the worldview they bring with them" (Barnhardt, 2002, p. 241). New theories must move away from student deficit thinking if educational institutions are to reconsider their role in the Aboriginal student experience. What would a culture-based view of the Aboriginal student departure process look like? Kuh and Love (2000) and Huffman (2001) provide a cultural lens for understanding Aboriginal student departure. Kuh and Love (2000), for example, argue that mainstream colleges provide a culture and environment that is disconnected from the lived experiences of many marginalized ethnic groups. Consequently, they suggest that the influence of a mainstream college is inversely related to students' own cultural experiences. This disconnect of institutional culture and Aboriginal culture can be described through Huffman's (2001) metaphor of "cultural masks," which alludes to the difficult balance First Nations students must maintain in negotiating through mainstream education. He describes cultural masking as "the process by which a person comes to construct a personal ethnic identity. It also provides a manner in which an individual uses and ultimately projects that ethnic identity" (p. 5). The four cultural masks (assimilated, marginalized, estranged, and transcultured) can be considered continuums of experiences from full assimilation to grounding in ones' self as an Indigenous person.

The assimilated mask refers to an Aboriginal person who is "assimilated" into mainstream society and has the same valued habitus and capital. This particular

> The most important influences on post-secondary outcomes are family background, post-secondary intentions, and academic performance.

mask does well in negotiating mainstream education because values are not in conflict. The marginalized mask refers to an individual who, though semi-assimilated, still maintains strong Indigenous-valued forms of capital and, therefore, has some challenges in negotiating a system that does not value the capital he or she brings to the institution. This alienation is even more evident in the estranged mask student. The estranged student has strong Indigenous capital and strong resistance to any assimilation efforts of mainstream education (Huffman, 2001). This particular student often ends up withdrawing from mainstream institutions. The transcultured student has strong connections to his or her Indigenous capital and uses it as a social anchor to negotiate through mainstream education. At the very least, retention models must be modified to incorporate these cultural considerations.

Research applying Tinto's model to Aboriginal student populations has found that the most important influences on post-secondary outcomes are family background, post-secondary intentions, and academic performance. Family background has the largest and most consistent influence on student intentions prior to pursuing a degree (Pavel, 1991, 1992, 1999; Pavel & Padilla, 1993). Although family is also important to non-Aboriginal students, it holds particular cultural and even epistemological significance in Aboriginal societies where Aboriginal students' motivations for attending college or university are often related to supporting their family and/or giving back to their own communities (Archibald et al., 1995). For example, student participants felt that their family, giving back to their tribal community, and on-campus social supports aided their persistence (Guillory & Wolverton, 2008). This sense of responsibility to one's roles within one's family and culture are key to Aboriginal student persistence, but these cultural and family considerations are not always a key component of retention initiatives or programs. These findings strengthen the recommendations of Holmes (2006), Pidgeon (2001), and the Royal Commission on
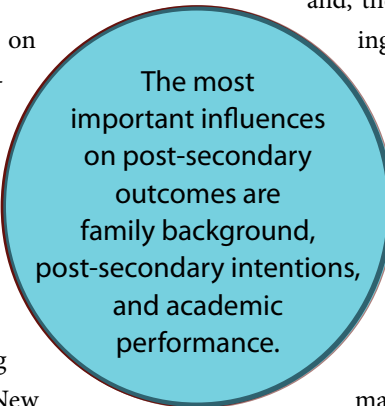
Aboriginal Peoples (1996) that Aboriginal student services or Native Student Centres provide crucial support by providing family and community ties.

In Guillory and Wolverton's (2008) study, students agreed with administrators that inadequate financial support and poor academic preparation in grade-schools created barriers. However, students did not attribute lack of academic readiness to individual fault but laid blame on the system. Interestingly, while administrators felt that providing more academic programs helped retention, students felt that the support provided by Native American Centres was much more important to their academic success (Guillory & Wolverton, 2008). The authors conclude by noting how administrators fail to connect the importance of family and community to Native American students' persistence in higher education. They recommend that

> by incorporating family within the educational experience of Native American students [e.g., relevant community based programs, multiple delivery formats, financial supports through scholarships and day care subsidies] institutions have the opportunity to bridge gaps, heal wounds, and build trust. For Native American peoples, it's all about family. Institutions that serve Native American students cannot continue to operate using traditional approaches to student retention, if they want to truly serve and help our country's Indigenous peoples (Guillory & Wolverton, 2008, p. 84).

One retention model that is based on Indigenous cultural values and that has incorporated the family at the core is HeavyRunner and DeCelles' (2002) Family Education Model (FEM). The FEM values the role of parents in the post-secondary experiences of Native American students. It considers the complex relationships and responsibilities that Indigenous post-secondary students have with their families and how they help or hinder the student's undergraduate experience and success. Guillory and Wolverton (2008) also found that although family could be a supportive factor, there were times when family responsibilities or lack of support could hinder student persistence, particularly if the student was a single parent.

Ibarra's (1996) research on Latino/Latina experiences in higher education provides relevant parallels to those experiences of Aboriginal students. Ibarra examined the nuances of ethnicity and national origin through the diversity of the research participants' own stories of their family backgrounds and histories. Just as the notion of diversity of identities in Ibarra's work serves as an important reminder that the Latino/Latina experiences in higher education are multi-layered and complex, the same can be said for Aboriginal identities (Huffman, 2001). Ibarra (1996) also explored the impact of family: "family and community still play important roles in shaping aspirations for higher education. At the core of Latino cultures are family values instilling a preference for positive interpersonal interactions, reliance on relatives as providers of emotional support, and at times, family unity" (Ibarra, 1996, p. 28). Overall, parents of the research participants had no college experience, a characteristic with consequences to students: "Regardless of family support, the lack of parental experiences in higher education was still the biggest problem facing Latinos entering graduate education" (Ibarra, 1996, p. 23). However, inter-ethnic comparisons revealed hidden variations in the role of family and parental education attainment. This reminds us that considering groups of students to be homogenous can generate faulty assumptions.

The strong attachment that Native American students felt for their respective communities also played out in their choice of educational program. Rather than consider their individual interests and objectives alone, they based their choices on the perceived needs of the community as well as their own experiences, skills, abilities, and interests (James & Taylor, 2008). Family and parental encouragement extended beyond what might be expected from the socio-economic status of the family: parents of participants in the James and Taylor (2008) study not only encouraged higher education participation, there were stories of parents sacrificing so that their children could attend a post-secondary institution. Consequently, there were few stories of family resistance to participants' aspirations for college or post-graduate study.

Parental involvement in the post-secondary experiences of their children is becoming an increasingly important issue for universities and colleges. For example, a

recent study entitled "The American Freshman: National Norms for Fall 2007" conducted by the Higher Education Research Institute at the University of California, Los Angeles, reported that the majority of freshman involved their parents in their post-secondary education choices and experiences.3 This report also found that minority students involved their parents in their decision making processes more than their non-minority peers in such areas as their decision to go to college, applying to enter college, dealing with officials at the college after enrolment, choosing college courses, and choosing college activities.4 Therefore, retention models will have to adapt to consider the role of parents in the higher education experiences of students. The role of parents alludes to the relationship between schooling and the wider society.

In turning the gaze from the student and their family, retention theories must also consider the responsibilities and relationships of the post-secondary institutions including their administration, faculty, and staff. Based on their analysis of the retention literature, Larimore and McClellan (2005) surmised that "students' experiences once they are enrolled in college play a substantially larger role in their successful integration into the academic and social environments of the campus" (p. 24). The researchers also recognize that no one individual in the institution, whether student service provider, faculty, staff, or administrator, would have "a holistic understanding of the student's total situation—or [understand] how best to coordinate the services available to support the student. One of the difficult truths is that although campuses provide a wide array of support services, many do not do an effective job of coordinating the delivery of multiple services to the same student" (Larimore & McClellan, 2005, p. 25). Therefore, they argue for a "more coordinated and comprehensive approach to retaining Native American students" (p. 25). Such efforts would reinforce "that each office or program shares in the responsibility to improve retention and the overall educational experience for Native American students" (p. 25). Such conclusions are laudable, but fail to consider the deeper cultural

issues that are also important for returning Aboriginal students.

Based on the literature presented, it is apparent that the "one-size-fits-all" approach of providing programs, services, and even teaching practices limits accessibility and retention of Aboriginal students. Until recently, retention theories took an assimilationist approach that reinforced the view that students had to "fit in," at the expense of their previous identity if necessary. Improving retention in this view meant providing institutional supports to help students with the transition rather than altering the institution to accommodate different cultural perspectives, values, and practices. The current review of literature now focuses more specifically on understanding issues of retention at the undergraduate level.

The Undergraduate Experience and Retention

Successful completion of an undergraduate degree is influenced by a number factors, including family education level, family income, high school grades, academic self-confidence, and social self-confidence (Ethington & Smart, 1986, Pascarella & Terenzini, 1991 cited in Hathaway et al. 2002). Because the student experience is now broadly perceived to be more than that of an individual in an institution, various factors outside the individual must also be kept in mind when considering retention. Among these are social integration with peers and faculty (Allen & Nelson, 1989; Berger & Braxton, 1998; Braxton et al., 2000; Elkins et al., 2000; Hawkey, 2004; Terenzini & Wright, 1987), academic integration (Hawkey, 2004), level of institutional commitment, and class size (Ashar & Skenes, 1993; Terenzini, Lorang, & Pascarella, 1981). In contrast, engagement with graduate education is only minimally linked to a student's background experiences, and is much more influenced by the type and quality of institutional involvement (Pascarella & Terenzini, 1991 cited in Hathaway et al. 2002).

The structure of higher education systems can thwart positive institutional involvement and present barriers to student success. For example, Andres (2001) found that the articulated transfer system in British Columbia is not without its problems. Students transferring between

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3 This information was accessed from http://www.insidehighered.com/news/2008/01/24/frosh

4 College in this report refers to 4 year degree-granting institutions in the United States, which are similar to universities in Canada.

institutions reported several obstacles such as accessing useful information and understanding transfer policies, practices, and procedures. These structural barriers hinder those students who do not have the knowledge or cultural capital to navigate the transfer from college to university. Andres (2001) also found that students experienced a decrease in their GPA when they went from colleges to universities. The transition to university, whether from college or high school, continues to present academic challenges for students. This highlights the need for universities and colleges to provide academic support programs to ease the transition for students. It also alludes to the larger issue of the hierarchy of the mainstream educational system (Andres, 2001). Educational pathways, such as transferring from a rural community college to an urban university, have direct impacts on career choice and social status.

> Indigenous views of successful education are grounded in wholism, relevance, participation, and Indigenous control.

The experiences of Aboriginal students in undergraduate programs are further influenced by a number of unique factors: a long history of government and educational policies following an assimiliationist agenda; the presence (or absence) of beneficial institutional characteristics such as Aboriginal content, curriculum, and Aboriginal mentors; the availability of financial aid, including federal Aboriginal post-secondary funds, band funds, and student loans; and finally, students' external commitments that may involve the family, cultural responsibilities, and their community (e.g., Archibald et al., 1995; Benjamin, Chambers, and Reiterman, 1993; Falk and Aitken, 1984; Gloria and Robinson Kurpius, 2001; Larimore and McClellan, 2005; Lin, LaCounte, & Eder, 1988; Mendelson, 2006; Pidgeon, 2001; Royal Commisson on Aboriginal Peoples, 1996; TeHennepe, 1993). Perhaps, as noted above, one of the more important concepts is that of cultural relevance. Culturally relevant models of education accommodate the role of extended families, embody cultural symbols that reinforce the identity of Indigenous students and increase their comfort levels, develop transition programs, and also offer culturally relevant academic and support services (Holmes, 2006; Martin, 2005; Pidgeon, 2001). Transfer and academic support programs offered at local colleges also encourage Aboriginal student participation. Martin (2005) argues that Indigenous views of successful education are grounded in wholism, relevance, participation, and Indigenous-control (Martin, 1994 cited in Martin, 2005).

Not all researchers of Aboriginal persistence are ready to critique institutional practices and adopt the notion of cultural relevance. Guillory and Wolverton (2008) provide a recent example of scholarship that remains couched in the language of student deficit. They explored Native American persistence in higher education through interviews with students, faculty, and university presidents. In conducting a multiple case study at different institutions and with different stakeholders, the authors were able to compare administrators' perceptions with those of students. They identified two persistent factors across the institutions: adequate financial support of Native American students (e.g., scholarships) and academic support programs (e.g., Indigenous-based programs, orientation, and/or academic preparedness programs). Administrators and other institutional participants believed students' inadequate financial resources hindered their persistence in higher education and felt that Native American students came to college ill prepared to meet the academic demands of higher education (Guillory & Wolverton, 2008). Such a point of view continues the student-deficit discourse, attributing lack of success to what the students are not doing or able to do.

When Guillory and Wolverton (2008) considered students' responses, they overlooked key cultural distinctions by treating students as a homogenous unit, with no regard for tribal affiliations, the institution they were attending, their program, or their age, gender, and prior educational experiences. This was partially explained through reference to commonalities between cultural groups ("pan-Indianism") and the fact that students used their respective Native American Centres for cultural support. The authors assumed that students were

expressing a common "Indigeneity" and not specific cultural identities when attending these Centres. These mistaken assumptions about the reasons students gather at such a space continue the marginalization of Aboriginal peoples, and perpetuate the institutional response that all Native American peoples are the same. Such a gross over-simplification negates the multiple dimensions of the student experience that impact educational journeys and trajectories. Gender, specific Indigenous-identity, and previous educational encounters are key aspects of the student experiences, particularly for Aboriginal peoples, and need to be considered in understanding issues of persistence. Despite the attempts to shed understanding on student persistence from a structural perspective, Guillory and Wolverton (2008) still portrayed persistence as overcoming a student deficit and failed to critique institutional policy and practice.

Ibarra (1996) provides a better example of culturally sensitive research into participation in higher education, particularly graduate education, by using semi-structured interviews with several stakeholders (e.g., administrators, faculty, graduate students, and non-academics) to examine the cultural and gender factors affecting the experience of Latino/Latina graduate students in the United States. A key component of Ibarra's (1996) work, unlike Guillory and Wolverton (2008), is differentiating between the various Latino/Latina identities. His work is "centred on the concern about the negative consequences of lumping ethnic groups, especially underrepresented ones in higher education, into generic ethnic categories and developing programmatic initiatives for them based upon inaccurate assumptions" (Ibarra, 1996, p. 3). In examining inter-ethnic variations, it becomes clear that some groups within the broader Latino/Latina populations are negatively impacted by socio-economic (SES) background. For example, Mexican Americans compared to other Latino/Latina groups have more trouble accessing higher education as a result of their SES. Ibarra's account resonates with the Aboriginal experiences in additional ways. Both groups are disproportionately under-represented at the undergraduate, graduate, faculty, and administrative levels within the academy. As well, Aboriginal peoples in Canada are the fastest growing

demographic; Ibarra (1996) presents similar statistics for the Latino/Latina population in the United States (at the time of the research). Research also provides evidence that various Indigenous groups (e.g., Métis, Aboriginal, First Nations, or Inuit) have unique experiences that challenge the stereotype of homogeneity.

Similarly, James and Taylor (2008) looked at the issue of student retention by examining how marginalized youth (immigrant Canadians of single-parent households) negotiated the language and tensions of merit scholarships to empower their own agency within the institution to rationalize their place in a system that was full of contradictions. Marginalized students have to deal with "the juxtaposition of the discourses of merit and those of marginalization and racialization – their social reality." Students constructed the "$2,000 they received annually [for their participation in an access program] not as aid support but as a scholarship—an indication that they earned their place in university on the basis of merit, as demonstrated through their academic abilities, skills, and potential" (James & Taylor, 2008, p. 577). The students who participated in this program also expressed that they felt they had to conform to get ahead, an expectation that caused tensions for them. However, the article does not discuss whether there was any dialogue on how students could participate in higher education without feeling the need to assimilate.

Recruitment into Graduate School

The previous section discussed a number of factors influencing undergraduate student engagement with and persistence through their university or college program. However, what is less certain are the factors that influence undergraduate students' decisions to enter graduate school. In 1987, Hearn studied the impacts of undergraduate experiences on students' aspirations and plans for graduate and professional education and found that students had somewhat different reasons for continuing with their studies. Students discussed their academic performance, parental supportiveness, the quality of faculty-student interaction, and their major department context as influencing their post-graduate aspirations (Hearn, 1987). As mentioned earlier, engagement with graduate

education appears less linked to a student's background experiences than it is to the type and quality of institutional involvement (Ethington & Smart 1986, Pascarella & Terenzini, 1991 cited in Hathaway et al. 2002).

In terms of preconditioning for graduate school, the majority of Latino participants in Ibarra's (1996) study attended four-year institutions close to home to remain close to family and to reduce financial costs. In his analysis, Ibarra (1996) found that undergraduate experience, family background, or other social/cultural factors failed to provide insights into student persistence in graduate education. Beyond academic achievement, personal characteristics such as persistence and determination along with adaptability to adversity were ingredients for success. Kidwell (1989) considered the situation facing Aboriginal students and concluded that "few Indians choose to enter graduate programs due to many deep seated cultural and historical factors as well as the socioeconomic status of many Indian families" (p. 79). Kidwell (1989) further argues that American Indians do not pursue graduate education or four year degree programs because of the immediate needs of job training for people living on the reservation. She emphasizes the historical legacies of discrimination and marginalization as barriers to graduate programs, but also identified several motivating factors for attending graduate school: parental and peer encouragement, awareness of career goals, role models, adequate academic preparation at high school and undergraduate levels, and adequate financial and academic support services at the graduate level.

Based on their review of retention theories and other literature, Hathaway, Nagda, and Gregerman (2002) investigated the role of environmental factors as students made decisions about their educational experiences and engagement with their institution. They surmise that the environment of students' primary academic department has the strongest effect on enrolment in graduate school. In the section of his report entitled The Graduate School Experience, Ibarra (1996) found that the motivation to

attend graduate school involved academic interest (the desire to explore the discipline more, faculty encouragement), career development or advancement, and ethnicity (particularly the motivation to make change within their respective communities). Badura, Ware, Davis, and Smith (2000) seem to agree about the importance of an encouraging academic environment, arguing that faculty have a responsibility to encourage students, specifically within Psychology, to publish and present their work. They argue that such activities encourage student creativity and learning, improve their communication skills, and foster a deeper appreciation for the professional aspects of their discipline. Ibarra's (1996) study also asked participants to share their experiences with the application process. Many felt that affirmative action policies and/or being bilingual helped their prospects to enter graduate studies, but poor GRE or other standardized test scores hindered their chances of admission.

This research follows from a growing, implicit understanding that new policies and practices are needed to encourage graduate participation. In 1987 there was a conference held in the United States discussing the underrepresentation of minorities in doctoral programs. This conference brought together scholars from across the United States to discuss how faculty can become more involved in increasing minority student (e.g., African American, Native American, and Latino) involvement at the graduate level (Adams & Wadsworth, 1989). The conference delegates discussed admissions and outreach, mentoring, enlarging the canons and boundaries of scholarship, and incentives and rewards for faculty. There were several recommendations put forward for each theme on what faculty as individuals could do, along with policy and actions inside and outside the institution. Faculty have an important role in mentoring minority undergraduate students so that they can gain the academic experiences and encouragement necessary for graduate school. One promising way that faculty can mentor students is by including them on research projects.

> Faculty have an important role in mentoring minority undergraduate students so that they can gain the academic experiences and encouragement necessary for graduate school.

Faculty Mentorship And Research Experiences Influence The Decision To Attend Graduate School

Since involvement in faculty research seems to encourage minority undergraduate students to apply to graduate school, several American universities have implemented special research programs. For example, Maddox and Smith-Maddox (1990) describe in detail a program called "Research oriented skills development model" that has the goals of recruiting and preparing minority undergraduate Science and Engineering students into graduate careers. The program is structured in four modules: research, seminar, communication, and GRE. Following are three other programs, the University Research Opportunity Program, Summer Research Opportunity Programs, and the Graduate Achievement Program.

University Research Opportunity Program (UROP)

Hathaway et al. (2002) surveyed 521 alumni of the University of Michigan State who had participated in the Undergraduate Research Opportunity Program (UROP) between 1989-1994. Their control group included alumni of the university who had applied to UROP but were not admitted during the same time period. Two hundred and ninety-one surveys were returned, representing students who participated in UROP (28%), students who received research experience outside of UROP (35%), and students with no research experience (37%). Forty-seven percent of respondents were underrepresented students of color, including African American, Latina/o, and Native American (Hathaway et al., 2002).

Undergraduate students who were involved in research during their academic programs were more likely to pursue graduate education, pursue post-undergraduate research activity, and use faculty for job recommendations than students who did not participate in undergraduate research (Hathaway et al., 2002). Their study also found that UROP alumni "tended to pursue professional degree programs, presumably more selective in their admissions and more challenging than two-year

graduate programs, for underrepresented students of color" (Hathaway et al., 2002, p. 623). In their view, "within the structure of peer group meetings, students may acquire experiences that develop their undergraduate transcripts and resumes, and make them more competitive and more likely to enter more demanding postgraduate and professional programs. The UROP programmatic support combined with having daily and weekly contact with faculty and graduate students in a research setting may assist students to better understand what it is like to be a faculty member, medical student, PhD student, or lawyer" (Hathaway et al., 2002, p. 264). They conclude their article stating that involvement in research during undergraduate studies not only "has positive effects on student retention… but also an enduring positive impact after graduation… [in terms of] enrollment and retention in graduate education and pursuit of professional academic fields" (p. 629-30).

Summer Research Opportunity Program (SROP)

Most universities responding to the Bowen et al. (1991) survey did not identify a concern for or a problem with the recruitment, retention, and post- graduation support provided to a diverse population. However, the Summer Research Opportunity Program (SROP) in the United States demonstrates that some institutions, given the financial support, are willing and able to change structurally to address minority participation and retention into graduate programs (Aguirre & Martinez, 1993).

The SROP history begins with the founding of the Minority Biomedical Research Support (MBRS) in 1972. The MBRS established early intervention programs to provide research grants to faculty for hiring minority undergraduate students. Later in 1977, the Minority Access to Research Centres (MARC) and Honors Undergraduate Research Training (HURT) programs provided targeted funds to Historically-Black Colleges, Hispanic Serving Institutions, and Indian Colleges to assist undergraduate minority students into graduate schools through research mentoring opportunities. Coupled with private initiatives such as the Ford Foundation's Mentoring Through Research Projects, this funding helped build a

foundation of support programs. As a result, by 1986 the need for more PhD credentialed minority peoples in the medical sciences was being addressed by a larger number of university-based programs that are now collectively called SROPs.

SROPs have three objectives: to increase undergraduate research opportunities with faculty, graduate students, and professional role models; to encourage the pursuit of doctoral degrees; and to motivate participants to consider careers in college teaching (Aguirre & Martinez, 1993, p. 4). SROPs strive primarily to develop research and technical skills through hands-on research experience with mentorship, and to provide workshops on such topics as applying for graduate school and CV writing. Aguirre and Martinez (1993) argue that the success of SROP depends on institutional commitment. They indicate that this commitment can be measured by considering the following two variables: official recognition of and respect for faculty participation as research mentors (through tenure and promotion, for example); and long-term, preferably line-item, financial commitment. This financial commitment allows for long term planning and helps to secure additional outside funding. Both faculty and students must understand and commit to their roles and responsibilities. Finally, there must be a system of data collection and evaluation to monitor the program's success and to keep track of a participant's education and career trajectory.

Aguirre and Martinez (1993) illustrate the value of the program by selecting five institutions that have SROPs and profiling students and their mentoring teams. This approach allowed them to use personal narrative to add depth to the quantitative data. For example, Purdue University in Indiana had had a SROP for 14 years when surveyed. The initial intake year of 1980 had six students enrolled in the program; by 1993, this number had increased to an enrolment of 51 participants. The participating programs also extended beyond the medical sciences with representation from Agronomy, Communication, English, Political Science, Psychology, and Sociology. This diverse department involvement in SROPs was also evident at several other universities: the University of California-Los Angeles (program started in 1981; 47 participants in 1993); Cornell University, New York (program started in 1986 ; 12 participants in 1993); and the University of Illinois at Urbana-Champaign, (program started in 1986; 81 participants in 1993). The other four institutions profiled had smaller numbers of participants and these participants were primarily in Sciences/Health Sciences (e.g., Stanford University (program started in 1985; 10 participants in 1993), Temple University (program started in 1986; 11 participants in 1993), Massachusetts Institute of Technology (program started in 1986; 28 participants in 1993); Howard University (HBCU) (program started in 1989; 21 participants in 1993) (Aguirre & Martinez, 1993). It is worth noting that one of the participants in the Aguirre and Martinez study was Michael Pavel, now an Associate Professor at Washington State University and respected Skokomish community leader. In 1993 he was a junior scholar at UCLA and one of the faculty mentors for the SROP. He commented on minority participation in graduate school and noted the differences he saw between Native American, Latino, and African American students. He also articulated the following statement:

> The formula for success clearly involves resources allocation. You can not recruit American Indian people without outreach, without an established presence or programs. They must know that you will take care of them, be concerned about their social and academic integration, and assure them that their culture will be respected. You bring them in, you talk to them, you plant the seed, and then you help them through the process. I think the efforts that you make to dispel the myth or to help prepare them for the realities of the situation, regardless of how glowing they may seem, is a justice to the community served. Students should be told the truth: it's a rough and tumble world out there and if you don't mind getting your knees skinned or getting a few bumps and bruises you'll come out of it just fine. You can't guarantee them safety, you may not guarantee their happiness, but as long as you're there and you're willing to be part of their lives you'll help them through the hard times. (Aguirre & Martinez, 1993, p. 24-25)

Davis (2007) was interested in the impact of SROPs on African American students. He conducted interviews (11) and focus groups (7) with undergraduate African

American students who were current participants or alumni of the Summer Research Opportunity Program. This faculty-student mentoring program aimed to increase Black student recruitment and retention in graduate programs. A large part of retention is having students "see themselves" in the academy. Davis argues that covert and overt forms of racism create environments that allow individual faculty to "avoid" dealing with non-White students and the institution to excuse lack of recruitment and retention initiatives on the "lack of qualified minority applicants or the 'pipeline problem'" (Davis, 2007, p. 220).

The SROP program in the Davis study was formed in the 1980s and included mentoring as a component that immerses students in faculty research projects (or their own project under faculty supervision), exposes them to graduate education, and involves them in specialized areas of study (Davis, 2007). Mentoring dyads for cross-race, same-race, cross-gender, and same-gender are incorporated into the SROP. The faculty mentors meet with students regularly over the summer and receive $500 to support student research. However, Davis (2007) did not provide more details regarding how long the summer program ran or the benefits to students. It may be similar to the other SROPs that run in the US in that students get a financial stipend and course credit; however, it was not clear from the article whether this occurred. Faculty mentors in essence serve as institutional agents enhancing student success by translating for them various components of the institution, both overt and covert. An important aspect of the mentoring program is the social capital that SROP participants gain in working with faculty.

The development of professional networks opens doors of opportunity for students in terms of other work opportunities, understanding the unwritten rules and norms of the profession, and letters of reference or introduction to key people in the field of study (Davis, 2007). While the author describes this as social capital, the article does not critique the possible effect of learning the norms and expectations of the structure on the individual students' own cultural integrity. Davis (2007) does discuss how some students recognized the impor-

tance of diversity in the professoriate and the negative impact the lack of diversity has on student success. Some participants thus credit SROPs with helping them move toward greater faculty diversity because, although their academic faculty may not be diverse, SROPs exposed them to a social network of diverse faculty who support minority students. SROPs helped these undergraduate students to see that they were not alone. Mentoring also helped some students to consider alternative career paths. Faculty mentoring of Black students increased academic engagement, attainment, and interest in graduate study (Davis, 2007). A limitation of this article is that while student interest in graduate work may be heightened by participating in the SROP, particularly given the social networks and rewards that follow, there is no indication how many of the 9,000 students who participated since 1986 have gone on to graduate school, graduated, and now are mentors themselves. The intergenerational nature of such mentorship relationships would be a true indication of success.

Graduate Achievement Program (GAP)

The Graduate Achievement Program at Tennessee University in Memphis aimed to identify and recruit talented minority undergraduate students who demonstrated financial need, and to provide a summer institute designed to introduce them to the opportunities and excitement of careers in the biomedical sciences (Barisa & Holland, 1993). The GAP participants engaged directly with research while attending workshops related to career exploration, research skills, and academic preparation for graduate study. This 12 week summer institute included one hour per week in classroom study on Philosophy of Science and Ethics. Students spent six hours a day in research laboratories. They also attended a two-hour seminar that met every other week to allow participants to present their research project and/or selected research papers. Enrichment activities (one hour a week) included field trips, seminars on career choices, mentorship, and discussions about the nature of graduate work. Participants also spent two hours per week in computer class to improve computer literacy skills.

The GAP also had an annual awards banquet at the

end of each program and a family style gathering at least once over the 12 week period. There were several assessment measurements put in place to monitor student progress and program effectiveness. Student participants were required at the end of the program to write a progress report outlining their project and the technical and research skills they obtained, and to write a formal research paper based on their study. In addition, the students were evaluated by their mentors upon completion. Students also completed evaluations on the program and their mentor. Program directors met weekly with participants during the program. An academic requirement was that students maintained a "B" average or better to reflect the general expectation of performance in graduate school. Barisa and Holland (1993) also discussed possible external reviews of the program and creating a GAP registry to follow all participants from application to adulthood.

Barisa and Holland (1993) shared several lessons learned from the program. For example, it was important to ensure that faculty mentors understood that students were there to learn research techniques and not lab cleaning skills. The authors also reflected on the merits of having a more structured schedule of events. Students were initially paid during their 12 week program on a set-pay period. However, students did not always show up for work or the seminars so organizers learned to introduce a pay structure that allowed "docked" pay. The authors also felt that a class on diversity training was needed for both the students and faculty involved.

Transitioning and Adjusting to Graduate School

Ibarra's (1996) study of Latinos and Latinas adjusting to graduate life provides valuable insight into the experiences of graduate students from the cultural minority. For these students, establishing personal relationships and incorporating family values into daily life were essential. There were nuances in the inter-ethnic story lines demonstrating that although most graduate students overcame difficulties when adjusting to a new academic community and the rigors of graduate work, the transition for some Latino/Latina students was complicated by academic culture shock. More specifically, they felt a disconnect between their ethnic identity and the curriculum and culture of graduate school, particularly between their value for personal connectedness and the institution's value for competition. Ibarra was quite clear about this: "The tendency towards establishing personal relationships and incorporating family values in daily life played important roles in adjusting to graduate school… First impressions of graduate school were imprinted with the contrast between their personal and family values and the sometimes opposing values of academic culture" (Ibarra, 1996, p. 38). Another theme in adjusting to graduate school was ethnic renewal or recognition. Some participants only became aware of their "minority status" in graduate school, but others sought some reconciliation between their own cultural values and those of the academic culture. Ethnic recognition resulted in participants meeting other Latino/Latina students or faculty, and encountering difference within the groups. One other theme described students' survival experiences, which took the form of defense mechanisms and coping strategies to deal with racism, self-doubt, and other negative experiences.

Transition into graduate school was facilitated for many students through interactions and relationships with faculty. On the other hand, open and direct ethnic discrimination or racism sometimes occurred for participants. Others experienced more covert, subtle, or indirect forms of discrimination by the faculty or departments. The participants also identified what Ibarra (1996) called general faculty problems ranging from frustration with difficult professors to the trauma of being abandoned by advisors. "As a result, progress toward a degree was slowed, hampered, or stalled" (Ibarra, 1996, p. 47). Even some Latino faculty caused stress for Latino/Latina students through covert discrimination, either as a result of inter-ethnic or SES differences. Completion rates for 42 participants holding doctorates averaged 9.3 years. There were variations when comparing inter-ethnicities and gender. Dissertation topics, particularly when dealing with Latino issues, were not always supported by faculty members or by the broader department (Ibarra, 1996).

Retention at the Doctoral Level

Hadjioannou, Shelton, and Dhanarattigannon (2007) discussed the importance of peer mentoring and faculty mentoring in retention of PhD students. The authors noted the importance of instructional support, participation in the discourse of the academic community, dealing with practical aspects of being a graduate student, improving writing, and emotional support.

The socialization process into doctoral education has been defined in terms of graduate students' integration into the intellectual, academic, and social life of the department by way of research participation in seminars, conference attendance, and interactions with peers and faculty, both formal and information (Faghihi & Ethington, 1996). Using a path analytic model, these authors found that the dominant influences on intention to persist come from students' intellectual involvement and their interaction with the faculty. Stopping out (a term used by Tinto, 1993) is influenced by financial impediments, which affect students' perceptions on gain in human relations. Students' enrolment status (full or part-time) also shows a significant effect on students' perceptions of growth in reflective thinking. Older students expressed higher intellectual involvement (Faghihi & Ethington, 1996).

Meacham (2002) puts forward the argument that graduate programs are failing to prepare their doctoral students for careers in the academy. He specifically refers to the role of teaching at both teaching-intensive institutions and research-intensive institutions. In discussing what factors are considered in hiring new faculty, Meacham mentions and extends the categories of teaching, service, and research. In fact, his list is quite extensive and leaves the reader wondering where this all-rounded academic superstar resides. Although the list of skills, abilities, and characteristics is extensive, Meacham (2002) also argues that programs could foster many of these attributes during the doctoral process; unfortunately, he feels that institutions are failing to provide graduate students with

such opportunities. He continues to argue that Preparing Future Faculty (PFF) programs could assist in facilitating doctoral student development as new faculty by introducing students to teaching and other aspects of faculty life. Elements of the PFF include "being mentored by one or several faculty at the cluster institutions, spending time following cluster faculty through a typical day on campus, participating in high-level graduate seminars on teaching and faculty life, preparing a course syllabus and having it critiqued, being supervised in teaching by excellent teachers, engaging in self-assessment and self-reflection as a teacher and potential faculty member, and assembling a teaching portfolio that includes a statement of teaching philosophy" (Meacham, 2002, p. 26).

Given the length of time required to complete a doctoral program, financial cost might be seen as an important element in decisions to enroll and persist. Eyermann and Kim (2000) studied factors that affected graduate school aspirations and attendance in comparison with student loans. They hypothesized that undergraduate borrowing, given the increasing reliance on student loans, would hinder undergraduate students' aspirations for graduate school. In studying two cohorts (1985-1989; 1994-1998), they actually found that student loan borrowing did not hinder either aspirations or attendance (Eyermann & Kim, 2000). They found that for both cohorts, educational aspirations were not negatively affected by parental income. General positive predictors of higher aspirations were high parental education, being African American, a high SAT Verbal or Math score, strong degree aspirations, low tuition costs, and high college GPA.

Eyermann and Kim (2000) argue that despite the debt some undergraduate students may have accumulated, their aspirations may remain high because borrowing is now the norm. Additionally, given contemporary financial aid policy and the high costs of attending college, today's students may be left with little choice but to borrow (Eyermann & Kim, 2000). The authors recognize that debts are increasing, particularly those in profes-

> Despite the debt some undergraduate students may have accumulated, their aspirations may remain high because borrowing is now the norm.

sional programs. The problem is more acute for those students who enter into lower-paying, public service-oriented jobs after graduation, and who may therefore have a harder time repaying debt. They also recognize that minority students are most likely to borrow for both undergraduate and graduate school and consequently incur more debt. A limitation of Eyermann and Kim's work (2000) is that Native Americans were not part of the sample group. This may be related to how Native Americans are funded in the US and of course, to the issue of self-identification.

Because Ibarra's (1996) study on the Latino/Latina experience in graduate education presents numerous parallels to the situation facing Aboriginal graduate and doctoral students, the current review of literature will end by summarizing its conclusions, particularly the advice and recommendations for enhancing the graduate student experience. Participants in Ibarra's study were asked two main questions: if you had the opportunity to talk to your graduate school administrators and faculty, what would you tell them about improving the graduate experience? Second, what advice would you share with Latinos contemplating or completing graduate school (Ibarra, 1996)? The responses suggested five main themes: faculty/administrative advice, academic culture change, department/discipline advice (institutions need to change), program advice, and student oriented advice. These five themes are important issues that administrators and faculty should consider in program design, faculty development, and orientation sessions. Ibarra (1996) elaborated that Latinos need mentorship by sensitive if not minority faculty, departments should provide adequate and steady student financial support, institutions need to change the culture of academe and the sometimes hostile environments in departments, institutions need to improve hiring and retaining of more diverse Latino faculty, and faculty attitudes need to change through training in cultural awareness. Participants advised other Latino graduate students to

- build a strong support system: develop a network of colleagues and a support group including family and friends; ask for help from friends, family, and peers; cultivate faculty interaction and networks

early; see faculty mentors early; seek professional networks by joining discipline and Latino academic organizations
- self assess and prepare mentally: know who you are and what you want, don't ignore your cultural heritage, prepare mentally
- plan ahead: get the big picture about graduate education, get involved with research experiences early at the undergraduate level if possible, improve your language and writing skills, do your homework on graduate schools, study the campus environment and choose a location or program where the people you will be with are supportive
- set an educational plan: get your degree(s) quickly and attend full time if possible, know what you really want to study, seek and develop clear research questions and objectives, select research on important topics, learn to negotiate with faculty over research goals and objectives
- know the cultural issues: take pride in your culture, achieve proficiency in English, learn to be assertive, evaluate how you perceive and respect higher authority/professors, become aware of pros and cons of Latino specific research, capitalize on Latino cultural strengths, prepare for academic culture, avoid self-imposed isolation

In light of the literature on student recruitment and retention in graduate education, these words of advice seem particularly relevant to Aboriginal students and the institutions they attend. The "deficit models" of recruitment and retention proposed by Tinto and Astin are being reformed to put more emphasis on the institution's responsibility to change and adapt in order to accommodate the diverse cultural backgrounds of students. In particular, the powerful sense of connection with family, community, and place that Aboriginal students feel must be respected. With the right kinds of institutional reforms, Aboriginal students will have improved opportunities for academic success.

4 RESEARCH METHODOLOGY

The research team approached the study of under-graduate to graduate student transitions using multiple research methods that, in addition to an extensive literature review, included administrator interviews, focus groups, a survey of graduate students, a survey of undergraduate students, secondary data analysis, and a case study based institutional scan. Behavior Research Ethics Board approval was granted by the University of British Columbia (principal investigator) and Simon Fraser University (co-investigator).

As indicated above, a wholistic Indigenous framework informed all aspects of the research project. Using this framework, researchers explored Aboriginal student transitions from the perspective of emotional, intellectual, spiritual, and physical factors that facilitate or hinder Aboriginal undergraduate transition to graduate study. The conceptual framework was inclusive of individual, family, and community aspects that reflect the interrelationships between structural, individual, and social and cultural factors associated with individual aspirations, intentions, and actions.

A review of the literature began with a focus on studies related to post-secondary education in British Columbia and Canada, and was later expanded to studies undertaken in North America, particularly the United States, and internationally. A dearth of research specifically on Indigenous learners in all jurisdictions meant that the search was expanded to include minority groups such as African American and Latino/Latina peoples. Although the focus was primarily on published academic literature, relevant reports in the public domain were also reviewed. Topics covered in the literature review included theories of student retention and their relevance to Indigenous students, undergraduate retention and at-trition, recruitment into graduate school, and transition and adjustment to graduate school.

Focus groups were conducted with SAGE members at universities from each of the four regional sites across British Columbia. Each focus group was audio recorded and the recording transcribed. A total of six focus groups involving 35 students were conducted. Focus group transcriptions were analysed for common themes across the four domains of the wholistic framework. Where possible, direct quotations are used in this report, but in order to safeguard the confidentiality and anonymity of respondents, no names are used and any details that may identify an individual have been excluded. Focus groups were conducted at five universities: The University of British Columbia-Vancouver; University of British Columbia-Okanagan; Simon Fraser University; University of Victoria; and University of Northern British Columbia.

Focus group data were used to develop a questionnaire that was then administered to Aboriginal graduate students in British Columbia. The graduate student questionnaire (as was the subsequent undergraduate questionnaire) was developed under the guidance of an Aboriginal researcher with extensive survey experience. The graduate questionnaire was pilot tested with a group of Aboriginal Graduate Research Assistants. The survey was administered via the world wide web and required about 20 to 30 minutes of respondents' time. A total of 60 Aboriginal graduate students submitted usable questionnaires, representing a response rate of approximately 30%. Because the size of the Aboriginal graduate student population is unknown, the response rate is an estimate only; this estimate is based on official university enrolment figures and SAGE participation numbers, and knowledge of university based Aboriginal community

members. Data were downloaded and stored on secure servers located at the University of British Columbia. Statistical Package for the Social Sciences (SPSS V.17) was used to analyse the data. Survey respondents may have included those who participated in focus groups. However, due to confidentiality the overlap between the two is indeterminable.

All Aboriginal graduate students in British Columbia were eligible to participate in the AT: U2G Aboriginal Graduate Student survey (Appendix F). Beginning in November 2008, the principal investigator sent letters of initial contact to all SAGE regional offices requesting permission to attend a SAGE meeting and provide information about the study; the SAGE provincial Coordinator sent email messages to past and present SAGE members telling them about the survey and directing them to the online questionnaire. Aboriginal graduate students who were not members of SAGE were invited to participate by using posters and word-of-mouth. An information poster was sent to all student service providers, program coordinators, and directors of First Nations/Aboriginal programs requesting them to forward the document to their students and post the information in their lounges and student gathering places. Reminder notices were sent out in December and again in January. Data submitted up to April 30, 2009 are included in this report. Because of the small size of the Aboriginal graduate student population, time to collect responses was extended and any usable responses submitted after this time were subsequently analysed and included in this final report.

Formal and informal interviews were conducted with a total of six administrators of Aboriginal programs across Canada and in New Zealand. As with focus group data, interviews were transcribed verbatim and transcriptions were analysed for themes related to helping and hindering factors associated with these programs. The interviews focused on how these programs addressed student transitions from undergraduate to graduate studies and the barriers and successes regarding student recruitment, admissions, and retention that have been observed. Specific questions focused on admissions policy, special incentives, and transition programs for Aboriginal students, before moving on to explore barri-

ers and facilitating factors for successful completion of graduate programs.

To help place this study within the local provincial context, a secondary analysis of available administrative student data was undertaken. The aim was to identify various pathways into graduate education. A life-course perspective recognizing that each educational transition is related to antecedent factors was adopted. For this reason, it was proposed to incorporate an analysis of K-12 and adult education pathways into post-secondary education prior to examining the undergraduate to graduate studies transition stage. Due to limitations of the secondary data (see Appendix C), a series of questions addressing student pathways into graduate study were added to the graduate student survey.

An institutional scan of existing graduate programs across Canada was undertaken and used to place the research within a broader context within which the framework would be developed (Appendix A). Programs or projects that offered some type of transition support were then explored in more detail in order to identify and learn from their strengths and potential gaps. Programs and projects at three institutions were examined in detail: Aboriginal programs and services at Lakehead University in Ontario; the LE,NONET Project, supporting the success of Aboriginal students at the University of Victoria; and student academic success services at the University of Ottawa (Appendix B).

The final data collection phase of the study involved feedback from Aboriginal undergraduate students. Data from the other components of this study, particularly from the graduate student survey and focus groups, were used in the development of an undergraduate student questionnaire (Appendix H). The draft questionnaire content was reviewed item-by-item in a focus group consisting of 14 undergraduate students, three Aboriginal staff, and three Graduate Research Assistants. Their feedback was incorporated into the final questionnaire.

The undergraduate questionnaire was programmed and uploaded to the Aboriginal Transitions URL on 20 February 2009 for pilot testing; data collection began 23 February. As with the graduate student survey, undergraduates were informed of the study and invited

to participate using information posters and word-of-mouth at four participating universities. An information poster was sent to all student service providers, program coordinators, and directors of First Nations/Aboriginal programs requesting them to forward the document to their students and post the information in their lounges and student gathering places. Reminder notices were sent out the first week of March and again two weeks after that. Data collection continued until mid-May and all received undergraduate surveys were analysed at this point and included in the final report. Due to the time of disseminating the undergraduate survey (e.g., after the spring semester exams and before start of summer sessions), there were fewer responses than anticipated.

However, compiling the undergraduate student survey responses along with the undergraduate focus groups and one-on-one interviews adds to the findings and recommendations of this report.

Throughout the research project, an eleven member Advisory Committee (Appendix J) offered feedback and advice on data collection, methodology, data interpretation, knowledge mobilization, and framework development. In addition, a communications blog using DRUPAL software was created to facilitate communications between the committee members, researchers, and graduate students. The blog was used to post documents, share ideas, and provide feedback as various components of the research project progressed.

Summary of Research Methodology

Extensive literature review

Administrator interviews

Focus groups

Survey of graduate students

Survey of undergraduate students

Secondary data analysis

Case study-based institutional scan

5 ANALYSIS AND FINDINGS: SUCCESS INDICATORS FOR A TRANSITION PROGRAM

Institutional Scan

As indicated in the above review of literature, published articles reveal a limited number of programs and student services in support of minority university students. Recognizing that many programs are not assessed and published (a significant exception is the work of Holmes, 2006), or even described in the academic literature, a scan of Indigenous graduate programs and student services offered at universities and university-colleges across Canada and at selected universities in the United States was undertaken as part of this study (see Appendix A). In addition, three case studies were developed to explore Canadian programs that offered some type of transition support in order to identify and learn from their strengths and potential weaknesses. Programs and projects at three institutions were examined in detail: Aboriginal programs and services at Lakehead University in Ontario; the LE,NONET Project, supporting the success of Aboriginal students at the University of Victoria; and student academic success services at the University of Ottawa (see Appendix B for details).

Key innovative strategies identified from these case studies can be categorized under physical, emotional, intellectual, and spiritual aspects of the graduate student experience. Some strategies and services could easily be placed within more than one category. For example, emergency funding, which meets a physical need, may also be important for a student's emotional wellbeing. Other services in the physical category include providing access to resources such as computers, study space, and telephones, as well as making available workshops and guides in stress and time management. These latter two services are also applicable under emotional well-be-

ing. Other services under the physical category included job posting and legal referrals, help finding daycare and housing, and budgeting.

Other services related to the emotional and spiritual categories included peer mentoring, Elder programs, counseling services, and social events. One program incorporated traditional healing workshops, feasts, sweats, and smudging into their Aboriginal cultural and support services. Also included here is a staff and faculty training module designed to create a more respectful learning environment for students by promoting an awareness of the history and contemporary realities of Aboriginal peoples.

Intellectual services tended to focus on specific skills development and information support such as admissions or grant application assistance, assistance with writing funding letters, and a variety of workshops and online guides covering such topics as writing, note taking, library skills, study skills, and job search seminars. But also an integral part of the intellectual supports and services for Aboriginal students were Elder visits, speakers series, and mentoring.

Many of the student services strategies identified in the case studies were identified by participants in this study through the focus group meetings and in the graduate student survey. These ideas have been incorporated into the framework development model seen later in Section 6 of this report.

Pathways Analysis

In identifying and understanding the various pathways that Aboriginal learners take to graduate school, a life-

course perspective recognizing that each educational transition is related to antecedent factors was adopted. For this reason, it was proposed to incorporate an analysis of K-12 and adult education pathways into post-secondary education prior to examining the undergraduate to graduate studies transition stage. Although data proved limited and a longitudinal analysis of pathways was not feasible, several data sources were accessed to provide at least a partial picture of Aboriginal learners pathways to graduate studies. (See Figure 1 and Appendix C for details.)

While Table 1 below can be viewed as a linear representation of the educational pathways to graduate education, the diagram above is meant to acknowledge the multiple pathways one can take to graduate education, illustrating that there are many points of entry and exit along the way from access, admissions, first year experience, and graduation. The journeys that are interrupted and started again (i.e., Tinto's notion of stopout) are not represented in Table 1, but the stories of those who participated in this research project testify to the resiliency and success of the pathways they have journeyed in their

Figure 1. Pathways to Graduate Education

education. Understanding these multiple pathways is important for as the data below demonstrate, understanding where the exit points are in the educational system for Aboriginal people is key to understanding issues of transition from K-12 to post-secondary and onwards.

Using aggregate data for a 2002 cohort of high school graduates provided by the Student Transition Project, a limited pathway from high school to post-secondary was mapped. Of 1,680 Aboriginal high school graduates

Table 1

Pathways through high school and graduate degrees completion

#	Description	N=55	100%
1	HS ➔ bachelor ➔ enrolled in master	18	33
2	HS ➔ bachelor ➔ master ➔ doctoral	14	25
3	Adult ➔ bachelor ➔ master ➔ doctoral	4	7
4	HS ➔ certificate/diploma ➔ bachelor ➔ master ➔ doctoral	3	5
5	HS ➔ certificate/diploma ➔ bachelor ➔ master	2	4
6	HS ➔ bachelor ➔ certificate/diploma ➔ master	2	4
7	Adult ➔ bachelor ➔ master	2	4
8	Adult v certificate/diploma ➔ bachelor ➔ master	2	4
9	HS ➔ completing UG ➔ accepted to master	1	2
10	HS ➔ bachelor ➔ doctoral	1	2
11	Adult ➔ certificate/diploma ➔ master	1	2
12	No HS ➔ bachelor ➔ master	1	2
13	Other HS ➔ certificate/diploma ➔ master	1	2
14	Other HS ➔ certificate/diploma ➔ bachelor ➔ master	1	2
15	Other HS ➔ bachelor ➔ doctoral	1	2
16	Other HS ➔ bachelor ➔ master ➔ doctoral	1	2

in 2002, 41.6% experienced immediate post-secondary education transition, 27.6% delayed transition, and 30.8% experienced no post-secondary education transition within 5 years since high school graduation. Looking at the institutional choices made by Aboriginal learners, we find that out the total of 1,680 learners, 4.4% made an immediate transition to university and 37.2% made an immediate transition to non-university institutions. Data published by the Ministry of Advanced Education and Labour Market Development (2008) confirm the importance of non-university institutions as points of access to post-secondary education for Aboriginal students. The Ministry reports that of the over 18,200 Aboriginal students in the BC post-secondary system, over three quarters were enrolled in institutes, colleges, and university-colleges; over 35% were enrolled in rural colleges (p. 14).

This finding was also confirmed by the graduate student survey results in the current study. A series of questions was added to the graduate student survey to identify pathways of students currently enrolled in graduate studies. Of the 60 survey respondents, 55 provided this information. As indicated in Table 1, the dominant pathway was the most traditional route of high school to bachelor's and then master's (33%) and/or doctoral degree (24%).

Forms of high school completion other than high school graduation, such as adult graduate diploma or certificate, were more likely to involve a pathway from the completion of a certificate or diploma before moving on to a bachelor's degree. In two instances, the completion of a certificate or diploma preceded enrolment in a master's program without a bachelor's degree.

Regardless of the type of high school completion, achieving a non-university certificate or diploma before pursuing an undergraduate degree followed by graduate enrolment was the route of about one fifth of respondents.

Most significant in terms of this analysis is the illustration of the variety of pathways – 16 in total – from high school (or no high school) to graduate level studies. This survey has proven a useful tool in that regard, but with so few responses, it is not possible to generalize. Further data collection and a more rigorous analysis that takes into account age and length of time since high school is needed.

Further exploration of pathways was undertaken using data provided by the University of British Columbia's Faculty of Graduate Studies. By using a UBC bachelor and graduate degree completion dataset, it was possible to present an example of trajectory analysis that focused

Table 2

Pathways through undergraduate and graduate degrees completion

#	Description	N=435	100%
1	Bachelor's degree	238	54.7
2	First professional degree	115	26.4
3	Bachelor/Professional	31	7.1
4	Master's	19	4.4
5	Bachelor/Master	15	3.5
6	Professional/Master	4	0.9
7	Diploma	3	0.7
8	Professional/Diploma	2	0.5
9	Bachelor/Professional/Diploma	2	0.5
10	Bachelor/Professional/Master	2	0.5
11	PhD	1	0.2
12	Bachelor/PhD	1	0.2
13	Master/Professional	1	0.2
14	Bachelor/Professional/Professional	1	0.2

on identifying the pathways from undergraduate to graduate education as informed by the completion of UBC degrees by the Aboriginal learners. Included in this analysis were 499 degrees awarded between 1994 and 2008. Table 2 shows the educational attainment pathways and their probabilities of occurrence. Fourteen attainment pathways were identified.

The pathways reflect the order in which degrees were obtained (i.e., path 5 and 10 are different sequences al- though finally the learner's highest level of education was a master's degree). The most common was to obtain a single degree at undergraduate level – about 55% of learners obtained bachelor's degrees (path 1) and about 26% obtained first professional degrees (path 2). Other pathways that occur more than 1% of the time were completing bachelor's and professional degrees (path 3 – about 7%), a master's degree (path 4 – about 4%) or a bachelor's and master's degree (path 5 – about 4%). Note that completion of a master's or PhD degree only may imply prior completion of an undergraduate degree at another institution, but this information was not available.

Overall, these discrete trajectory analyses illustrate the variety of pathways into graduate study. The value of the diversified post-secondary system in BC is implied in the variety of pathways, but the lack of suitable data for a longitudinal analysis that would provide a population based profile is evident.

*A*boriginal Graduate Student Survey and SAGE Focus Group Findings

The Aboriginal graduate student survey and SAGE focus groups included sets of questions that examined the following four major phases of graduate study: the decision to pursue graduate study; access and admission experiences; first year graduate experiences; and completion of a graduate (master's) program. In the initial analysis, helping and hindering factors related to each phase were identified. The 4Rs framework first advocated by Verna J. Kirkness and Ray Barnhardt (1991) to make higher education more responsive to

and successful for Indigenous learners was also used as an analytical framework for the data and development of the transition framework: respect, relevance, responsibility, and reciprocity.

Kirkness and Barnhardt (1991) emphasized the need for institutions of higher learning to make substantial changes to their policies, programs, and practices rather than focusing institutional efforts on changing or assimilating the Indigenous student to fit predominantly Western oriented frameworks. Respect for students' Indigeneity, culturally relevant learning programsand student services, institutional responsibility to facilitate access to and retention of Indigenous learners, and fostering reciprocal teaching and learning relationships formed the philosophical basis of this framework. Kirkness and Barnhardt's (1991) 4Rs framework creates an important foundation upon which to develop success indicators for transition programs/models.

A wholistic circle is used to provide a context that appreciates the cultural, historical, social, and political context of Aboriginal university students as well as to address Indigenous Knowledges. The 4Rs and the Indigenous wholistic circle will be used as theoretical principles in which to shape the undergraduate to graduate transitions framework that will be discussed later (See Figure 2).

Figure 2 . Representation of an Indigenous wholistic framework

This section on the survey and focus group findings starts with a demographic profile of survey participants, then continues to examine the findings using the four major phases listed above.

Demographic Profile of Aboriginal Graduate Student Survey Participants

At the time of this report, the AT: U2G online survey had 60 respondents (approximately 30% response rate). Of the 59 respondents who indicated their gender, 43 were female and 16 were male. The age range of survey participants was somewhat evenly distributed (See Table 3: Age Range of Participants). For example, 20% of participants were less than 30 years of age, another 25% were between 30-39 years of age, another 29% were between 40-49 years of age, and 24% of participants were over 50.

According to Statistics Canada (2003) Aboriginal university students at the undergraduate level are typically older than average students (i.e., older than 21) and this trend is consistent for graduate students. The important factor to consider when developing transition programs for Aboriginal students is that they are usually older than the traditional master's student and many have children. For example, of the 35 participants in the focus groups, approximately 70-75% of these students had dependent children.

Decision to Pursue Graduate Studies

The top three reasons for choosing a graduate program (based on the combination of rating of 4 or 5, see Table 4) were: specific program related to my career (81%), general faculty expertise (78%), and the university had

Table 3
Age Range of Aboriginal Graduate Student Survey Participants

Age Range	Frequency	Percentage
Less than 30	13	22.0
30 to 39	15	25.4
40 to 49	17	28.8
50 and over	14	23.7
Total	59	100.0

a good reputation (79%). These findings are expected for students choosing to pursue graduate work.

Geographic proximity of the institution to the students' home(s) was also a factor as 72% of respondents wanted to live close to home and 57% of respondents considered the accessibility of campus from their home. For example, 38% of survey participants indicated that they either completed or attended their graduate studies at the same university where they did their undergraduate degree. Geography plays an important part in Aboriginal students' lives whether through physical connection to their traditional territories or the opportunity to remain close to their family, community, and cultural supports while they returned to school. Fifty-six percent of survey participants also valued the accessibility of their institution from their home. Proximity of the institution to their home could also be related to the need for childcare and schools for their children, as discussed later in the SAGE focus groups results.

The role of Indigeneity in the decision to attend a graduate program was also evident from the survey and focus group responses. For example, 64% of survey respondents indicated they chose their program based on the Aboriginal faculty present in the program/institution. Another 50% of survey respondents chose their program after considering the availability of Aboriginal programming and 50% were influenced by the availability of Aboriginal courses. The presence of and engagement with Aboriginal faculty acting as role models and mentors, providing what Linda Smith (1999) calls the "seen face," was crucial to the decision of many Aboriginal focus group participants to attend graduate school, complete their application process, transition through their first year, and most importantly, complete their graduate program. The role of faculty was also evident in the undergraduate student focus groups and surveys to be discussed later in this report.

I had one person [a faculty member] that was always behind me helping me along each step of the way. (FG participant[5])

Graduate survey respondents were asked what was the single most important reason in their decision to

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5 FG = Focus Group participant

Table 4
Reasons for choosing your first graduate program

Reason	N	Not Important (1)	(2)	(3)	(4)	Very Important (5)
Specific program related to my career	48	2.1	4.2	12.5	8.3	72.9
General faculty expertise	46	4.3	-	17.4	13.0	65.2
University had a good reputation	47	4.3	8.5	8.5	19.1	59.6
Aboriginal faculty at this institution/program	46	14.9	6.4	14.9	12.8	51.1
Offered financial assistance/scholarships	45	28.9	8.9	8.9	4.4	48.9
Availability of Aboriginal program	47	17.4	10.9	21.7	2.2	47.8
Availability of Aboriginal courses	46	19.6	10.9	19.6	2.2	47.8
Accessibility of the campus from my home	46	15.2	10.9	17.4	17.4	39.1
Size of university	47	21.3	12.8	23.4	21.3	21.3
Wanted to live close to home	47	8.5	2.1	17.0	8.5	63.8

attend the graduate program he/she was enrolled in? Eleven participants shared that they were pursuing their graduate education for career, employment and/or certification purposes. Three respondents shared that the location was key to their choice, while another three indicated they picked the program because of Aboriginal faculty. As discussed earlier, location and reputation were important influences on students' choices. A couple of students had been invited to apply to their program and/or had done their master's at the same institution.

Decisions about which graduate school to consider are certainly influenced by the type and quality of program, quality of faculty expertise, geographic location, quality of Aboriginal programs, and availability of Aboriginal faculty. All these considerations are the purview of the university and relevant to individuals. In determining a success factor for a transition program, an additional and key finding is the need for relationships that provide encouragement, support, and mentorship.

Mentoring and supportive relationships make a difference

Peer and faculty mentoring, and family relationships were key factors in influencing students' decisions to pursue graduate studies. Encouragement and assistance

from graduate students (32%) and fellow undergraduate students (33%) comprised the highest levels of combined support. Faculty members or instructors gave advice to 57% of the respondents, which shows the importance of personal interest and mentoring in helping students think about their graduate education. Family members still have an important contribution and were consulted for advice by almost one quarter of respondents (23%).[6] For the survey respondents, these kinds of personal interest and encouragement were turning points for pursuing graduate study. Sometimes, faculty members or administrators associated with programs that had a particular Aboriginal focus such as education, First Nations Studies, and law made these suggestions. Some faculty members even helped Aboriginal undergraduates with their applications. Similar themes were evident in the focus group discussions across the province.

When I was graduating with my Bachelor's, I was really inspired by the encouragement [from] the faculty here. (FG participant)

I got real encouragement…and after talking to [faculty member], it was to go into a master's degree with the intent of doing my PhD as well. (FG participant)

6 Respondents could note more than one response.

I was a research assistant four times and became friends with a lot of the professors. They were the biggest encouragement for me to go to grad school. It seemed like a natural flow. (FG participant)

Family support and encouragement ranged from financial and childcare assistance, to providing transportation when necessary, and to emotional and social support. The extended family was included in the notion of family. Family was emphasized in both the focus group and surveys with Aboriginal graduate students, as evident in the following quotations.

My family is my strongest support, I am supported by certain professors and peers. (Survey participant)

My family, extended family, friends, and school community were very supportive and encouraging to me while going to school. Without this moral support I would not have continued my studies. (Survey participant)

Peer support ranged from friendship networks in both undergraduate and graduate studies, to more structured peer support through the Supporting Aboriginal Graduate Enhancement (SAGE) network. (SAGE is discussed later in this report.) Graduate students were viewed as role models and some acted as mentors; sometimes just knowing that Aboriginal people were in master's and doctoral programs was sufficient motivation for some to consider graduate studies.

Although the value of supportive peers, colleagues, family, appear crucial to success in graduate studies, another key finding about what helped students succeed with their entrance to graduate school focuses on their personal initiative and assumption of responsibility to find sources of information and to meet with faculty members.

Taking individual responsibility seriously

Sometimes research participants, whether in the focus groups or through the open-ended responses on the surveys, talked about motivating factors that made them think about graduate education. Stories of how individuals took personal responsibility and what motivated them to pursue graduate studies may have relevance to undergraduate students. This type of information could be included in transition framework materials. Study

participants also shared experiences when they took responsibility for identifying faculty members who would be potential program advisors and research supervisors.

I was in regular contact, before I was even registered or thinking about applying, with the professor who would later become my thesis supervisor. He encouraged me to apply and I did. (Survey participant)

Prior to my formal application, I met with my potential thesis supervisor and based on that meeting I decided to apply. (FG participant)

When asked what motivated them to pursue graduate studies, respondents replied by noting a range of factors from broadening their career/job prospects, to providing a better economic life for their families, to contributing to Aboriginal peoples' well-being.

I wanted a higher education for myself, as well as to show other young people in my home community that education is important. I feel my research topic is important and necessary for the advancement of my people. (FG participant)

The motivating factor was because I had kids and I knew I could not get a decent paying job with just a B.A. I finished my B.A. and then went on to my master's. (FG participant)

Career....I did not want to get stuck in another dead end job. (FG participant)

The dearth of material in my area of interest which was off reserve Indians was so dismal…I was thinking I was in the [social service and political] field for 30 years – who else would write this stuff? I figured I should turn that [experience] into my thesis, which I am doing at the moment. I intend to go on to my PhD for the same reasons. (FG participant)

To improve the overall education of our people (Survey participant)

I wanted to continue my post-secondary education beyond undergraduate studies because I felt my undergraduate experiences and studies were not sufficient for a satisfying and successful career. (Survey participant)

The notion of taking responsibility seriously seems consistent with the most important reasons given for

choosing particular graduate programs noted earlier: specific program related to chosen career (81%); university has a good reputation (79%); general faculty expertise (78%); wanted to be close to home (72%); and Aboriginal faculty (64%). By choosing a graduate program carefully, Aboriginal people addressed their professional and academic interests while balancing their need to be near their home community.

Access and Admissions Experiences

Once an individual makes a decision to pursue graduate study, a host of questions arise and decisions need to be made. Often people don't know what type of decisions are required of them (such as which type of master's program do they want: a professional or research oriented one?) or they don't understand the length of time that is required to complete an application. Because it is crucial to understand relevant admissions questions and how to provide an informed response, a second major transitional point to graduate studies is access to institutional graduate and student services' information and admissions processes. As before, positive, competent, respectful, and helpful people who work with graduate programs and admissions can facilitate or block this transitional experience.

Making institutions user and aboriginal friendly

Departmental graduate secretaries, faculty members, and Aboriginal student service staff who answered numerous questions through phone conversations and emails, and who were friendly, patient, competent and gave accurate admissions information were pivotal in helping people navigate institutional admissions procedures. This was clear from both the focus group and survey participants.

> *The Aboriginal faculty members at [university] helped me with my application process; their advice, support and encouragement (& letters of reference) were the factors that helped me gain admittance to the graduate program. (Survey participant)*

> *Thankfully, I spent some time on campus and I got to know some people and they were helpful-the secretaries in the department. I could call them up when I got stuck; they would either help me or send me to the person who could. Having the personal contact with people really helped*

me. It is difficult when you don't live [close to the university] to find help. The face-to-face contact is really helpful. (FG participant)

> *A very supportive faculty in the program I was applying to. I had one person that was always behind me helping me along each step of the way. (Survey participant)*

> *Well before submitting my application, I contacted the professor with whom I wanted to study with, and arranged for a meeting. The professor was extremely willing and helpful when it came time for the application process. The professor endorsed my application, which was vital for admission into the Master of Arts program. (Survey participant)*

In rating the application process of their graduate program, 50% of respondents noted fairly high satisfaction compared to 19% with fairly low satisfaction. In response to how the university handled their application, 52% indicated fairly high satisfaction while 21% noted fairly low satisfaction. It appears that universities still need to address their admissions procedures to make them more friendly to Aboriginal applicants as well as others.

Survey respondents were asked to identify factors that helped them gain admission into graduate studies. While many of the responses address individual strengths and traits, responses also highlight potential areas of support that can be provided by institutions to encourage Aboriginal undergraduate students transition into graduate school. The top five factors that helped sur-

Table 5

Factors that helped survey respondents gain admittance into graduate studies program

Helpful Factors	N
Distinction/good grades	17
Experience	11
Professor/supervisor	9
Research focus expertise/topic/ proposal/letter of intent	8
Reputation/References	6

vey respondents gain admittance into graduate school were good grades, personal experience, assistance from a professor or mentor, identifying a focused research topic in their letter of intent, and good reference letters.

The important role of mentors and relationships with faculty members was also evident across many survey responses.

> *My grades. I have been very successful in my undergraduate studies. (Survey participant)*

> *I had lots of experience teaching. I had good grades in my B.A. and B.Ed. (Survey participant)*

> *A very supportive faculty in the program I was applying to. I had one person that was always behind me helping me along each step of the way. (Survey participant)*

> *Another student identified three main factors for their admissions: "prior acceptance from a professor, high GPA, an important project idea that crossed discipline boundaries" (Survey respondent).*

Another important source of admissions support was found when undergraduate students attended various SAGE meetings and activities. (SAGE is discussed later in this report.) SAGE members often helped them with their application materials. For example, most graduate programs request a letter of intent from the applicant, but many do not know how much detail to include or the priorities of the admissions committee. Getting feedback on a letter of intent from others can be very helpful. Some of the undergraduate students participated in one of the SAGE cohorts and felt inspired to associate with Aboriginal graduate students.

> *At first I didn't know about SAGE, and then, 'Holy, that was an eye-opener!' I didn't realize there were so many intelligent women in their master's and in their bachelor's. I was exhilarated when I got home [after the SAGE session]. I thought, 'I can survive that [graduate studies]. (FG participant)*

> *The ones who have completed their [bachelor's] degrees and doing their master's degrees are such big role models for us. (FG participant)*

Despite the positive stimulation gained through SAGE and supportive faculty members and staff, both focus group participants and survey respondents shared several experiences that spoke to the institutional racism and acts of colonization that continue to exist in the school system.

Depersonalized and colonial institutional barriers

Departmental support staff and faculty who were rude, didn't respond to inquiries, or gave incorrect information were often identified as hindrances to accessing information and to completing the admissions process. These difficulties left the Aboriginal applicants feeling that universities did not respect, care about, or take responsibility for facilitating their access and admissions. Others talked about feeling intimidated about the admissions process or attributed students' feelings of inadequacy to the imposition of a colonial structure.

> *Apart from the incompetence of [university's] administration (almost equal to their arrogance) I didn't really have that much trouble [with admissions]. (FG participant)*

> *I think that a lot of Indigenous students face a lot of self-doubt--the systemic aspects of colonialism are a part of the education institutions that Indigenous children attend. Therefore, this feeling of self-doubt is a result of the colonialism that is entrenched into institutions. If this were addressed more often, then perhaps students would see that the doubt is not born within them, but rather perpetuated by the system itself. (FG participant)*

There were mixed reactions to university web sites as a source of information for admissions purposes. Some focus group participants responded that the graduate program and admissions process sites were straight forward and easy to use, while others felt that the web sites were overwhelming and confusing to navigate. In general, Aboriginal graduate students are fairly comfortable with using web sites and digital technology to locate information and to create social networks for sharing and learning from each other, so their confusion was not related to ignorance of Web 2.0 approaches.

Survey participants were asked to identify factors that might have made admissions difficult. While 10 respondents indicated they did not encounter any difficulty with the admissions process, other students were not that

fortunate; in fact, 33 responses were provided. The top four hindrances were: low GPA/grades, degree not recognized or non-transferable, deadlines, and self-doubt.

> *Having a GPA slightly lower than that required and not getting a response to my application until the middle of December for entry in January. I was told my application had been simply sitting on the dean's desk waiting for extra information that I could have provided but was never asked for. (Survey participant)*

> *They first denied me entry because of not having "relevant" work experience--they did not see my work experience while I was a student as work experience--I appealed the decision and was admitted. (Survey participant)*

> *[The First University] wouldn't let my application past the door. Unlike [Second University] where the department holds weight, it was reversed at [First University]. I missed the [Third University] deadline which was 2 months earlier than the other 2 universities or I would have applied and preferred [Third University]. (Survey participant)*

> *My undergrad degree at [Name of College] was not widely recognized in Canada or the US. I knew of one university in Texas that would accept it, if I had certain recognized undergrad class (math, English, science, linguistics). (Survey participant)*

> *My own self-doubt was one factor that made it difficult to gain admittance; the Aboriginal faulty members helped me over-come my doubts. (Survey participant)*

Similar experiences were shared by participants in the focus group.

First Year Experiences

The transition from undergraduate to graduate school can be a difficult one, as discussed earlier in the literature review. The first few months and the first year of a master's program comprise a third area of transitional examination. There are several adjustments to be made along the way. Survey respondents were asked how successful they were in making a variety of adjustments to graduate school. Respondents indicated that they were successful to very successful in: meeting academic demands (92%), understanding content and information presented in

courses (92%), performing adequately in written assignments (81%), and organizing their time to complete academic work (72%). Sixty-seven percent of respondents also felt that they were either successful or very successful in maintaining their Aboriginal identity. Areas where they indicated they were not very successful included becoming involved with campus activities (33%), balancing their academic and personal lives (26%), finding suitable and affordable housing (23%), and feeling if they belonged to the university (26%).

The intellectual part of the wholistic circle of the Medicine Wheel seemed to be a satisfactory adjustment for respondents. It is refreshing to see that about two-thirds of the students felt that they maintained their Aboriginal identity, despite the difficulties that a number of respondents shared about experiencing racism. A transition framework should continue to build upon the success factors identified when students share the strategies that helped them to succeed academically and to maintain their Indigeneity. This framework also needs to identify social, cultural, emotional, and spiritual supports to address the areas that they did not feel were successful. One very important transitional issue is to help students understand the different expectations and different learning environments found in many graduate programs.

Navigating different learning expectations in graduate studies

Many focus group students recalled their initial surprise at finding graduate studies much more unstructured than their undergraduate programs regarding instructor oversight of their readings and assignments. They also had to figure out how to navigate university bureaucracy. On the other hand, they were delighted that their classes were much smaller than those of their undergraduate programs.

> *I think that is where it is very difficult going from being in a structured program at the bachelor's degree level and having your instructors giving you a lot of guidance and support and then going into a master's degree for a year basically on your own. There is such a huge gap I felt like I was swimming all the time. It takes a lot of individual strength because we never had cohorts. (FG participant)*

Basically I was told to find out things on my own. (FG participant)

I was like, 'OK. Yay, I'm in graduate school, I'm a graduate student! Now what?' And coming to the realization that… I really needed to discipline myself with… all the readings we had to do. They give you a list of books to read and it's totally up to you to read them. It was like, 'Holy crap. You want us to read all this. Aren't you going to check?' … It's something I had to work on… part of the realization, if you don't do it, no one's going to do it for you. (FG participant)

I think there should be clearer [information given] to students entering grad school of the expectations of them. My program had almost twice if not three times as many courses as other programs. I had to learn fast that each grad course was like 2-2.5 times the workload per class compared to my B.A. stuff. (FG participant)

Navigating racism

Stories of encounters with racism in various forms continue to pervade graduate studies. Below are three different experiences and ways that each of the Aboriginal students chose to deal with these difficulties. University professors and administrators need to recognize that racism is still experienced by Aboriginal learners in many university classrooms and that it takes concerted and continuing effort to address its many forms. Students try to deal with it in their own ways, but their emotional, spiritual, and physical health is heavily taxed.

There was a person in our [Indigenous education] cohort who was very negative and she was affecting the whole cohort. She was a non-Indigenous person. She was taking up all the discussion space and she was being rude to other people in the cohort. I thought I do not have to put up with this. I emailed the instructor and the coordinator and told them this person is being inappropriate and they asked this person to leave. I thought did I have to put up with this. I thought, no. I am paying for this [education]. I used to not be assertive but now I am. (FG participant)

My first semester in my program… someone was saying racist remarks. I told the instructor and I was mad at myself for not saying something. I ended up speaking to others in the class and we just decided to steer the conversation differently

throughout the course and as a result of that I ended up making a lot of friends with different people…. It ended up being really good and we formed a close group and learned how to tackle those issues. (FG participant)

Dealing with those classroom situations where you are up against settler attitudes is really challenging. How to deal with that without alienating a classroom and without feeling like you have been silenced and are complicit in your own challenge is a challenge too. [I started to swim at the university pool to deal with this and other issues.] Once I started I couldn't stop; the pool became my therapist. It helped me gain physical strength and healing so that I could carry on to the end of the term. (FG participant)

Completion of Graduate Program

Even though the focus of this study is to examine the transitional points between undergraduate and graduate studies, questions about student satisfaction with aspects of their graduate program and university services have implications for the transitional framework that will be developed as a result of this study. For example, the framework could include information about the various types of student services available at universities such as a disability centre or women's student services.

Working with and communications about university student services

When asked "Do you feel that your first graduate program has been/was what you expected it to be?" Seventy percent of respondents indicated yes, their program was what they expected (N=43). A survey question asked respondents to rate their satisfaction with a variety of university services.

It is evident from the survey respondents that they were satisfied (score 4-5) with basic academic services such as their campus bookstore(s) (68%), library facilities (64%), access to computers (60%), and study skills/ learning support services (51%). What is also clear is that student respondents were less satisfied (score 1-2) with parking facilities (28%) and food services (24%).

Respondents identified several areas that did not apply to them or they did not use, such as university day

care services (76%), disability services (70%), university residences (68%), and services for women students (53%). Because the literature review noted that housing, day care, disability, and women's services are important to student retention, further examination is needed into why students indicated that they were not applicable to them. In the focus group discussions, some students mentioned that they did not know that disability services were available to them, while others indicated that they could not afford university day care and had family members or private day care providers look after their children. While 46% of respondents did not use personal counseling services, 31% of respondents were satisfied with this

particular on-campus service. Respondents were also mostly satisfied with their on-campus Aboriginal student services (39% satisfied, 26% not satisfied).

Survey respondents were also asked the question "How satisfied were you with each of the following aspects of your first graduate program and university?"

Table 7 suggests the degree to which survey respondents were satisfied (e.g., ranking 4 or 5) or dissatisfied (e.g., ranking of 1 or 2) with aspects of their first graduate program and university. For example, 68% of respondents indicated they were satisfied with their personal safety on campus and 70% were happy with the average size of their classes. Other areas that met students' ex-

Table 6

Respondents' satisfaction with the services they received during their first graduate program and university.

Services	N	Not Satisfied (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very Satisfied (5) (%)	N/A (6) (%)
Library facilities	47	4.3	6.4	19.1	29.8	34.0	6.4
Access to computers	47	4.3	4.3	17.0	21.3	38.3	14.9
Study skills/learning support services	46	4.3	6.4	21.3	23.4	27.7	17.0
Campus bookstore(s)	47	4.3	6.4	14.9	31.9	36.2	6.4
Athletic facilities	47	4.3	6.4	23.4	14.9	27.7	23.4
University residences	47	4.3	4.3	8.5	4.3	10.6	68.1
University day care services	46	6.5	6.5	2.2	2.2	6.5	76.1
Parking facilities	47	19.1	8.5	14.9	12.8	10.6	34.0
Social activities	46	4.3	17.4	21.7	13.0	17.4	26.1
Student employment/placement services	46	8.7	6.5	19.6	10.9	6.5	47.8
Disability services	47	2.1	4.3	12.8	8.5	2.1	70.2
Services for women students	47	4.3	4.3	21.3	6.4	10.6	53.2
Personal counseling services for students	46	8.7	2.2	13.0	19.6	10.9	45.7
Services for Aboriginal students	46	8.7	17.4	21.7	17.4	21.7	13.0
Campus medical services	46	4.3	0.0	19.6	17.4	17.4	41.3
Campus security services	45	4.3	4.3	28.3	15.2	19.6	28.3
Food services	45	13.3	11.1	26.7	15.6	11.1	22.2

Table 7

Importance of aspects of first graduate program and university

Aspect	N	Not at all Satisfied (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very Satisfied (5) (%)	N/A (6) (%)
Personal safety on campus	47	2.1	6.4	12.8	23.4	44.7	10.6
The average size of your classes	47	2.1	-	23.4	19.1	51.1	4.3
Accessibility of your thesis supervisor	47	8.5	6.4	8.5	27.7	40.5	8.5
Amount of time spent with your thesis supervisor	47	6.4	8.5	14.9	27.7	34.0	8.5
Instructional facilities (e.g., classrooms, labs, equipment)	47	2.1	10.6	23.4	21.3	36.2	6.4
The availability of required courses	47	8.5	23.4	12.8	12.8	36.2	6.4
The way that Aboriginal methodology is used for thesis purposes	46	26.1	6.5	15.2	6.5	30.4	15.2
Concern shown for you as an individual by the university	47	19.1	14.9	19.1	14.9	25.5	6.4
The way that Aboriginal knowledges are addressed in courses	47	27.7	25.5	10.6	23.4	12.8	-
The way that Aboriginal methodology is addressed in courses	47	27.7	6.4	12.8	17.0	21.3	14.9

pectations were: accessibility of their thesis supervisor (68%), amount of time spent with their thesis supervisor (62%), and instructional facilities (58%). The positive outcome of thesis supervisor accessibility is another success factor that could be included in the transitional framework for faculty mentoring purposes.

Creating networks for sharing aboriginal knowledge and aboriginal methodology for graduate education

There were several aspects of their studies about which respondents were less satisfied: 34% did not feel there was concern shown for them as an individual by the university; 33% were not satisfied at all with the way that Aboriginal methodology was used or permitted for thesis purposes; while another 34% were not happy with how Aboriginal methodology was addressed in their courses. In addition, 53% of respondents also indicated they were not at all satisfied with the way that Aboriginal knowl-

edges were addressed in their course work. Kirkness and Barnhardt's (1991) criteria of the 4Rs of respect, relevance, responsibility, and reciprocity are clearly not met in these important areas of Indigeneity.

The transitional framework could provide an opportunity for Aboriginal students and faculty to share examples of relevant use of Aboriginal knowledges and Aboriginal methodology in theses and in course projects. The framework could be used to organize a network of students keenly interested in these areas who interact through blogs, wikis, or social utilities like facebook, and to provide opportunities for them to meet face-to-face with faculty for further discussion. Such a proposal would fit well with the results displayed in Table 7 below, which indicate the relatively frequent participation of Aboriginal graduate students in academic events and Aboriginal cultural activities.

Respondents were asked to pick all responses that

Table 8

Respondents' participation in events during their first graduate program and university.

ACTIVITY	YES, I participated (N)
Attended an academic event like a conference or symposium	38
Participated in Aboriginal cultural activities on campus	28
Presented at an academic event like a conference or symposium	25
Participated in community events or organizations	24
Volunteering/participating in community service	21
Served on a university committee with faculty/staff	17
Attended an athletic event	15
Participated in spiritual/religious activities on campus (e.g., worship, meditation, prayer)	14

applied to their experiences during their first graduate program. The most common activities were attending an academic event (e.g., conference or symposium), participating in Aboriginal cultural activities on campus, and presenting at an academic event. Respondents were also involved in community events and organizations, volunteered, served on university committees, and attended athletic events. Others participated in religious activities, played intramural sports, or, less often, joined a club.

Finances

Financial security is another important factor that influences completion of graduate education and the quality of life experienced during graduate studies, as noted in this participant's story:

> *Major hindrances were finances and time as a single mother. I wasn't able to attend all the extracurricular lectures or networking opportunities I wanted to. My band covered tuition and basic living expenses ($1,200 for family of three), but not childcare or transportation; this was inadequate for [urban] cost of living. I took on stu-*

> *dent loans to pay for childcare, housing, food, clothing, etc, but now, after completing, I have over $80,000 in debts to pay back. I had to take on part time jobs, which further distracted and exhausted me, to reduce the need for student loans. Once I became more efficient, I had more energy to apply for bursaries, which further reduced my reliance on student loans and made living a little easier, and had to take on less part time work. (FG participant)*

Thirty-two percent of survey respondents indicated that they had received a student loan or other form of government student assistance (N=19) while 27% of respondents indicated that they received a scholarship or award. Approximately 30% of respondents (N=18) had applied for financial awards (e.g., SSHRC, NSERC, MSHRF, CIHR, etc.). While the application rate may be perceived as low, the rate of return was high in that 78% of those who applied for such funding were successful in receiving their financial award. This point should be of interest to graduate students wondering whether or not to apply for scholarships. It also reinforces the need for faculty and the institution to provide more encouragement and support to Aboriginal graduate students in their applications for such funding opportunities – as the results show, students are successful! This type of information will be important to highlight in the transitional framework to show that Aboriginal students are competitive in acquiring scholarships and fellowships.

Many graduate students work part-time or even full-time while they are completing their studies. The survey respondents were no exception: of the 45 respondents who answered this question, 58% indicated they worked outside the university, while 31% were not working and not seeking work and another 11% were not employed but looking for work. The number of responses to this question may have been higher if we had included on-campus employment opportunities such as research or teaching assistantships.

With scholarships and employment in mind, 46 respondents answered the question "How concerned are or were you about having sufficient funding to complete your first graduate program?" 30% of survey respondents were very concerned about not having enough funds to complete their studies, while another 37% had some con-

ANALYSIS AND FINDINGS

cern but felt they "probably have enough funds"; 33% of respondents felt they should have enough funds and were not concerned. The transitional framework could also be a communications portal to connect students seeking research assistantships with faculty members and Aboriginal organizations. More Aboriginal and community organizations are engaging in research and often have a need to hire Aboriginal research assistants.

Aboriginal Undergraduate Student Survey, Focus Groups and Interviews

The Aboriginal undergraduate student survey, focus groups, and interviews were conducted to gain perspectives about the kinds of issues and considerations undergraduate students have about pursuing graduate school. There were a total of 38 responses to the undergraduate survey. Sixty-eight percent of respondents were female and 29% were male. One student chose not to disclose their gender. These proportions are representative of the gender distribution in universities, as more Aboriginal females choose to go to university than males. The gender distribution in the focus groups was also predominately female. Dates of birth ranged widely from 1951 to 1990, for a mean age of 39. Table 9 presents the age distribution of respondents. The majority of the students were born between 1981-1990, making them between the ages of 19 and 28.

Seventy-nine percent of respondents had completed their high school diploma, whereas approximately 8% of respondents had completed an adult graduation diploma or a GED, and 5% of respondents had completed an alternative form of high school. One respondent had not completed high school.

Aboriginal undergraduate survey respondents were asked if they have obtained any diploma or certificate at a post-secondary institution other than a university. Approximately 34% of respondents indicated yes, they had attended another institution, but the majority of respondents (60.5%) had not attended another post-secondary institution. For those who did complete a diploma or certificate elsewhere, the types of programs completed were: Associate of Art ABST (N=4),

Table 9
Age range of respondents to undergraduate survey

	Frequency	Percent
1951 – 1960	5	13.2
1961 – 1970	2	5.2
1971 – 1980	5	13.2
1981-1990	24	60.5
No response	2	5.3
Total	38	100.0

Table 10
Where are you currently in your studies?

	Frequency	Percent
1st year	10	26.3
2nd year	3	7.9
3rd year	8	21.1
4th year	10	26.3
Other*	5	13.2
No response	2	5.3
Total	38	100.0

*Other: programs that included more than 4 years of study or students in transition to years 1-4.

Aboriginal Culture Tourism Pilot Project (N=1), Applied Business (N=1), Technology/Administrative Assistant (N=1), Bachelor's degree, First Nations Studies (N=1), Diploma in Business Management (N=1), Fashion Design & Technology (N=1), Financial Management (BCIT) (N=1), First Nations Community Studies (N=1), and Office Administration-Legal administrative assistant (N=1).

The majority of participants were either first year (26%) or fourth year students (26%) (See Table 10). Approximately 8% of respondents were in second year and 21% were in third year.

Students were also asked to identify the department in which they were completing their degree. When Aboriginal students first began to enter universities in any number (ca. 1960s -1970s) they were typically found in either education or First Nations studies, however, the

AT: UTG PHASE 1 FINAL REPORT

• 42 •

diverse department areas listed below in Table 11 are tes-
timony of the growing presence of Aboriginal peoples in
various academic fields across the university.

Undergraduate respondents were for the most part
doing well in their studies. Thirty-six percent of respon-
dents had a Grade Point Average of 3-3.99, 20% of re-
spondents indicated their GPA was 2-2.99, and 10% had
a GPA of four or higher, while 5% had a GPA of 1.99 or
lower. Ten percent of respondents did not respond to this
question.

Respondents mostly lived on their own, which is ex-
pected given the age range of respondents. For example,
approximately 37% rented an apartment or house while
21% lived in on-campus housing, and another 16% rent-
ed a room or shared accommodations. Less than 15% of
respondents lived with their parents and only 5% of re-
spondents owned their own home.

Understanding how undergraduate students transi-
tion into undergraduate studies provides important in-
sight into the issues that may present success or challeng-
es for them as graduate students. Table 13 presents their
responses to questions about how successful they felt in
making the transition from several aspects of undergrad-
uate studies. In looking at those who ranked themselves
successful or very successful (4 or 5 respectively) the top
three successful adjustments were: Understanding con-
tent and information presented in courses (83%); find-
ing their way around campus (77%); and performing
adequately in written assignments (74%). Approximately
51% of respondents felt that they were also successful in
maintaining their Aboriginal identity. Undergraduate
respondents did not feel very successful in the follow-
ing aspects of their university adjustments: Becoming
involved with campus activities (47%); finding suitable,
affordable housing (40%); and making new friends with
other students (35%). Approximately 34% of respondents
also felt they were less successful in organizing their time
to complete academic work.

Respondents were asked to choose from the cat-
egories listed in the above table which adjustment was
the most difficult to make and why. Some respondents
stated the following: Balancing academic and personal
life, becoming involved in campus activities, being away

Table 11

Type of department in which respondents were completing undergraduate studies.

	Frequency	Percent
Social Sciences	14	36.8
Sciences, Health Sciences	8	21.1
First Nations Studies	5	13.2
Education	4	10.5
Humanities	4	10.5
N/A	2	5.3
No response	1	2.6
Total	38	100.0

*Note: Several students in First Nations Studies were taking

Table 12

Where respondents were living during their undergraduate studies program

	Frequency	Percent
In rented home or apartment	14	36.8
In on-campus housing (residences, dormitory, apartment)	8	21.1
Rented room/shared accommodations	6	15.8
With parents (guardians, relatives)	5	13.2
In personally owned home	2	5.3
No responses	3	7.9
Total	38	100.0

from home, adjustment to school after prolonged period
away from school, finding affordable housing, getting
academic service, making new friends, and organizing
their time.

In terms of the easiest adjustment to make, others
made the following sometimes paradoxical comments:
"Balancing my academic and personal life" (Survey re-
spondent) because they had always worked; becoming in-

Table 13

Respondents' self evaluation on their success in making various adjustments to undergraduate studies

	N	Not very successful (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very successful (5) (%)	N/A (6) (%)
a. Meeting academic demands	35	-	8.6	34.3	37.1	11.4	8.6
b. Getting academic advice	35	2.9	11.4	25.7	40	11.4	8.6
c. Performing adequately in written assignments	35	-	8.6	14.3	48.6	25.7	2.9
d. Performing adequately in courses requiring mathematical skills	35	2.9	14.3	22.9	20	11.4	28.6
e. Understanding content and information presented in courses	35	-	-	11.4	57.1	25.7	5.7
f. Organizing my time to complete academic work	35	2.9	31.4	28.6	17.1	17.1	2.9
g. Making new friends with other students	34	8.8	26.5	23.5	17.6	17.6	5.9
h. Maintaining my Aboriginal identity	35	5.7	8.6	25.7	25.7	25.7	8.6
i. Becoming involved with campus activities	35	22.9	25.7	17.1	20	2.9	11.4
j. Feeling as if I belong to the university	35	11.4	17.1	28.6	25.7	11.4	5.7
k. Finding suitable, affordable housing	35	22.9	17.1	14.3	17.1	8.6	20.0
l. Finding my way around campus	35	-	2.9	14.3	20	57.1	5.7
m. Finding useful information and resources on careers and occupations	35	11.4	8.6	34.3	28.6	8.6	8.6
n. Balancing my academic and personal life	35	5.7	20	31.4	34.3	2.9	5.7
o. Other (specify	15	-	6.7	-	-	-	93.7

volved with campus activities because the activities were easy to identify; being accepted at the university, a transition facilitated by the First Nations Centre[misplaced modifier]; understanding content and information presented in courses; finding one's way around campus; making new friends, and maintaining my Aboriginal identity.

Respondents were also asked to rate the importance of various aspects of their undergraduate program (Table 14). In terms of importance, 78% of respondents felt that the reputation of their chosen university was important and 59% felt general faculty expertise was important.

While 58% felt that the availability of their specific career related program was an important criterion, another 58% rated the size of the campus as important. Fifty percent indicated the availability of Aboriginal specific programs was important. Aspects of their university program that were not important were: tuition fees (31%); availability of on-campus residence accommodation (28%); rich social life (25%); offered financial assistance/scholarships (22%); and accessibility of the campus from my home (22%).

Table 15 shows that respondents participated in a number of campus events. The most popular were

Table 14.

Respondents' rating of importance of various aspects of their current undergraduate program.

	N	Not very important (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very important (5) (%)	N/A (6) (%)
a. Wanted to live close to home	32	3.1	6.3	18.8	12.5	6.3	53.1
b. Wanted to live away from home	32	6.3	-	21.9	15.6	12.3	43.8
c. Accessibility of the campus from my home	32	3.1	18.8	21.9	15.6	21.9	18.8
d. Offered financial assistance/scholarships	32	15.6	6.3	34.4	21.9	3.1	18.8
e. Specific career related program	31	9.7	9.7	12.9	35.5	22.6	9.7
f. University has a good reputation	32	6.3	3.1	12.5	40.6	37.5	-
g. Availability of Aboriginal program	32	6.3	6.3	25	18.8	31.3	12.5
h. Availability of Aboriginal courses	32	6.3	6.3	28.1	12.5	28.1	18.8
i. Aboriginal faculty at this institution	32	12.5	3.1	25	18.8	21.9	18.8
j. General faculty e xpertise	32	9.4	6.3	18.8	43.8	15.6	6.3
k. Size of university	31	3.2	-	35.5	38.7	19.4	3.2
l. Rich social life	32	6.3	18.8	15.6	25	9.4	25
m. Size of city/town	32	3.1	6.3	21.9	34.4	21.9	12.5
n. Availability of on-campus residence accommodations	32	18.8	9.4	12.5	9.4	15.6	34.4
o. Tuition fees	32	18.8	12.5	15.6	15.6	6.3	31.3
p. Parents wanted me to enroll here	32	3.1	-	9.4	6.3	-	81.3
q. Other family members currently attending here	32	3.1	-	9.4	21.9	12.5	53.1

Aboriginal cultural activities on campus (42%), attending an academic event like a conference or symposium (37%), and participating in a club or intramural sports (37%). Another 32% of respondents indicated they attended an athletic event.

The survey also asked respondents to describe any significant challenges, hindrances, or barriers that they encountered during their undergraduate studies and more importantly, asked them to elaborate on how they resolved or did not resolve the problem. Student respondents discussed issues of financial security dealing with food and/or rent; others mentioned immature students. Some respondents felt that their instructors were not qualified to teach their courses. One respondent indicated that their practicum was stressful. Others identified educational stressors such as exams or papers. A few students mentioned personal and/or family challenges while others had time management issues.

Respondents were also able to identify strategies that would help them overcome these challenges. Strategies included:

- Attending writing seminars
- Attending time management seminars
- Obtaining information on orientations, websites, advisors, etc.
- Finding a job
- Sharing concerns with person in charge of programs

Table 15

Respondents participation in campus events during their undergraduate studies

	Frequency	Percent
Participated in Aboriginal cultural activities on campus	16	42.1
Attended an academic event like a conference or symposium	14	36.8
Participating in club or intramural sportsw	14	36.8
Attended an athletic event	12	31.6
Volunteering/participating in community service	11	28.9
Participate in community events or organizations (e.g. attended a local council meeting, served on a community committee)	10	26.3
Participating in political activities (e.g. assisted with a campaign, attended a rally/fund raiser)	6	15.8
Participated in spiritual/religious activities on campus (e.g., worship, mediation, prayer)	6	15.8
Served on a university committee with faculty/staff (e.g. search committee, awards committee, college/department advisory board)	5	13.2
Presented at an academic event like a conference or symposium	2	5.3
Other: Fitness class through Rec Centre, None of the above, Participate in arts community on campus, Was in a play, Worked on campus	4	10.5

- Obtaining increased financial support (bursaries, scholarships)
- Attending more counselling services

In discussing challenges, respondents were asked to identify supports that they found helpful during their undergraduate program. Several supports were identified such as: Aboriginal counsellors, Aboriginal student services, the AMS (a student association), First Nations Longhouse, Academic advising, Ch'nook Aboriginal business program, family and friends, bursaries, band assistance, and a peer support centre.

The next phase of the survey asked the Aboriginal undergraduate students to explore aspects of transitioning to graduate school. A few specific questions were asked of those who indicated they were planning on attending graduate school and of those who had indicated they were not planning to further their education with a graduate degree. These questions will be discussed later in this section of this report. However, before addressing the specific questions directed at those who planned to continue with graduate studies, the questions general to all 38 respondents will be discussed.

For example, respondents were asked "What is the single most important reason in your decision to attend your graduate studies program?" The most common response was "having a job when I graduate/career prospect" (23.4%) and making a difference/having a positive impact (7.8%). Most respondents did not answer this question, but similar themes were heard from the focus group participants. One Aboriginal undergraduate student shared that while she did not plan to go to graduate school immediately, it was a future possibility:

Not right away, go out and get more experience, not sure what route I want to go, get some life skills first… Some financial stability before I become a student again. (FG participant)

When asked if graduate studies was far in the future, she responded "No, not that far, probably within the next five years, so not that super far." This particular student is thinking about graduate studies in the next 5 years, which is different from last decade where graduate studies was not perceived as the next educational step for most Aboriginal undergraduate students. In fact, many of Aboriginal undergraduate students who were sur-

veyed see graduate school as their next step. The survey also had a question asking who had provided respondents with advice about graduate school.

The answers to questions about influential factors in choosing to attend graduate school can help the AT: U2G research team and post-secondary institutions more broadly to provide undergraduate students with relevant information about graduate school. Table 16 shows that many of the students have not been receiving much advice at all. For those who have had advice, the two greatest sources of information are fellow undergraduate students (32%), faculty members or instructors (32%) and family members (26%).

The survey provided an example of how poor advice can hamper one's application to graduate school. Of the 19 respondents who answered about factors that would help gain admittance to graduate studies, the majority (58%) were aware that their GPA was the influential factor in gaining admittance to graduate school. Only two participants indicated volunteering and experience in the career field would help their admission package. Interestingly, only one participant felt that a good reference letter would be important. This lack of awareness of the importance of reference letters to the graduate application process is something that the AT: U2G transition program can help address. The survey participants were also asked to identify barriers in gaining admittance (of the 19 respondents who answered this question), GPA/Grades (47%) and funding/financial assistance (26%) were the top two barriers.

Many graduate studies programs include a research project such as a thesis or major paper. As undergraduates, the majority of survey participants (63%) had not participated in such research projects. However, 10 respondents did know that the graduate program they hoped to attend required a research project, while 8 respondents did not know whether this was a requirement.

Funding continues to be a theme common to the Aboriginal graduate survey and the Aboriginal undergraduate survey. For example, 14 Aboriginal undergraduate students had some concern about funding but felt they would be okay while 10 others were very worried about funding (and only 3 indicated they were not con-

Table 16
Who provides Aboriginal undergraduate students with advice about graduate school.

	Yes (%)	No (%)	No Response
Fellow undergraduate students	31.6	31.6	36.8
Graduate students in the program you wanted to attend	10.5	52.6	36.8
Faculty members or instructors	31.6	31.6	36.8
Student advising	15.8	36.8	36.8
Your family members	26.3	36.8	36.8
Your Chief and Council	2.6	60.5	36.8
Other	2.6	-	97.4

Table 17
Aboriginal undergraduate students funding sources.

	Yes (%)	No (%)	No response (%)
Student loan or other government student assistance	28.9	42.1	28.9
Scholarship or other financial award from your university	28.9	42.1	28.9
Scholarship or other financial award from outside of your university	39.5	31.6	28.9

cerned). Table 17 outlines how Aboriginal undergraduate students were funding their undergraduate program.

Of the 15 respondents who applied for outside scholarships, 80% (N=12) received the award. Of the 27 respondents who answered the employment question, 48% (N=13) were working outside the university while working towards their undergraduate degree. Most averaged 11-16 hours a week (38.5%) and a few worked 32-38 hours (23%) (see Table 18). Only four participants indicated that they were working within the university, with their average hours ranging from 10 to 12 to 15 hours each week, and, in one case even as high as 40.

Eighty-one percent (N=27) of Aboriginal undergraduate students anticipated requiring financial assistance to attend graduate school. Only 7 out of 27 respondents indicated they had been able to find adequate information regarding financial assistance for graduate studies. Most students (N=12) were aware that there were scholarships and bursaries available at the graduate level; however, only one respondent had indicated she had applied for graduate scholarships. An interview/focus group participant shared that the barrier she faced was "Probably funding, I'm getting sponsored by my Band right now, but accessing funds might be difficult, the funds may not be there in 5 years." However, she also acknowledged that lack of funding would not stop her from attending graduate school, as she was aware of other funding options. She stated

> *No, it didn't stop me before, there are loans and stuff. I wouldn't let it stop me from doing what I wanted to do. (FG participant)*

This information highlights that the AT: U2G program could focus on information regarding student financing for graduate school.

To assist further in program development, respondents were also asked about the kinds of workshops in which they would consider participating (Table 19). The most popular workshops were in research and grant proposal writing. Respondents were also asked if they would be interested in having a paid research assistantship with faculty, a paid teaching assistantship, a one week orien-

Table 18
Average number of hours a week Aboriginal undergraduate students were employed outside of the university.

	Frequency	Percent
5 – 10 hours	2	15.4
11 – 16 hours	5	38.5
16 – 21 hours	1	7.6
22 – 31 hours	2	15.4
32 – 38 hours	3	23.1
Total	13	100

tation, and participating in a peer mentoring program. Given the financial concerns of students, they were most interested in the paid work. While there was interest in the orientation and the peer mentoring program, it was obvious from the low number of responses to these questions that more information needs to be shared with undergraduate students regarding the benefits of attending orientation and becoming involved at the graduate level (e.g., through peer mentoring programs).

Table 20 provides insight into aspects of peer-mentoring that interested students. Respondents were mostly interested in aspects of mentoring that came from faculty sharing their research experiences or expectations of graduate school. It is important for any program to

Table 19
Respondents interest in workshops related to graduate school.

	N	Not at all interested (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very interested (5) (%)	N/A (6) (%)
a. Grant proposal writing	22	-	13.6	13.6	13.6	59.1	-
b. Research proposal writing	22	-	13.6	13.6	18.2	54.5	-
c. Research for literature review	22	-	9.1	36.4	18.2	36.4	-
d. Writing literature review	22	-	13.6	27.3	22.7	36.4	-
e. Research paper writing skills	22	-	9.1	9.1	36.4	45.5	-

Table 20
Various aspects of a peer mentoring program that interested respondents.

	N	Not at all interested (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very interested (5) (%)	N/A (6) (%)
a. Regularly scheduled face-to-face meetings	22	9.1	4.5	27.3	36.4	22.7	-
b. Online chat with peers	22	18.2	9.1	18.2	31.8	22.7	-
c. Sharing stories about graduate work with other students	22	9.1	-	27.3	27.3	36.4	-
d. Hearing faculty discuss expectations for graduate work	22	9.1	-	22.7	22.7	45.5	-
e. Hearing faculty discuss expectations for research work	22	9.1	-	18.2	27.3	45.5	-
f. Participating in a research project with a faculty member	22	9.1	-	13.6	27.3	50.0	-
g. Sharing experiences with peers	22	9.1	4.5	31.8	27.3	27.3	-

remember that while Aboriginal students are interested in faculty mentoring and research along with peer mentoring that their home lives and other responsibilities will impact how much time they have to dedicate to such opportunities. As one student stated "If I wasn't a single mom of a toddler, I would definitely be interested in peer mentoring" so taking into consideration that many Aboriginal undergraduate students are older than average and/or have dependents will influence how the AT: U2G program is structured and delivered.

The importance of any Aboriginal transition program to consider the needs of mature students and single parents was reinforced by this participant's comment, "I would like more information for mature students & single parents."

Forty-seven percent of respondents indicated that they were planning on pursuing a graduate program. Twenty-nine percent indicated they were not going to go to graduate school and 24% of respondents did not answer this question.

Those students who indicated "yes" they were going to attend graduate school were asked a series of questions regarding their knowledge and readiness for undertaking a graduate program. In an open-ended question, students were asked which area of graduate studies they would pursue. Although not considered a graduate degree, the majority of students indicated they wanted to pursue a professional degree such as education (17%) or medicine (11%). Another 11% wished to pursue a Masters in Education (Table 21).

Table 22 reports the sources of information that undergraduate students were relying upon regarding graduate studies. The top three sources of information were university websites, word-of-mouth from friends and family, and academic advisors from their home institutions. A support system that integrates information for students and also helps build relationships is important for the future developments of the AT: U2G programs. As a focus group student stated:

I think it is important to have a support system around you as a student, even in general, it would not only be beneficial academically, but socially and personally—the opportunity to get together in groups. (Interview undergraduate participant)

The importance of personal relationships was evident for graduate and undergraduate Aboriginal students in pursuing and attending graduate school. Having personal testimonials,

Table 21
What department of graduate studies would you pursue? (N = 18)

	Frequency	Percent
Bachelor of Education	3	16.7
Master's of Education	2	11.1
Medicine	2	11.1
Environmental, Atmosphere Sciences	1	5.6
First Nations	1	5.6
Law	1	5.6
Atmospheric Science	1	5.6
Political Theory	1	5.6
Social Work	1	5.6
Sociological Studies	1	5.6
Zoology	1	5.6
Unknown	2	11.1
No Response	1	5.6
Total	18	100.0

Table 22
Main sources of information regarding graduate studies programs.

	Frequency	Percent
University websites	15	83.3
Word of mouth from fellow students, family or friends	15	83.3
Academic advisors at my university	6	33.3
Information sessions	3	16.7
Published university calendars	2	11.1
Academic advisors at other universities where I hope to apply	-	-
Career fairs	1	5.6
Other: Family,; University calendars; N/A	2	11.1

even through video, was a valuable way of sharing information across the province.

Yeah, it is coming from that person's mouth. I can talk to a counselor, but that is not someone who is going through it. I'm all about talking to people with first hand experience—it is real. Not something I am reading in a pamphlet. (Interview undergraduate participant)

Many of the respondents (56%) were not aware whether their desired graduate program required a standardized test score (e.g., GRE, LSAT, GMAT, or MCAT). Three participants (17%) knew their graduate program did not require them to take such tests, while 33% did know which test they had to take. Only one participant had actually taken the required standardized test and 44% said they had not taken the test yet. Another 50% indicated that this question did not apply to them.

Another important part of applying to graduate school are the academic reference letters. Forty-four percent of respondents indicated they have identified the professor or instructor whom they will ask to prepare these letters, while 44% have not identified their academic reference. Another 11% of participants indicated that this question did not apply to them. At the time of this survey, the majority of undergraduate respondents (83%) had not yet applied to graduate school; only two respondents (11%) indicated they had already applied. In fact, of those who had submitted their applications, one respondent had submitted only one application, while the other student had applied for graduate school at four institutions. Fifty-six percent of respondents indicated that they were not applying to the same university where they were currently attending. Only one participant indicated they wanted to stay at the same institution where they were completing their undergraduate program for graduate school.

The choice of graduate school is not just about the institution, it is also about potentially relocating to another province or country. Of the 18 respondents who were interested in graduate school, 22% wanted to stay within their home province to pursue their graduate degree, while 11% were willing to move outside their home province. This parallels findings with the Aboriginal Graduate Student Survey, where Aboriginal graduate

students said that the proximity of school did not influence their choice but many students chose institutions that were relatively close to their home and/or support networks.

Table 23 below further elaborates on influential factors students may consider in choosing their first graduate studies program. The top four reasons that influenced the respondent's decision in choosing their graduate program were: specific career related program (93%), general faculty expertise (93%), university has a good reputation (67%), and offer of financial assistance/scholarships (86%). The least influential factors were: other family members attending here (93%), parents wanted me to enroll here (93%), and special needs services (79%).

As important as it was to learn about the experiences of those who are already thinking about graduate school, it is also important to understand why some respondents were not choosing to go to graduate school. The next series of tables and summaries are based on those 10 respondents who indicated they were not yet planning to go to graduate school. This group of respondents was asked the question "If you were to attend graduate school in the future, how important do you think each the following would be in choosing your first graduate studies program? Please click the appropriate button." Table 24 shows their responses. The top three important factors, similar to their peers who have already decided to go onto graduate school, were: specific career related program (100%), offered financial assistance/scholarships (90%), and the university has a good reputation (90%). Living away from home (70%) was the least important consideration for this group of students.

The information gathered from these surveys is important because these factors can be examined further in order to improve services and supports to undergraduate students transitioning to graduate school. For example, many of those wishing to enroll in graduate studies wish to do so on a full-time basis (83%). Such information coupled with other factors (e.g., how many have dependents, financial resources, and housing needs) allows for proactive program planning. The next section of the report provides insight into the administrator's perspective on what kinds of supports are needed to assist the suc-

cessful transition of Aboriginal undergraduate students into graduate school.

Administrator Interviews

Six former or current administrators of graduate programs participated in individual interviews. They were also former or current faculty members with extensive experience teaching and serving as Indigenous graduate student research advisors. The administrators currently work with graduate programs in British Columbia, Manitoba, and New Zealand. They were asked questions about admissions policies, special incentives, transitional programs, barriers, and facilitating success factors for program admission and completion. They were also asked to suggest advice to Aboriginal undergraduate students considering graduate studies.

Admissions and Pathway Information and Preparation

No specific admission policies for Indigenous graduate students were identified. Most of the administrators felt that students needed to be academically prepared to meet the necessary reading and writing expectations and requirements. They emphasized the importance of providing undergraduates with relevant information to prepare them for various graduate program pathways. Education (as a field of study) provides a good illustration, since at the master's level there are typically two degrees offered: Master of Education (MEd) and Master of Arts (MA) in Education. The MEd is often considered a "professional" degree and may have a limited applied research component, although it is favoured by teachers and administrators wishing to extend their knowledge and skills and to advance in their careers. In contrast, the MA requires more methodology courses and a research-based thesis. Consequently, students who choose a pathway to an MA in Education, rather than an MEd may acquire more experience in such research processes as searching literature, gathering and analyzing data, and writing a thesis. Those who complete a thesis may also receive more research assistantship and mentoring experience from faculty members, which positions them better for admission to a doctoral (PhD) program. Those thinking about

Table 23
Reasons for choosing your first graduate studies program.

	N	Not important (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very important (5) (%)
Wanted to live close to home	14	42.9	7.1	14.3	21.4	14.3
Wanted to live away from home	14	50	14.3	14.3	7.1	14.3
Accessibility of the campus from my home	14	14.3	-	42.9	14.3	28.6
Offered financial assistance/scholarships	14	7.1	7.1	7.1	14.3	64.3
Specific career related program	14	-	-	7.1	14.3	78.6
University has a good reputation	14	-	-	14.3	35.7	50.0
Availability of Aboriginal program	14	-	14.3	28.6	14.3	42.9
Availability of Aboriginal courses	14	-	14.3	28.6	14.3	42.9
Aboriginal faculty at this institution	14	14.3	-	35.7	21.4	28.6
Aboriginal Elders at the institution/program to provide support and advice	14	14.3	-	42.9	14.3	28.6
An Aboriginal Students Association at the institution/program	14	-	14.3	21.4	21.4	42.9
General faculty expertise	14	-	-	7.1	28.6	64.3
Size of university	14	7.1	21.4	35.7	28.6	7.1
Rich social life	14	7.1	14.3	42.9	35.7	-
Size of city/town	14	21.4	7.1	35.7	35.7	-
Availability of on-campus residence accommodations	14	14.3	28.6	35.7	14.3	7.1
Availability of Family Housing	14	64.3	7.1	-	7.1	21.4
Availability of childcare services	14	71.4	-	-	-	28.6
Tuition fees	14	14.3	-	21.4	21.4	42.9
Parents wanted me to enroll here	14	78.6	14.3	-	-	7.1
Other family members currently attending here	14	85.7	7.1	7.1	-	-
Friends attending here	14	64.3	-	28.6	7.1	-
Advice from counsellors/teachers	14	7.1	7.1	28.6	35.7	21.4
Availability of public transport	14	-	7.1	21.4	35.7	35.7
Contact with students from the university	14	28.6	14.3	28.6	21.4	7.1
Computer facilities	14	7.1	14.3	35.7	28.6	14.3
Opportunities for International work/study abroad	14	21.4	7.1	42.9	21.4	7.1
Special needs services	14	57.1	21.4	14.3	7.1	-
Other (specify)	7	71.4	-	28.6	-	-

Table 24

Importance of various aspects in choosing a graduate studies program.

	N	Not important (1) (%)	(2) (%)	(3) (%)	(4) (%)	Very important (5) (%)
Wanted to live close to home	10	40.0	-	20.0	-	40.0
Wanted to live away from home	10	60.0	10.0	10.0	-	20.0
Accessibility of the campus from my home	10	10.0	-	10.0	30.0	50.0
Offered financial assistance/scholarships	10	-	-	10.0	30.0	60.0
Specific career related program	10	-	-	-	30.0	70.0
University has a good reputation	10	-	-	10.0	20.0	70.0
Availability of Aboriginal program	10	10.0	-	10.0	30.0	50.0
Availability of Aboriginal courses	10	10.0	-	10.0	30.0	50.0
Aboriginal faculty at this institution	9	-	-	33.3	11.1	55.6
Aboriginal Elders at the institution/program to provide support and advice	9	-	-	33.3	-	66.7
An Aboriginal Students Association at the institution/program	9	-	-	22.2	11.1	66.7
General faculty expertise	9	-	-	11.1	33.3	55.6
Size of university	9	-	11.1	55.6	-	33.3
Rich social life	9	-	22.2	44.4	-	33.3
Size of city/town	9	22.2	11.1	44.4	-	22.2
Availability of on-campus residence accommodations	8	-	-	50.0	25.0	25.0
Availability of Family Housing	9	11.1	11.1	33.3	11.1	33.3
Availability of childcare services	9	22.2	11.1	22.2	-	44.4
Tuition fees	9	11.1	-	22.2	-	66.7
Parents wanted me to enroll here	8	50.0	-	37.5	-	12.5
Other family members currently attending here	9	44.4	11.1	22.2	-	22.2
Friends attending here	9	11.1	33.3	33.3	-	22.2
Advice from counsellors/teachers	9	-	22.2	44.4	11.1	22.2
Availability of public transport	9	-	-	33.3	22.2	44.4
Contact with students from the university	9	11.1	44.4	-	-	44.4
Computer facilities	8	12.5	12.5	12.5	12.5	50.0
Opportunities for International work/study abroad	9	22.2	22.2	11.1	22.2	22.2
Special needs services	9	22.2	11.1	22.2	-	44.4
Other (specify)	3	33.3	-	33.3	-	33.3

graduate studies need to be given this type of information to help them determine which graduate program pathway to take.

Incentives and Transitional Considerations

Some universities are starting to provide financial incentives/packages to attract strong Indigenous applicants to doctoral programs. In British Columbia and Manitoba, the current amounts are $20,000 annually and the duration of funding varies, with the maximum being four years. Some consideration is being made in the development of these initiatives to offer Masters' students a funding package. Based upon the environmental scan and these interviews, we did not identify any formal programs intended to assist students in the transition from undergraduate to graduate studies. Such programs would be useful, since once students are in a graduate program they can access peer support or faculty mentoring initiatives such as SAGE or introductory research courses that focus on topics such as writing a literature review. University student service units and Aboriginal student services were noted for providing intellectual, emotional, cultural, and financial (physical) student support, often as a way to deal with personal challenges and institutional barriers that students experienced.

Barriers to Program Admission and Completion

Racism and an unwelcoming learning and social environment were mentioned by administrators as continuing barriers that face Indigenous graduate students: "the university environment is a Western environment for the most part and it's not always welcoming." Finance is another challenge considering that most of the graduate students, especially at the master's level, are older and have family and community responsibilities: "our students are generally not 25 to 30 year old single people. They're mothers, the majority is female. Many of our students are grandparents. They carry these family and community responsibilities." Limited childcare facilities was mentioned as an on-going challenge. With the absence of adequate funding, most students work full time while trying to complete their thesis research, thus delaying their time to completion.

One administrator felt that a challenge facing students is the "false divide" between Indigenous culture and academia. Sometimes students "hide behind the cultural element as a way to avoid some hard work on the intellectual. It is not 'either or.'" This person believes that students need to acquire an "openness of the mind" while developing a critique of institutional barriers and oppression, but that the goal is to have "power and strength to engage in the world…with a full range of [knowledge] choices." The tensions between culture and academia become intense for students when their community cultural responsibilities surface: "being called home for a death in the community or they are needed for some work on a language program…they're pulled in many directions." The relationship between Indigenous culture and academia is complex and requires sensitive navigation by all concerned for dealing with challenges and for creating opportunities for success by building on Indigenous culture and Indigenous Knowledges.

Success Factors for Program Admission and Completion

Various success factors for admission and completion were identified by the administrators such as Aboriginal-specific master's programs; Aboriginal research courses; Aboriginal faculty and advisors; Aboriginal noted scholar visits and presentations; program orientation sessions; social and cultural activities for students, their families and community members; research assistantships; writing retreats; and SAGE. Many of these factors were also mentioned in the graduate and undergraduate data and warrant further consideration for the transitional framework that will be developed as a result of this study. The following quotations reinforce some of the key points above:

> *Students need role models, they need to see themselves there at the university.*
>
> *Our program addresses recruitment of Aboriginal students by seeking out master's students who are interested in PhD; active recruitment through relationships with communities and by visiting the communities.*
>
> *We wanted our students to have a good understanding of all knowledge and to specialize in*

particular fields and to feel that they could do it rooted in their strong cultural platform; they could engage with critical elements as well as anyone else.

The students have had a number of meetings with Aboriginal scholars who have come on campus. They talk to them and they speak on topics from Indigenous theory to all kinds of things. Those [interactions] facilitate student success. (Administrators)

SAGE as a Model Framework

SAGE (Supporting Aboriginal Graduate Enhancement) modeled on the MAI (Maori and Indigenous Graduate Program) began in British Columbia in 2005 under the guidance of Dr. Graham Smith and Dr. Jo-ann Archibald.7 The overarching goal of SAGE has been to develop a critical mass of Indigenous doctoral credentialed people who through their research and practice will transform all aspects of Indigenous education in BC, Canada, and internationally. SAGE is a peer mentoring program that extends beyond institutional and disciplinary boundaries through its four regionally-based pods (e.g., Vancouver, Okanagan, Prince George, and Victoria). Indigenous faculty members provide mentorship and guidance to SAGE; however, the important leaders of this initiative are the graduate students themselves.

SAGE members meet at their respective pod locations several times over the academic year, usually on the weekend, to discuss their course work, share research ideas and methodology processes, and to listen to guest speakers. The meetings typically begin with a cultural opening either in the form of a song or prayer, after which, in the opening circle, students share who they are and what they have been doing since the SAGE group last met. Lunch is provided to the students for free. There may be workshops on technical skills such as writing or analyzing data, and/or presentations by guests who are either fellow students, Indigenous faculty members, or Indigenous scholars from outside BC. The meetings end with a closing circle where students share what they

plan to achieve before the next meeting. In the spirit of building relationships and cooperation, these meetings provide an environment that is grounded in Indigenous protocols. "The students essentially support and advise each other and reflect the Native saying that there is always more wisdom in the circle than there is in one individual. SAGE is culturally supportive and provides an Indigenous knowledge orientation to student support and mentorship" (Archibald & Brown, 2008, p. 22).

SAGE has a current membership of over 300, with members who are either currently enrolled or have completed doctoral studies, completing their master's and wishing to go onto a doctorate, or have completed their master's and are applying to (or considering) doctoral study. Members represent a wide variety of institutions (e.g., University of British Columbia (Vancouver, Kelowna campuses), Vancouver Island University, University of Victoria, Simon Fraser University (Surrey, Burnaby campuses), University of Northern British Columbia, University of Fraser Valley, and many others). SAGE members are engaged in research in Education, English, Fine Arts, First Nations Studies, Archaeology, Chemistry, Forestry, Anthropology, Psychology, Biology, Linguistics, Political Science, and Business to name a few.

SAGE provides an environment that is culturally relevant to graduate students who may be the sole Indigenous student in their department or faculty. It is a model to which others are now looking to develop at their own institutions. For example, there are pods being developed in Alaska at the University of Alaska and in Ontario at the University of Toronto, OISE, and Laurentian University. An important outcome of this project has been to substantiate the success of SAGE by hearing from Aboriginal graduate students through the Aboriginal Graduate Survey and the SAGE focus groups.

In the survey of Aboriginal graduate students, 64% of survey respondents were members of SAGE (N=45). Respondents represented the Vancouver pod (78%), Prince George (9%), the Okanagan (6%), and Vancouver Island (2%).

The supportive elements of SAGE emerging from the analysis of the survey and the focus groups are: it fosters

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relationships and a sense of belonging; it creates self-accountability to one's studies; and it empowers students to think beyond graduate school in terms of career and educational opportunities. There were also several recommendations put forward by participants on how SAGE could improve to benefit more Aboriginal graduate students across the province through better scheduling, location, selection of discussion topics, and dedicated staff.

The next sections highlight the themes emerging from the open-ended responses of the survey and the focus group transcripts.

Relationships create sense of belonging

When respondents to the Aboriginal Graduate Survey were asked about the benefits of SAGE, the role of relationships was very clearly central to their positive experiences. SAGE provided students an opportunity to connect with fellow Indigenous graduate students who were not necessarily in their department or university. This networking provided students with feelings of support and pride. As one respondent said, "[I received] support from other Aboriginal/First Nations students, [and I had] a feeling of community from the group meetings." (FG participant) Others commented that these relationships allowed them to feel safe at the university and share their experiences in a supportive and respectful environment.

> *The camaraderie and support from fellow students and all the rich information provided through guest speakers and lecturers. Having a place to feel safe about sharing [was important]. (FG participant)*

> *Understanding that my experiences were not alone – that each person brings individual strengths and successes to their program and that we can learn from each other in that way. The emphasis on cultural protocol and respecting everyone attending [was beneficial]. (FG participant)*

> *SAGE was a break for me to recuperate. A place where there are people with common struggles and interests. It is where the heart and the head come together. It is all connected. (FG participant)*

The role of culture also comes out in the above quotation, in that through the SAGE meetings students felt respected by having Indigenous cultural protocols recognized and practiced.

Self-accountability to academic studies

SAGE not only provided students an opportunity to meet fellow graduate students, it also provided a support structure that challenged students to be accountable to the goals that they set for themselves during the opening and closing circles. While no one is "documenting" the commitments students identify for themselves, it is clear from their comments that students are motivated to work, encouraged about their research, and supported by sharing their work commitments orally with others.

> *The most beneficial aspect of attending the SAGE meetings is the encouragement provided by all the members in the circle. Although I did not attend all the meetings I was provided with updates, readings, thoughts, ideas and invitations to participate in monthly events etc. (FG participant)*

> *SAGE for me is my 'check-in' – see if I am aligning myself. (FG participant)*

Recommendations for Improving SAGE

Of the 31 respondents who answered the question "Do (did) you attend the monthly SAGE meetings?" approximately half said yes. For those respondents who did not attend all SAGE meetings, their reasons for not attending were mostly due to scheduling conflicts; between balancing full-time studies, work, and family, they could not attend the meetings. Others indicated that they were often out-of-town, had scheduling conflicts, or were so immersed in their own research that they were not able to attend. For example, the need for childcare and transportation to get to the meeting location hindered some students from attending even though they wanted to.

> *Time, it's difficult to attend meetings during the weekend when I have to look after my family. It would help if you had child-minding activities so that student-parents could attend. (FG participant)*

A few respondents indicated that the SAGE meeting topics may not have been relevant to them that particular meeting so they did not attend. This may have been particularly true for those participants who were currently

undergraduate students and attend SAGE to learn about graduate school. For example, one participant said she did not attend the meetings because "Topics don't meet my needs. I think more support is needed at the undergrad level to get into grad school. Topics seemed to focus on thesis writing" (FG participant).

SAGE's commitment to its participants' and the demands of graduate student life continues to evolve (e.g., offering day-time on-campus workshops, improving email communications, and sharing resources). Respondents further suggested SAGE continue to offer a wide variety of topics (from applying to graduate school to finding a job) on a rotating basis so that the needs of the membership are addressed. Many participants expressed a deep appreciation for SAGE and the work that was being done in the respective pod locations.

> *I appreciate all the hard work the leaders and members continue to provide to the community. It is hard to improve on that. (FG participant)*

> *Since the only meeting I've attended was wonderful and have no other experience to base an evaluation on – I don't really see how the meetings can be improved. (FG participant)*

Recognizing that the SAGE pods are essentially run by fellow members and faculty members who volunteer their time, this participant suggested that a funded student position be created at each pod to provide consistency and a regularized schedule of SAGE meetings.

> *Continue to stick to a regular meeting schedule. Focus on improving the skills inventory of students. I am speaking in support of outside of Vancouver pods. I feel that because SAGE is such an important support mechanism for students that a financial contribution could be offered for a student to coordinate in the regions. Lives get really busy so it would be very good if someone could be compensated to ensure that SAGE maintains continuity. The meetings are sometimes run at the mercy of volunteers. (FG participant)*

There was also evidence from the survey respondents that not all the SAGE pods have access to the same resources, including guest speakers, or enjoy the same frequency of meetings. In pointing out where SAGE needs to improve, participants were also able to articulate how SAGE could help them. For example, this participant suggests the use of video conferencing to link up the different pods.

> *Advertise better, provide better funding/or better options for people not living in Vancouver? I know this happens in almost every facet of life up north, but there is a very clear divide and the feeling up north was that SAGE was a lower mainland process, and we northerners were an after thought. Hold meetings with/over video-conference so non UBC'ers can participate in the "good stuff" happening down in Vancouver etc. (FG participant)*

Therefore, the role of the annual graduate student conference becomes an important part of the continuing networking of SAGE members across the province. As this participant explained,

> *Attending the SAGE Vancouver conference in 2005 or 06? Taiaiake Alfred was the keynote. It was nice to meet graduate students from UBC and other schools in the south and actually feel connected to something bigger. (FG participant)*

6 KEY RESULTS FOR A PROPOSED TRANSITION FRAMEWORK

This section reiterates the major research questions, the research methods that shaped the development of the Aboriginal Transitions Undergraduate to Graduate (AT: U2G) Framework, and the key results. First the research questions:

1. What factors facilitate and hinder Aboriginal undergraduates' access and admission to graduate programs?

2. How can the facilitating factors be strengthened and the hindering factors mitigated?

3. What are the critical components that would comprise a successful transition framework for Aboriginal learners? What are they important? How can they be incorporated?

Second, the study used the following research methods, which are described in more detail in section 4 of this report:

1. An extensive review of scholarly literature about transition and retention of Indigenous and minority post-secondary students. There is very little literature that focuses on transition from undergraduate to graduate studies for Aboriginal students. In order to understand this transition and to identify success factors for transitional purposes, an extensive examination was completed on research literature that included Indigenous and minority students such as African American and Latino/Latina peoples. Included are discussions of retention theories about undergraduate studies, supports and barriers students encounter while completing undergraduate studies, and challenges and successes for supporting students through to doctoral studies.

2. An institutional scan of Indigenous graduate programs and student services offered at universities and university-colleges across Canada, and at selected universities in the United States. Three case studies were developed using web site information and publically available reports.

3. A secondary analysis of administrative student data. Data were analyzed to gain a better understanding of the various post-secondary pathways that Aboriginal people took to graduate education.

4. Six administrator interviews. These administrators oversaw Indigenous graduate programs and were mainly faculty members.

5. An Aboriginal Graduate Student Survey. This was administered online throughout British Columbia.

6. SAGE focus group discussions. Focus groups were held at five BC universities – UBC Vancouver, Simon Fraser University, UBC Okanagan, University of Northern British Columbia, and University of Victoria.

7. Three focus group sessions at UBC Vancouver and University of Northern British Columbia with Aboriginal undergraduate students. Participants discussed transitional framework ideas.

8. An Aboriginal Undergraduate Student Survey. It was administered on line to students at UBC Vancouver, UBC Okanagan, Simon Fraser University, and University of Northern British Columbia.

Indicators for successful undergraduate to graduate transition were identified in all of the above methods, as were issues vital to facilitate successful transition and completion of graduate degrees (in response to research question 1).

The discussion of findings was organized around these four major phases of graduate education that had relevance to transitioning from undergraduate to graduate study: the decision to pursue graduate study; access and admission experiences; first year graduate experiences; and completion of a graduate (master's) program. The following major themes emerged from an examination of helping and hindering factors experienced by many of the study participants (in response to research question 1):

- Mentoring and supportive relationships make a difference
- Individual responsibility to plan and to prepare for graduate school makes a difference
- People make institutions user and Aboriginal friendly, and relevant
- Depersonalized and colonial institutional barriers still exist
- Navigating different learning expectations in graduate studies is challenging
- Navigating racism is a critical challenge
- Working with and providing communication about university student services are important
- Sharing Aboriginal Knowledge and Aboriginal methodology for graduate education is necessary

Fellow undergraduate students and graduate students were very influential in helping individuals make the decision to pursue graduate studies. Faculty members who encouraged and assisted undergraduate students with applications to graduate programs were the second most important influence. Relationships in the forms of peer support and mentoring from graduate students and faculty were key success indicators in this initial phase of thinking about and making a decision to pursue graduate education. Those who took the initiative and found both graduate information and people to talk to also experienced more success with their access and admission to graduate school.

University personnel such as departmental secretaries, graduate advisors, and faculty members often made a difference as to whether one chose to submit an application to that university or not. Often potential applicants who did not receive personal help from a faculty member did not know what questions to ask or did not know what decisions needed to be made during the application process.

SAGE was a major success indicator for providing role models to undergraduate students, for providing access and admissions assistance, for facilitating a sense of belonging to a community of learners, and for providing a social, academic, and cultural network of graduate students.

Racism and a perceived depersonalized and colonial institutional attitude continues to present barriers students in all phases of graduate education. These too are key findings that must be addressed in a transitional framework. The study participants shared many personal stories of experiencing these difficulties but they also shared many experiences where they took personal responsibility to navigate various bureaucratic procedures and racist encounters, and to use family and peer support networks. Their lived experiences and consequent understandings of how to access and complete graduate education are also success indicators that can be built upon in a transitional framework.

Graduate students seemed fairly satisfied with academic services provided by their universities such as libraries and book stores, but there were services that they did not use such as university residences or disability services. Students may not need these services, or they may not be eligible, or they may not know they exist. A transitional framework could assist with providing information on types of student services that are available.

An important area that needs greater attention is addressing Aboriginal Knowledge and Aboriginal methodology in respectful, responsible, and reciprocal ways. This area is gaining momentum in academe and many participants noted the importance of Indigenous programs and faculty as factors for choosing their graduate program. Survey responses indicate that while there is satisfaction with these areas, it could be better. A transitional framework could enhance the sharing of Aboriginal methodologies and sharing Aboriginal Knowledge understandings and resources. The next section describes the transitional framework that is based on the research findings.

Framework/Model Description

Based on a comparative analysis of the literature and environmental scan, and the major findings of the surveys, interviews and focus groups, the following three major approaches will form the foundation of the AT: U2G framework: access, relationships, and digital technology (in response to research questions 2 and 3).

Access focuses on providing a variety of scholarly and research based experiential programs or activities that introduce Aboriginal undergraduate students to a range of graduate programs and to various forms of research knowledge and skills. The literature review and environmental scan provided examples of summer research and graduate preparation programs that have increased the numbers of Indigenous or minority students over a multi-year period (particularly the University Research Opportunity Program, Summer Research Opportunity Program, and the Graduate Achievement Program).

Relationships that focused on mentoring from senior graduate students and faculty members, support from peers, and support/encouragement from family and community members were a key finding from the graduate focus groups and survey. The importance of these relationships to the continued persistence of Aboriginal undergraduate and graduate students needs to be emphasized as a key component to Aboriginal student success. Mentoring from faculty members ranged from encouraging one to consider graduate studies, to assisting with the application process, to providing research assistantships to undergraduates, and to being involved with SAGE. The intergenerational nature of mentoring is included in this framework because Aboriginal undergraduate students noted that being with and learning from Aboriginal graduate students was inspirational to them and this mentorship helped them deal with their questions and problems.

It should be noted that at least three SAGE participants have now completed their doctoral degrees and are now SAGE pod/site faculty mentors. Faculty may not know the impact that their encouragement, support, and mentorship has had upon both undergraduate and graduate students. This part of the transition framework provides faculty with this recognition and suggestions

for those who would like to do such mentoring in the future.

Digital Technology will facilitate the development, implementation and sustainability of the AT: U2G transitional framework. Web 2.0 in higher education is expanding the possibilities for social interaction, for storing and accessing information and resources in a variety of media, and for developing materials and engaging in learning experiences with a participatory and networked oriented approach. The various activities undertaken in this transitional framework could be video-recorded, stored and displayed as a pod-cast, and archived in text and powerpoint formats. Many of the student participants in this study wanted to hear graduate student stories that could be archived in any of the aforementioned

ACCESS

Proposed programs include:

1. Orientation/workshop sessions that provide general tips and information. Topics in these sessions include:

    • factors to consider in selecting and applying to graduate programs
    • how to plan for graduate education;
    • admissions information and assistance
    • financial planning
    • expectations for applying for Tri-Council graduate fellowships such as SSHRC, CIHR, and NSERC
    • applying for Aboriginal specific fellowships
    • identifying potential faculty advisors/ research supervisors
    • writing letters of intent for applications
    • balancing academic and personal life

2. Research internship/assistantship initiative. Students work with faculty members on their research, receive tutorials on research methodology, and become familiar with graduate programs and their requirements. Students will be paid a stipend. They will also develop materials for the other aspects of this transitional framework?

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RELATIONSHIPS

Propose relationship-oriented initiatives include:

1 A SAGE-like initiative for undergraduates with pods/sites located at various universities in BC (for now, it is called SAGE-Undergrad).
   • The sites could be at these locations:
   - Lower Mainland with UBC-V & SFU
   - Vancouver Island with University of Victoria or Vancouver Island University
   - Thompson Rivers University;
   - UBC-Okanagan
   - University of Northern British Columbia.
   These locations have the largest numbers of Aboriginal students enrolled in undergraduate programs and comprise the major regional areas of the province.
   • Each pod would require a faculty mentor and a student coordinator.
   • A provincial student coordinator and a provincial faculty mentor are required to ensure coordinated communications and sharing of information among the SAGE-Undergrad pods.
   • Another function could be to develop and offer the access activities.

2 A province-wide symposium, to be held with faculty members (Aboriginal and non-Aboriginal) who are identified by Aboriginal graduate students as being effective mentors. They will discuss their mentoring approaches and suggest ways that faculty can be encouraged and prepared (in-service) to be mentors for Aboriginal undergraduate students who show promise and interest in graduate education. Their discussions will be video-taped and documented for future mentoring activities.

DIGITAL TECHNOLOGY

Proposed uses of digital technology include:

1. Record, display and archive activities through technologies such as video recording, podcasting, text and presentation formats.

2. A web site which would be a portal of information for graduate students.

3. Developing modules about key areas of support, such as:
   • specific disciplines or graduate programs,
   • completing a research ethics form
   • getting ready for a thesis defence
   • what to consider in applying to a graduate program.

4. Social networking applications such as blogs and wikis.

cific disciplines or graduate programs, or about phases of a graduate program such as completing a research ethics form or getting ready for a thesis defence, or about the many points to consider in applying to a graduate program. Social networking among Aboriginal graduate students could be done through blogs and wikis. Aboriginal undergraduate and graduate students would be involved in developing the digital technology activities and resources to give them the flavour of an intergenerational learning community..

Provincial Applicability of AT:U2G Framework

The AT:U2G Framework consists of the SAGE-Undergrad initiative and the Web 2.0 resources. The SAGE-Undergrad initiative has a province-wide reach in that the universities with substantial Aboriginal undergraduate students will participate. Its structure and the way it operates can be similar to that of its relation, SAGE. The participants determine their agenda/activities, they share their experiences, and they support and challenge each other to stay on track with their studies; therefore, they ensure that this initiative meets their local needs. The principles of running a SAGE -like session

formats. A web site could also serve the function of a graduate student portal with information about various graduate programs, finances, resource materials, theses/dissertations etc. Modules could be developed about spe-

can be documented and shared with any post-secondary institution wanting to offer this type of transition initiative. Based on the SAGE experience, other universities in Ontario have set up a SAGE initiative at the University of Toronto/Ontario Institute for Studies in Education and at Laurentian University.

After the access orientation and workshop activities are developed and piloted they can be documented via digital technology and archived on the web portal, making them accessible to BC and the world. The research assistantship will also be documented and a report on what was successful and what was problematic will be posted on the web portal for others to use.

The web portal and Web 2.0 activities will be available to anyone who wishes to access them; therefore ensuring wide access and sustainability.

Project Framework Implementation

We will work as a consortium with our university partners and SAGE to determine which sites will pilot test specific components. Each constituent will contribute its particular strengths and interests, while the consortium relationship facilitates coordination and communication. For example, one university may agree to pilot access initiatives/workshops on topics such as "How do you choose a graduate program?" or "Tips for a successful application to graduate program" or "Developing a graduate education plan." Another university may agree to develop and oversee the piloting of effective faculty mentoring principles and practices.

The web site/portal will be pilot tested with a few different groups at different locations to ensure we address applicability to various universities in BC, regional variations, and disciplinary diversity.

The SAGE-Undergrad will establish pods at regional areas in the province. During an academic year, members of any given pod will develop their own activities but will have opportunities from time to time to meet members of others pods, gathering as one large group to share successes and challenges. The graduate students involved in SAGE will also act as mentors to SAGE-Undergrad that will provide an inter-generational pedagogical approach.

Project Endorsement & Partners

The following universities have agreed to participate in various aspects of the development, piloting, and evaluation of the transition framework: University of British Columbia (Vancouver and Okanagan), Simon Fraser University, University of Victoria, Vancouver Island University, Thompson Rivers University, and the University of Northern British Columbia.

Because the principal researcher and the majority of Advisory Committee members are from UBC, it will be the principal partner. The co-principal investigator is from Simon Fraser University; therefore, SFU will be a major partner. SAGE will continue to be a partner in phase 2. This partnership is critical to the success of the transitional framework because we will rely on SAGE participants and network for student engagement and assistance and for communications.

Evaluation

Evaluation data will be collected in various ways:

1. Intake and exit surveys will be completed with all participants who are involved in the research assistantships; as well as individual interviews with those who volunteer.
2. Student research assistants will be asked to keep a journal to be used for evaluation purposes.
3. Participant evaluation questionnaire will be administered after various workshop and orientation sessions.
4. Web site hit counts and an online feedback form will be collected to provide evaluation of web site/portal.
5. Focus groups will be held with undergraduate students at participating university sites to evaluate web site portal launch and evaluation.
6. Student participants will be interviewed (at SAGE-Undergrad pods).
7. Faculty and staff participants will be asked to complete an evaluation questionnaire and to be interviewed.
8. Future research will be considered for longer term tracking of participants along with admission rates to graduate studies by Aboriginal students.

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