

STUDENT INVOLVEMENT AND STUDENT SUCCESS IN HIGH SCHOOL TO POST-
SECONDARY TRANSITIONS

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University of Saskatchewan
Saskatoon

By
VICKY PAROHL

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Department Head

Department of Educational Administration

University of Saskatchewan

3079 Education, 28 Campus Drive

Saskatoon Saskatchewan S7N 0X1

Canada

OR

Dean

College of Graduate and Postdoctoral Studies

University of Saskatchewan

116 Thorvaldson Building, 110 Science Place

Saskatoon Saskatchewan S7N 5C9

Canada

ABSTRACT

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The literature reviewed in this study includes previous studies on high school grades as an indicator of success in post-secondary education, the relationship between institutional environment and student success, student expectations for post-secondary, and a review of theories on students and belonging, student motivation, and students in transition. Data were obtained through sequential mixed-method study. In the first phase of the study, 55 students representing rural public, rural separate, urban public, and urban separate schools who began their post-secondary studies as first-year, direct-entry students in the year prior to the study participated in an online questionnaire, which was used to collect primarily quantitative data. Five of those students participated in a follow-up interview which was used to collect qualitative data. The study confirmed that, for this sample of students, there was a correlation between high school and post-secondary grades. The correlation was stronger for students who attended schools in urban communities. While there was a relationship between high school environment and student involvement, there was no significant correlation between student involvement and a student's high school average. The study found that there was a moderate positive correlation between time spent on homework in high school and subsequently post-secondary, as well as hours spent on homework in post-secondary and term 1 average. Students were not entirely sure what to expect when they began their post-secondary studies and struggled most with not knowing the expectations of each instructor. Based on the findings of this pragmatic study, the researcher identified recommendations for practice in post-secondary institutions as well as considerations for high school educators to support students who are transitioning from high school to post-secondary education.

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CHAPTER ONE: INTRODUCTION

This chapter provides an introduction to the research problem and the impetus for pursuing this study, including an explanation of relevant definitions, and an overview of limitations, delimitations, and assumptions as they relate to the study.

Background to the Problem

High school grades are often used by post-secondary admissions officers when assessing students for admission. While high school grades are an indicator of potential success in post-secondary education (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene, Galambos, & Lee, 2004; Lee, Smerdon, Alfeld-Liro, & Brown, 2000; Pike & Saupe, 2002; Sawyer, 2013), a review of relevant literature reveals that there are environmental factors within the high schools that impact opportunities for student success (Betts & Morell, 1999; Cyrenne & Chan, 2012).

One of the ways that high school environment can impact student success is how the environment facilitates opportunities for student involvement and a sense of belonging. Student involvement and a sense of belonging in the classroom are important factors that contribute to students achieving academic success in both high school and post-secondary education (Astin, 1999; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987; Waters, Cross, & Runions, 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread declaration on school connections [Wingspread Declaration], 2004). If students feel that they do not belong to or fit at their institution they may choose to discontinue their studies (Tinto, 1987; Tinto, 1999).

Students who come from different high school environments will have had different high school experiences and will experience their transition to post-secondary education in different ways. As a result of having different high school experiences, students begin their post-secondary studies at different levels of academic and social preparedness. Collier and Morgan stated that students need to be more than just academically prepared to be successful in their post-secondary studies. They argued that students must also be able to demonstrate what they have learned and prove their knowledge in order to be successful. The authors proposed a model that distinguishes between “learning the college student role and learning course content” (Collier & Morgan, 2008, p. 428). Based on the model presented by Collier and Morgan, students coming from different backgrounds may all have received similar educations and may begin their studies with comparable academic skills; however, it is a student’s ability to express

what they know and understand that impacts how successful they will be. The high school environment is not just where students receive their education, but that environment is also where they learn how to learn and apply their knowledge. Some high school environments will be more conducive to students learning how to express their knowledge. Chapter two will explore Collier and Morgan's (2008) model further.

Since every student will have a different high school experience, it can be difficult for parents, high school educators, and post-secondary staff and faculty to prepare students for and support students in their transition from high school to post-secondary education. With a greater understanding of the role that high school environment plays in student transitions, adults can be more adequately prepared to support students as they transition to post-secondary education.

Context: The Canadian Educational Landscape

There are multiple governing bodies overseeing education in Canada. In each of the ten provinces and three territories, there are departments or ministries of education that "are responsible for the organization, delivery, and assessment of education" (Council of Ministers of Education, Canada [CMEC], n.d.). In many of these jurisdictions, governance is divided further with separate ministries or departments for elementary and secondary education and post-secondary or advanced education (CMEC, n.d.).

According to Statistics Canada (CMEC, n.d.) there are approximately 3,400 secondary schools and 2,000 mixed elementary and secondary schools in Canada, meaning that a Canadian student applying for post-secondary admission could have graduated from one of 5,400 schools, or even home school, each offering a unique environmental experience. The website of the Council of Ministers of Education, Canada (n.d.) explains that, although there are many similarities in the educational systems across the country, "there are significant differences in curriculum, assessment, and accountability policies among the jurisdictions that express the geography, history, language, culture, and corresponding specialized needs of the populations served" (para. 3). The educational landscape in Canada reflects the country's varied history and its diverse population. The governance of education in each province or territory is a reflection of the diversity of that particular location.

Provincial Education

The province of Saskatchewan, where this particular study took place, has a Ministry of Education as well as a Ministry of Advanced Education. The Ministry of Education oversees pre-kindergarten to grade 12 education. As of September 30, 2020 there were 27 school divisions in Saskatchewan, varying in size from 355 to 25,213 students (Government of Saskatchewan, 2020). In Saskatchewan, there are 620 public schools, 142 separate schools, and 16 French schools. Of the 778 schools/programs in Saskatchewan, 310 cater to a kindergarten to grade 12 (K-12) population and there are 64 high schools (offering grades 9-12 inclusive) in the province (Government of Saskatchewan, 2020). These statistics demonstrate the diverse high school environments that exist in Saskatchewan. The Ministry of Advanced Education in Saskatchewan oversees post-secondary institutions, including universities, colleges, and schools (Government of Saskatchewan, n.d.). There are two universities in Saskatchewan: the University of Regina and the University of Saskatchewan.

Local Education

In pre-K-12 education, schools are usually governed locally by “school boards, school districts, school divisions, or district-education councils” which generally oversee “the operation and administration (including financial) of the group of schools within their board or division, curriculum implementation, responsibility for personnel, enrolment of students, and initiation of proposals for new construction or other major capital expenditures” (CMEC, n.d.). Because there is no standard way of implementing curricula or assigning grades, students may be getting a different academic experience and might be assessed differently from one school to another depending on which school they attend.

The differences in curricula, grading practices, and high school experiences across schools and school divisions also presents a challenge for post-secondary institutions attempting to determine criteria for admission and in assessing students for admission to their programs. This has resulted in some post-secondary institutions in Canada adopting mechanisms that consider the high school that an applicant attended when considering applications. For example, the faculty of engineering at the University of Waterloo in Ontario recognized that some schools were inflating student grades more than others, so they devised a list that helped them to factor in which high school a student attended when they were making admissions decisions (Cain, 2018). Waterloo maintains a list not only for schools in Ontario, but they apply a similar concept among

the Canadian provinces as well as internationally. The example from the University of Waterloo demonstrates how an institution could leverage information regarding school environment to help admissions officers in making admissions decisions.

In Saskatchewan, a parent expressed concern to the Regina Leader-Post over some school divisions weighting final exams differently than others by using attendance as an incentive for students to have an opportunity for their final exam mark to not have a negative impact on their final grade should they do poorly on the exam (Giesbrecht, 2019). The parent was concerned about how attendance incentives may disadvantage some students for post-secondary admissions if they do not have access to the same incentives. The example coming from Saskatchewan shows how students may be advantaged or disadvantaged depending on the way their school assesses students and assigns final grades.

Rationale for the Study

This study explored how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influenced student transitions and academic success (as perceived by the student) in post-secondary education. In this study, students were asked to select from a number of options which description best matched their high school. Based on student responses, the high school environments used in this study included whether high school was in a rural or urban community and whether it was a public or separate school. Students were also asked to describe how they perceived the environment of their high schools; descriptions included interactions with peers and teachers, size of the school, and the classroom dynamic. Variables of student involvement included the amount of time students spent on homework, their engagement in classroom discussions, the way their teachers encouraged discussion in the classroom, and their participation in athletic and non-athletic extra-curricular activities.

Given recent economic challenges, it is becoming increasingly more critical for post-secondary institutions not just to recruit students, but also to retain them (Gorgodze, Macharashvili, & Kamladze, 2020; Hardy Cox & Strange, 2010). Stone (2010) suggested that it is essential for high school teachers and counsellors to help prepare students for what to expect and how to succeed when they enter post-secondary education. Gorgodze et al. (2020) explained that it is important for universities to know what students expect so they can continue to attract and retain students. The results of this study could help students prepare for the transition from

high school to post-secondary. It could also help inform parents or guardians of students, teachers, post-secondary counsellors, and other adults supporting students of ways in which they can help students prepare for the transition from high school to post-secondary. Finally, it could help professionals working in post-secondary institutions understand how to support students in an effort to increase student retention rates.

The Researcher

I grew up in a Saskatchewan town with a population of approximately 5,000 people. My graduating class had just over 80 students. I attended the public high school in town and, while I did not have close relationships with everyone in my class, I did know who all my classmates and teachers were. In high school I easily maintained an average of higher than 90% without spending much (if any) time outside the classroom on homework or studying. I was well-liked by my teachers and this gave me the impression that I was academically inclined. While I knew that post-secondary education would be more work, I expected that I would continue to excel in my studies. During my first year as an undeclared student in the College of Arts and Science, which I completed at home through the regional college, I struggled to maintain a 60% average. I realize now that my high school experience did not prepare me for what to expect in my first year of studies; I felt as though I had not learned how to learn. I also felt lost in the classroom; it was difficult to involve myself in classroom discussions as I did not know my peers and, perhaps more importantly, my instructors had no idea who I was. While my intrinsic motivation was low, I managed to complete my degree because I felt that was what was expected of me by my parents and peers.

Upon completion of my degree I began working at a university, eventually undertaking academic advising for undergraduate students. I regularly met with students who were struggling with the transition from high school to post-secondary. Many students struggled with living on their own for the first time, managing their time, meeting the academic demands of their courses, or the shock of seeing their average fall well below what they had expected. At the same time, several students thrived; these students seemed to be able to balance extra-curricular activities, social interests, and excel in their studies all at the same time. I wondered why some students were able to transition more easily than others and, based on my personal experiences, whether their experiences in high school had anything to do with it.

Purpose of the Study

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The study was conducted using a mixed-method approach. The research problem was explored through a pragmatic lens, which focuses on the outcome of the research results and allows for the selection of the method or methods that best match the research problem (Creswell, 2007). The quantitative aspect of the study sought to explore a cause-and-effect relationship between high school environment, student involvement, and post-secondary success. The qualitative phase of the study elaborates on the results of the quantitative phase by determining how individual students interpret their involvement and successes in their high school and post-secondary environments. An online questionnaire was used for the quantitative phase of the study and in-depth interviews were used for the qualitative phase of the study. An explanatory sequential mixed-method design was used, where quantitative data was collected and analyzed followed by the collection and analysis of qualitative data to build upon and further explain the results of the quantitative data (Creswell, 2014).

The findings of this study highlight the importance of educators and educational staff in both high school and post-secondary institutions working better together to support students in transition. With a better understanding of how students coming from different high school environments experience the high school to post-secondary transitions those in staff, faculty, and administrative roles at both levels of education could be better prepared to foster for students an environment and experience that is conducive to student success. Student success may mean student retention, academic achievement, goal realization, or it may be defined differently by different parties.

Research Questions

This study aimed to investigate how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. To this end, the following five questions guided the study:

1. How does high school environment impact a student's level of involvement in their high school?
2. What is the connection between high school environment, student involvement in high school and subsequently in post-secondary education, and student success (GPA and student perception) in post-secondary education?
3. How do student expectations align with their experiences in transitioning from high school to post-secondary education?
4. What do students identify as the easiest and as the most difficult aspects of the transition from high school to post-secondary education?
5. How do students feel they could have been better prepared for what to expect when making the transition from high school to post-secondary education?

Assumptions

There were six assumptions underlying this study:

1. There is a correlation between a student's high school grades and their post-secondary grades (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013);
2. There are several factors other than just high school grades that can help predict student success in post-secondary education (Astin, 1993; Betts & Morell, 1999; Collier & Morgan, 2008; Cyrenne & Chan, 2012; Fishman, 1961; Pike & Saupe, 2002);
3. High school environment influences opportunities for student success (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Gallop & Bastien, 2016; Kirkness & Barnhardt, 2016; Lee et al., 2000; McGrath, 2010; Oloo, 2007; Weiss, Carolan, & Baker-Smith, 2010);
4. Student involvement and a sense of community within the school environment contribute to student success at both the high school and post-secondary levels (Astin, 1999; Baumeister & Leary, 1995; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987, 1988, 1999; Waters et al., 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread Declaration, 2004);

5. Students who attend high schools with similar environments will tend to have similar experiences with their transitions to post-secondary education and similar levels of student involvement at both the high school and post-secondary levels; and
6. Parents, educators, and staff in high schools and post-secondary institutions can influence involvement or success if they understand the student's high school environment.

Delimitations

This study had the following delimitations:

1. **Sample:** The sample for this study included first-year, direct-entry students beginning their post-secondary education in the fall immediately following their high school graduation. As this study focused on high school to post-secondary transitions, it is important that students made a direct transition from high school to post-secondary in the fall term immediately following their high school graduation. Students were invited to participate in an online questionnaire via the institution's student web portal. During the questionnaire students were asked if they were willing to participate in the second phase of the study. A selection of those students who attended high schools of different environments participated in in-depth interviews.
2. **Location:** The research took place at one Canadian post-secondary university. This study focused on high school environments and, as such, the type of post-secondary institution is not being studied. Students at the institution were studying in different direct-entry colleges within that institution.
3. **Time:** Data was collected beginning in September 2020 through to December 2020.

Limitations

This study had the following limitations:

1. This is a study on student involvement. The researcher recognizes that those students who are more likely to be involved were more likely to self-select for this study and the data is more likely to reflect the views of involved students than those of un-involved students.
2. This is a study on success. As interviews occurred during the students' second year of study, students who struggled may no longer be at the institution. As such, the data is more likely to reflect the views of successful students than those who struggled to be successful.

3. Phase two of this study relied on relationship building and a level of trust between the researcher and the interviewees. In ideal circumstances, those that indicated they were willing to participate in phase two of the study would be open to discussing their experiences.
4. Students were asked to reflect on their expectations after they have arrived and had undertaken a year of study at the institution. Asking students about expectations after they arrived allowed students to provide a reflective account of how their expectations compared with the actual transition; however their account of their expectations may have been skewed by their actual experiences.
5. This study relied on participation from students who attended multiple school types. Given that fewer than the ideal number of students participated, the results of some data analysis may not be statistically significant. The methodology of the study was adjusted to account for fewer student participants.
6. In March 2020, in response to the COVID-19 pandemic, the University of Saskatchewan (and universities around the world) shifted to remote learning. Student perceptions may have been further skewed by this experience.

Definitions

Affective Coding Methods: Affective coding methods explore the “subjective qualities of human experience (e.g., emotions, values, conflicts, judgments) by directly acknowledging and naming those experiences” (Saldaña, 2013, p. 105). Emotion coding and values coding, which were both used in this study, are both types of affective coding.

Emotion Coding: Emotion coding is a method of affective coding that labels “the emotions recalled and/or experienced by the participant, or inferred by the researcher about the participant” (Saldaña, 2013, p. 105). Emotion coding is particularly appropriate “for those [studies] that explore intrapersonal and interpersonal participant experiences and actions” (Saldaña, 2013, p. 105).

GPA/Grades: A student’s grade point average (GPA) is “the average obtained by dividing the total number of grade points earned by the total number of credits attempted” (Grade point average, n.d.). The institution at which this study was undertaken considers a five-subject average for direct entry admission where they use grades from one English course, one Math course, and three other approved subjects (Calculating your average, n.d.). Students were asked

to report their five-subject high school average and were instructed on how to find this in the University's online web portal. While the primary focus of this study was on a student's perception of their own post-secondary success, students were also be asked to report their weighted average from Term 1 (September through December) of the academic year, which is "calculated by multiplying the grade achieved in each class by the number of credit units in the class. The sum of the individual calculations is then divided by the total number of credit units to produce the weighted average" (Understanding your grades, n.d.).

Incongruence: Occurs for students when there is a "perceived mismatch between the social value, preferences, and/or behavioral styles of the person and those which characterize other members of the institution, expressed individually or collectively" (Tinto, 1987, p. 53)

Institutional Characteristics: Include measures such as institutional size, student to teacher or instructor ratio, and the operating budget of the institution. (Astin, 1993)

Institutional Control: Refers to the "principal source of governance or control (public, Protestant, Roman Catholic, nonsecretarian)" (Astin, 1993, p. 33). This particular study looked at students who attended public or separate schools.

Institutional Environment: Comprised of institutional control and characteristics. In this study, institutional environment refers to a public or separate school in a rural or urban community.

In Vivo Coding: Uses words and phrases as they appear in the transcript, in the words of the participants (Strauss, as cited in Saldaña, 2013). The use of In Vivo coding is particularly useful in "studies that prioritize and honor the participant's voice" (Saldaña, 2013, p. 91).

Public school division: "Is a school division other than a separate school division;" (Education Act, 1995, p. 13).

Rural community: A community that resides outside of a population centre/urban area (Statistics Canada, 2017). In this study, rural community was used to describe a community of fewer than 1,000 inhabitants.

Urban community: An urban community – referred to as a population centre since the 2006 census – "has a population of at least 1,000 and a population density of 400 persons or more per square kilometre" (Statistics Canada, 2017). As students were not asked to report on population density, the Statistics Canada threshold of a population of 1,000 or more was used to define urban communities in this study.

School: In Saskatchewan, a school is defined as “a structured learning environment through which an education program, under the jurisdiction of a board of education, the conseil scolaire or the ministry, is offered to pupils and to children attending kindergarten” (Education Act, 1995, p. 13)

Separate schools “Reflect the constitutionally protected right to religious education for Roman Catholics or Protestants, when either group is the religious minority in a community” (CMEC, n.d.).

Students in transition: Refers to high school graduates who are transitioning from a high school environment to a post-secondary education environment.

Success: Is a “complex and multi-dimensional” concept (Hardy Cox & Strange, 2010, p. 18). As defined by the institution, success could be measured by program completion (Hardy Cox & Strange, 2010), student retention (Hardy Cox & Strange, 2010; Sawyer, 2013), or student grade point average (GPA) (Sawyer, 2013). Success as defined by the student could mean “the achievement of a specific, short-term academic goal” (Hardy Cox & Strange, 2010, p. 18). This study asked students to self-report their GPA and reflect on whether they achieved success based on their own ideas of what success means.

Values Coding: Is another type of affective coding method and refers to the “application of codes onto qualitative data that reflect a participant’s values, attitudes, and beliefs, representing his or her perspectives or worldview” (Saldaña, 2013, p. 110). Values coding is particularly valuable for “those studies that explore cultural values, identity, intrapersonal and interpersonal participant experiences and actions...” (Saldaña, 2013, p. 111).

Organization of the Thesis

The study is organized into six chapters. The first chapter introduces the research problem and the researcher, as well as context and rationale for the study. The second chapter provides a review of related literature. Chapter three outlines the method and methodology used in the study. Chapter four includes a presentation of the data while chapter five explores the findings of the study and discusses implications for policy, practice, and future studies.

CHAPTER TWO: LITERATURE REVIEW

The purpose of this chapter is to explore literature and theories related to educational environments, student interactions, student success, and student transitions from high school to post-secondary institutions. Researchers have concluded that high school grades are an indicator of post-secondary grades and that the high school environment may affect the correlation between a student's high school and post-secondary grades. This review considers theories that address student motivation, success, and resiliency in education. It examines how the high school environment may influence a student's involvement as a student at both levels of education, and the way students experience the transition from high school to post-secondary education.

This was a study on how high school environment impacts student involvement and student success in high school to post-secondary education. The study began prior to the COVID-19 pandemic, which removed the physical post-secondary environment for most students. Most of the new literature in the area of student involvement and motivation that emerged in the last year is related to remote learning and student engagement during the pandemic. As this is not a study on the effects of the pandemic, COVID-19 related literature was not included in the review.

Introduction

Several researchers have examined the post-secondary admissions process. These researchers have determined that high school grades are a valuable consideration in making admissions decisions as high school grades are indicative of a student's grades in post-secondary education (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013). Student success is determined in part by a student's psychological development but is also influenced by the systemic design of institutions at both the high school and post-secondary levels (Strange, 2010). Collier and Morgan (2008) stated that "unless we assume that grades are completely determined by prior preparation and personal skills, there must be other elements of academic integration that influence GPAs" (p. 426). Astin (1993) suggested that while those who achieve high grades in high school are likely to continue to do so in post-secondary, factors from the student's background also need to be taken into consideration when making predictions regarding student success. This literature review examines some of the non-grade-related factors that influence student grades and success in post-secondary education.

A student's preparedness for post-secondary education is one factor that influences their potential for post-secondary success. Students begin their post-secondary studies at various levels of readiness based on their experiences before starting their post-secondary education. Collier and Morgan (2008) argued that more than just academic skills and preparedness influence grades in post-secondary education. The authors proposed a conceptual model that distinguished between "learning the college student role and learning course content as two important influences on student performance" (Collier & Morgan, 2008, p. 428).

In the model proposed by Collier and Morgan (2008), academic skills and actual capacity are what a student brings with them when they begin their post-secondary studies. Academic skills involve a student's ability to read and acquire the knowledge and technical skills necessary to succeed, whereas actual capacity is what the student already knows and understands. A student's cultural capital and their ability to demonstrate their capacity are factors in a student's ability to transition from high school to post-secondary. Cultural capital is "preexisting knowledge about interacting successfully in academic settings, including such essentially social skills as the ability to recognize and respond to the standards faculty members use when they evaluate assignments" (Collier & Morgan, 2008, p. 429). The authors determined that academic skills and actual capacity reflect a "traditional model of education, where a student's academic ability determines the understanding of course material, which then determines academic performance" (Collier & Morgan, 2008, p. 428). Cultural capital and demonstrated capacity are implicit factors involving a student's ability to prove their academic skills and capacity; that is, cultural capital and academic skills are a reflection of a student's abilities, whereas demonstrated capacity and actual capacity are related to a student's performance. Based on the model presented by Collier and Morgan (2008), students coming from different backgrounds may all have received similar educations and may begin their studies with comparable academic skills; however, it is a student's ability to express what they know and understand that impacts how successful they will be.

Theoretical Underpinnings

A theoretical understanding of student interactions and motivation within educational environments creates a foundation of knowledge as to why students may or may not be successful in their academic undertakings or their transition from high school to post-secondary education. This section reviews theories that address student connectedness, student

involvement, student motivation, and student departure, and explores how these relate to student success.

Students and Belonging

Humans seek to belong; they desire “frequent, affectively pleasant interactions with a few other people” and “these interactions must take place in the context of a temporally stable and enduring framework of affective concern for each other’s welfare” (Baumeister & Leary, 1995, p. 497). Baumeister and Leary (1995) hypothesized that “a need to belong is a fundamental human motivation” (p. 497). The relationship between belonging, motivation, and student success is a common theme in educational literature (Astin, 1999; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987; Waters et al., 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread Declaration, 2004). A sense of belonging and a desire to be involved can influence a student’s motivation to learn (Astin, 1999; Ryan & Deci, 2000). Learning is a social endeavour, and a sense of community is crucial in fostering an environment that is conducive to student success (Wenger, 1999). Social connections within the academic environment help students feel cared for and supported (Blum, 2005; Waters et al., 2009; Wingspread Declaration, 2004), assist students as they develop their identity within the institution (Whannell & Whannell, 2015), and can help students find their place and achieve success as they transition from high school to post-secondary education (Tinto, 1987).

School Connectedness Theory. *The Wingspread Declaration on School Connections* (2004) “is based on a detailed review of research and in-depth discussions among an interdisciplinary group of education leaders” (p. 233) who convened at a conference to discuss student success and school connections. Those leaders determined that it is crucial for students to feel connected to the school, and those who do feel connected are more likely to be successful. The Declaration defines school connectedness as “the belief by students that adults in the school care about their learning as well as about them as individuals” (p. 233). Students who experience connectedness “feel that they belong, believe teachers care about them and their learning, believe education matters, have friends at school, believe that discipline is fair, and have opportunities to participate in extracurricular activities” (Blum, 2005, p. 17). Blum (2005) stated that school connectedness could be a substantial contributing factor to student achievement that schools can work to address.

Waters et al. (2009) stated, “connectedness to school can be thought of as a function of the dynamic interactions between individuals and their social and ecological environments” (p. 521). Several factors affect school ecology and student connectedness, including high academic standards, positive relationships with peers and teachers, and a safe school environment (Blum, 2005, p. 17). On the contrary, factors that can be a barrier to school connectedness include isolation, an unsafe environment, and a poor classroom environment (Blum, 2005, p. 17). When creating a classroom that encourages connectedness, Blum (2005) suggested that classroom culture is more important than classroom size, team learning encourages connectedness, students need to understand academic expectations, and, perhaps most importantly, teachers need to be supported by school administration to be able to foster successful learning environments in their school.

School connectedness influences students at all levels of education, and it is an essential factor in the context of looking at student transitions from high school to post-secondary school. School connectedness plays a role in student achievement and grades; students who come from schools that have a more supportive school ecology may complete high school with higher grades. If a student comes from a less encouraging school environment, their grades may reflect this. Further, a student’s ability to feel a connection at the post-secondary level is likely to be a contributing factor to their GPA at that level as well.

Student Motivation

While the theories above examine how students engage within their community, the following theories focus on how individual students may be motivated.

Student Involvement Theory. Astin (1999) proposed student involvement as a developmental theory for higher education. In Astin’s theory, the term ‘involvement’ is used in place of ‘motivation,’ as involvement is behaviour-based rather than a psychological state. Astin (1999) defined student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 518). A highly involved student would spend a lot of time studying, participating in student events and clubs, and interacting with peers and instructors. Highly engaged students are more likely to be successful; therefore, educational institutions should create environments that encourage student involvement (Astin, 1999).

Astin (1999) explored three other theories that explore student involvement: subject-matter theory, resource theory, and individualized theory. Subject-matter theory suggests that students

will learn just by exposure to the right materials. Subject-matter theory puts students in a passive role where they are not very involved in the learning process – such as a traditional lecture theatre environment – and highly motivated students are more likely to be successful in this type of learning environment. Resource theory focuses on having the right kinds of resources in place for students, such as access to tutors, funding, advisors, physical spaces, etc. Institutions are likely to spend a lot of time and money providing resources to students; however, resources are only valuable if accessed by students. Individualized theory tries to meet the needs of each student, focusing on access to personalized advising and opportunities for students to make their academic programs their own through access to electives and other individualized opportunities. Individualized theory is consistent with what Deci and Ryan (1985) suggested in their self-determination theory, which also proposed the importance of autonomy to influence intrinsic motivation.

Self-Determination Theory. Ryan and Deci (2000) suggested that motivation is determined by more than just biological traits; social environments also influence both intrinsic and extrinsic motivation. To be genuinely intrinsically motivated, “a person must also feel free from pressures, such as rewards or contingencies” (Deci & Ryan, 1985, p. 29). Non-supportive environments can hinder student motivation. Extrinsic motivation, in contrast to intrinsic motivation, “refers to behavior where the reason for doing it is something other than an interest in the activity itself” (Deci & Ryan, 1985, p. 35).

Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) is an approach to motivation that focuses not only on psychological and biological predispositions to motivation but also examines how the environment impacts motivational tendencies. It is rooted in intrinsic motivation, which is “the inherent tendency to seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn” (p. 70). Self-determination can either be supported or hindered by environmental factors (Deci & Ryan, 1985).

Deci and Ryan (1985) proposed a continuum of self-determination, which aligned types of motivation with regulatory styles, whether motivation is internal or external, and the types of processes related to motivation and regulation. External regulation involves processes such as external rewards and punishments. Ryan and Deci (2000) argued that the more external regulation a student experienced, the less that student valued or showed interest in the activity and the less likely they were to accept responsibility for their failures. Introjected regulation

means that people are taking on some sense of responsibility. However, introjected regulation is still an extrinsic motivator as it is more driven by guilt than being a genuinely intrinsic motivator. Introjected regulation is related to expending more effort than external regulation; however, it also leads to students experiencing more anxiety and handling failure poorly. The most autonomous and self-determined kind of extrinsic motivation is integrated regulation. Integrated regulation means that the activities an individual participates in are in congruence with an individual's values. Integrated regulation is still a kind of extrinsic motivation, as the motivator is still not purely for interest, enjoyment, or satisfaction. External factors still drive integrated regulation, such as when a student is motivated to study in school to eventually get a job.

It is essential that students feel connected to others and feel a sense of belonging in their environment to encourage internal forms of regulation or motivation (Ryan & Deci, 2000). In an educational setting, a sense of belonging will help with congruence and promote integrated regulation and self-determination. Based on this theory, students need to have a sense of autonomy, so that external regulations such as rewards and punishments are not their primary motivators (Ryan & Deci, 2000). Schools are not only crucial in helping to develop students' academic capacities, but they are also the primary way that young people are socialized and are therefore critical in helping shape the "self-esteem, coping capacities, social development, and personal values of children" (Deci & Ryan, 1985, p. 246). The development of these characteristics can also help students navigate periods of transition in their lives.

Students in Transition

The following theories explore student identity, emerging adulthood, how students experience the transition to post-secondary education, and reasons why students may choose to discontinue their academic studies.

Identity Theory Framework. Whannell and Whannell (2015) used identity theory as a framework to understand retention and attrition amongst university students in transition. They argued that, for student retention to improve at post-secondary institutions, administrators needed to know why students become disengaged. The authors suggested that many students experience significant changes in living and school environments when they transition to university, which also impacts the way they experience their transition (Whannell & Whannell, 2015). Students often find that they must be much more self-directed and self-sufficient when they begin their

post-secondary studies, as they may have had a lot more guidance and support from their teachers and parents when they were in high school (Whannell & Whannell, 2015). While students may appreciate their new independence, they may also struggle with meeting deadlines and being accountable for their schoolwork. Whannell and Whannell (2015) also suggested that students might struggle with their identity when they transition to university, and they may find this change to be even more difficult than the academic challenges they face. The authors expressed that this may be especially hard for students who come from smaller or rural schools, as students may go from an environment where they know every student in their classroom – or even school – to a campus where there are thousands of students within a large and possibly unknown city.

Whannell and Whannell (2015) suggested that post-secondary institutions could help support students through this transition by assisting students as they discover their identity during the first few weeks rather than focusing on having them demonstrate what they already know. Students need to find themselves, form relationships with their peers, and become comfortable within their communities so they can feel comfortable expressing themselves in their academic environment. Institutions can facilitate a sense of belonging through orientation programming and creating a sense of community within the classrooms. The authors also indicated that assessment and feedback should be formative and help students develop their identities as well as grow as learners (Whannell & Whannell, 2015).

Emerging adulthood. Emerging adulthood is a theory of development proposed by Arnett (2000) that focuses on the years from the late teens through the early twenties. Arnett described emerging adulthood as “neither adolescence nor young adulthood but is theoretically and empirically distinct from them both” (p. 469). Those aged 18-25 are often between the stage of childhood dependency but not yet at the stage of having all the responsibilities of adulthood. While this period in a person’s life used to be a time where young people would get married and start families, it is now more often a period of life “characterized by change and exploration for most people, as they examine the life possibilities open to them and gradually arrive at more enduring choices in love, work, and worldviews” (p. 479).

Those in emerging adulthood begin to view work and education in a new way. During a student’s time in post-secondary education, they are exposed to a number of different worldviews (Arnett, 2000). During their post-secondary studies, students begin exploring their

interests and try to decide on a career path for adulthood (Arnett, 2000). Their idea of work begins to shift as well; in adolescence work may have been primarily about earning money, while in emerging adulthood the focus shifts more to preparing oneself for future work in adulthood (Arnett, 2000). Identity exploration in emerging adulthood is, however, not just about preparing for adulthood, but it is also about “obtaining a broad range of life experiences before taking on enduring – and limiting – adult responsibilities” (p. 474).

Emerging adulthood is an unstable time of development (Arnett, 2000; Arnett, Žukauskienė, & Sugimura, 2014). Beginning post-secondary studies would add another level of instability to this already turbulent time. For those students who move from their home community to attend post-secondary, emerging adults might find that they are without adequate social support which could lead to depression (Arnett et al., 2014). However, many emerging adults also thrive on their new-found independence (Arnett, 2000, Arnett et al., 2014) and the post-secondary environment may provide students with “a temporary safe haven where emerging adults can explore possibilities in love, work, and worldviews with many of the responsibilities of adult life kept at bay” (p. 219). While this particular stage of emerging adulthood is turbulent, it can provide both opportunities and challenges for post-secondary students.

Students in transition and student departure. Tinto’s (1988) theory on student transitions compares student experiences to Van Gennep’s (1960) rites of passage in tribal societies. Tinto (1988) argued that a student persists in their post-secondary studies in a similar way that an individual persists in their new community. According to Tinto (1988), the three major stages a student goes through in their transition are separation from their high school and perhaps their community; transitioning to their new community, and; incorporating into their new community. To be successful in integrating into their post-secondary institution, a student must first successfully navigate the separation and transition stages.

The separation phase in student transitions means that students must leave behind their past habits and norms, the pains of which may hinder post-secondary success (Tinto, 1988). While students who leave home will undoubtedly experience a significant change in their environment, those students who transition to post-secondary education but continue to live at home may have a hard time fully integrating into their new academic environment, causing them to experience their own challenges with integration (Tinto, 1988).

Students enter post-secondary studies from a variety of backgrounds and with differing experiences, including different high school experiences (Tinto, 1987). Students coming from different backgrounds or school environments will all experience the transition to post-secondary education in different ways. Tinto (1988) noted that “the scope of the transition stage, that is, the degree of change it entails, depends on a number of factors, not the least of which is the degree of difference between the norms and patterns of behavior of the past and those required for incorporation into the life of the college” (p. 445). To successfully integrate into their new environments, students must establish connections with others in the institution; failure to make these connections may result in isolation and voluntary withdrawal (Tinto, 1988).

Tinto’s (1987) theory on student departure focused primarily on voluntary withdrawal from post-secondary education and explored reasons that a student may choose to leave their post-secondary studies. Tinto’s (1987) student departure theory can help to explain why students beginning their post-secondary studies may experience difficulty with the transition. Tinto’s (1987) main argument for why students may have trouble transitioning to post-secondary education is because of issues with incongruence or isolation. “Incongruence refers in general to the mismatch or lack of fit between the needs, interests, and preferences of the individual and those of the institution” (Tinto, 1987 p. 50). Depending on the environment of the high school a student attended, students may have varying ideas as to what to expect when they transition to post-secondary education. If a student received specific supports or experienced a particular learning environment, they may experience incongruence, or a lack of fit, with their post-secondary institution. Incongruence could go beyond the school experience and might be a “perceived mismatch between the social value, preferences, and/or behavioral styles of the person and those which characterize other members of the institution, expressed individually or collectively” (Tinto, 1987, p. 53). The environment of the school or a student’s home community can cause feelings of incongruence. For example, a student coming from a larger school in a big city may have experience with a more diverse student population than a student coming from a smaller school or community.

The above theories highlight three themes that influence student success in post-secondary education: belonging, motivation, and transitions. Belonging and motivation are essential factors that contribute to student success at any level. The experiences a student has in high school with belonging and motivation can affect the way they experience the transition to post-secondary and

develop their identity as a post-secondary student. Ultimately, the way the transition experience unfolds can affect student success in post-secondary education.

The following section navigates a selection of literature related to how high school grades are an indicator of student success in post-secondary education, and some factors that might affect the reliability of using high school grades as an indicator of success in post-secondary education. This section involves an exploration of why students attending certain types of schools may perform better in high school or may have an easier time transitioning to the post-secondary education environment.

High School Grades as An Indicator of Post-secondary Student Success

There is a correlation between student grades in high school and their grades the first year of university (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013). Given the correlation between high school grades and post-secondary grades, post-secondary admissions offices often use high school grades as a criterion for admissions when making acceptance decisions. High school grades are a good indicator of a student's likelihood of success in post-secondary education because "the past is considered to be the best means available to us for understanding the future, and past performance is the best predictor of future performance (Fishman, 1961, p. 477) and high school grades "reflect students' cumulative performance over a period of years in a variety of subjects" (Geiser & Santelices, 2007, p. 26). Because of the cumulative measurement of performance, high school grades are a better measure of potential academic success than standardized tests, which generally occur only once or twice.

Although there is a correlation between high school grades and post-secondary grades, there are many factors that can impact grades at both the high school and post-secondary levels (Pike & Saupe, 2002). These factors mean that while there may be a correlation between high school grades and post-secondary grades, high school grades are not the only indicator of success in post-secondary education. The school a student attends, and the experiences they have within that environment, can have an impact on their high school grades in multiple ways.

Betts and Morell (1999) argued that there is a stronger link between GPA in post-secondary education and personal factors such as "sex, ethnicity, and family income" (p. 288) than between high school grades and post-secondary GPA. In their study focused on students attending the University of Winnipeg, Cyrenne and Chan (2012) found that the neighbourhood a high school is

in and its resources have an indirect effect on success. Since other factors impact high school GPAs, high school grades are not the only measure of a student's potential to succeed in post-secondary education. Cyrenne and Chan (2012) also found that international students at the University of Winnipeg performed worse than domestic students did in their first year, even if those international students attended Manitoba high schools. Students in their study who attended private schools did better than those who attended public schools. To address these known variances in student success, the University of Winnipeg has flexible admission standards for specific types of students (Cyrenne & Chan, 2012).

Students attending post-secondary institutions come from all over the country or world with different cultural backgrounds and traditions (Fishman, 1961). Because students have different high school experiences, it is challenging for post-secondary admissions officers to assess for admission because there is no standard student experience. Since a student's high school experience may have an impact on how likely that student is to be successful, Fishman (1961) proposed that post-secondary institutions should take into account non-intellective criteria in the admissions process. The author suggested that admissions offices could weight grade point averages while also taking into consideration where a student went to school and their social or cultural backgrounds. Although an older study, Fishman's (1961) study is still relevant – perhaps even more now than it was at the time – as a Statistics Canada report (Frenette, Lu, & Chan, 2019) showed that the number of international students studying in post-secondary institutions nearly doubled between 2009 to 2015, suggesting that the study body is more diverse than ever before.

Critics of assessing students for post-secondary admission based on high school averages argue that different high schools may have different grading standards and that high school grades may be a less reliable indicator of potential student success than other ways of assessing student abilities, such as standardized testing (Pike & Saupe, 2002). In Canada, provincial ministries govern high school curricula (CMEC, n.d.). However, despite provincial regulation, different grading practices exist across schools at the high school level; a student with a certain GPA at one school may not be as academically ready for post-secondary education as a student with the same GPA from another school (Cyrenne & Chan, 2012).

The following section explores how different school environments may influence the type of experience a student has at the high school level and how they may navigate the transition to post-secondary education based on that experience.

The Relationship Between Institutional Environment and Student Success

While high school grades are an indicator of post-secondary success (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013), there are many factors related to the type of high school a student attends that impact how strong this correlation may be (Betts & Morell, 1999; Cyrenne & Chan, 2012). Astin's Input-Environment-Outcome (I-E-O) model (Astin, 1962, 1970a, 1970b, 1977, 1991, in Astin, 1993) measures the impact of the environment of a post-secondary program by comparing student outcomes with student inputs, where inputs are "the characteristics of the student at the time of initial entry to the institution" (Astin, 1993, p. 7). While his studies focused on measuring the impact of a post-secondary program, Astin (1993) stressed the importance of having "more input information on the student's ability, motivation, and family background" (p. 20) in order to better predict whether a high achiever in high school will go on to be a high achiever in their post-secondary studies based on the environment of the post-secondary institution.

There are different environmental factors of a school that may impact opportunities for student success. Astin (1993) described environment as "the various programs, policies, faculty, peers, and educational experiences to which the student is exposed" (p. 7). The theories above demonstrate that the educational environment affects how students interact and learn within school environments and how transitions between learning environments may influence how successful a student will be in post-secondary education. Therefore, the type of school a student attends will impact their student experience. Some of the institutional factors that may influence student success are school size (Lee et al., 2000; Weiss et al., 2010), control of the school (Birch & Miller, 2007), a student's (or their community's) socioeconomic status (Betts & Morell, 1999; Cyrenne & Chan, 2012; Warikoo, 2016), or the student's culture or the culture of the school they attended (Gallop & Bastien, 2016; Kirkness & Barnhardt, 2016; McGrath, 2010; Oloo, 2007; Pidgeon, 2008).

School or Cohort Size

Lee et al. (2000) examined how school size might impact student success; they determined that small schools and large schools each had advantages, and the size of the school influenced whether students at the high-, middle-, or low-end of the academic performance perspective got the most attention and support. Building on the work of Lee et al., Weiss et al. (2010) explored the relationship between school size, school engagement, and student achievement. The authors examined not just school size, but cohort size as well, as they felt that cohort size had an even more significant effect on engagement than school size did. While Weiss et al. (2010) did find that smaller cohort sizes did lead to higher engagement, they argued that a moderate-sized cohort was best for student achievement.

In the three large public schools that Lee et al. (2000) surveyed, the authors found that larger schools “best served the students at the extremes of the ability distribution” (p. 155) and that those in the middle were more or less left to navigate the experience on their own. Small schools, in contrast, catered to students in the middle. The authors assumed that this was because those students who were performing at the academic extremes could seek support elsewhere through remedial classes or by taking courses through their community colleges.

Larger schools had a more extensive resource base available to them than smaller schools did and were likely to have access to more financial resources as well as having more teachers with a wider variety of teaching areas and specialties (Lee et al., 2000). Because larger schools had more students, these schools were likely to have more students with similar needs, meaning that larger schools could cater more specifically to these students’ needs than a smaller school may be able to (Lee et al., 2000). Smaller schools often offered a narrower curriculum with more of a focus on core academic courses. While a narrow academic curriculum may help ensure that students are successful in core high school courses, administrators in smaller schools questioned how well-prepared or interested in college their students might be as a result of the limited offerings of the school (Lee et al., 2000).

An advantage of smaller schools was that they offered more of a community feel for students (Lee et al., 2000). A more tight-knit community meant students were likely to receive more support from their teachers and their peers. Students in smaller schools are also typically more engaged in the classroom than those in larger schools (Weiss et al., 2010). In contrast to the community feel of a small school, Greene et al. (2004) argued that “large schools are said to be

impersonal and bureaucratic” (p. 148). Students who might get lost in larger schools (those in the middle of the academic ability spectrum) were noticed and supported more in smaller schools. The studies by Lee et al. (2000) and Greene et al. (2004) demonstrate that students are likely to benefit from attending both small and large schools for different reasons.

School Control

Astin (1993) defined control as the “principal source of governance or control” (p. 33). The control of high school a student attended can also influence a student’s likelihood of success in post-secondary education. In an Australian study, Birch and Miller (2007) found that students who attended non-government schools, such as Catholic or independent schools, were not as successful in their post-secondary studies as those who participated in government schools. Birch and Miller (2007) found that when students came from government schools, there was less variation in students’ post-secondary grades. These results led to the conclusion that high school grades were a better indicator of post-secondary success for students who attended government schools than for those who did not (Birch & Miller, 2007). In a Canadian study, Cyrenne and Chan (2012) found that students at the University of Winnipeg who attended private schools did better in their post-secondary studies than those who came from public schools. The different outcome in the Canadian and Australian studies is a demonstration of how diverse the educational landscape can be from one place to another and how important it is for post-secondary institutions to understand the academic backgrounds of students applying to their specific institution.

Socioeconomic Status

Socioeconomic status impacts access to and quality of education at any level, so students who come from higher or lower socioeconomic backgrounds may already be at an advantage or disadvantage when it comes to achieving success based on where they come from (Betts & Morell, 1999; Warikoo, 2016). Schools in communities with lower socioeconomic status may not have as many supports as schools in more affluent neighbourhoods, such as teaching resources or counsellors to help students make post-secondary decisions (Betts & Morell, 1999). Students of low socioeconomic status may have financial or personal barriers that impede them from putting as much time into their academic endeavours as someone from a more economically-advantaged socio-economic background may have (Betts & Morell, 1999). A

student from a lower-income area may qualify for admission into a post-secondary program based on their high school grades, but, due to financial constraints, they may have a more difficult time being successful upon entry than a student that came from a higher income area (Cyrenne & Chan, 2012). In their study on school size and student engagement, Weiss et al. (2010) found that students coming from higher socioeconomic status families are generally more engaged in high school, which the theories mentioned above have indicated is a crucial component in student success.

Students in Transition: From High School to Post-Secondary Education

Strange (2010), drawing on human development theory (Levinson & Levinson, 1996), concluded that “individuals often seek formal educational opportunities during periods of transition in their lives” (p. 21); students beginning their post-secondary studies not only experience an academic transition, but a psychological one as well. This turbulent stage of development between adolescence and adulthood is referred to as *emerging adulthood* by Arnett (2020). As students are beginning their post-secondary studies during a time of change, there are factors outside of the transition itself that also impact a student’s experience.

One of the main factors impacting a student’s transition from high school to post-secondary is that the living and school environment at the post-secondary institution is likely quite different than what they experienced during high school (Whannell & Whannell, 2015). Students have to adapt not only to new academic expectations but a different physical and social environment as well (Maloshonok & Terentev, 2017). The authors suggested that a significant change in the student’s environment is one reason why institutions should take into account a student’s academic and social background. Students need to be able to re-align their expectations and adjust quickly to their new educational environment to diminish frustration and increase their likelihood of success (Miller, Bender, Schuh, & Associates, 2005).

Student Expectations

A critical means of supporting students as they transition is preparing them to understand what to expect from post-secondary education and to help students form reasonable expectations as to what success in post-secondary education means (Collier & Morgan, 2008; Maloshonok & Terentev, 2017; Miller et al, 2005; Stone, 2010). It is unreasonable to assume that students will know what to expect when they begin their post-secondary education; those working in post-

secondary institutions and high schools should do whatever they can to help students prepare for this transition (Whannell & Whannell, 2015). This is important not only for the student experience, but also for the institution if they want to retain students (Gorgodze et al., 2020). If a student's expectations do not meet reality, then they may experience stress or anxiety, which may impact their ability to be successful or their desire to continue their studies (Miller et al., 2005).

Students often have unrealistic expectations regarding what kind of grades they can expect to achieve when they begin their studies (Maloshonok & Terentev, 2017). Stone (2010) said that “students report[ed] being warned to expect a drop from 10 to 20 percentage points in grade average from high school” (p. 134). Schunk (2008) determined in their expectancy-values theory of motivation that students are less likely to engage in a task if they are expecting to fail. If students have done well through all of their high school careers and believe that they are doing poorly in their post-secondary education, they may choose to withdraw as they no longer consider themselves to be successful.

Cultural Dynamics

Students belonging to a cultural minority who transition to a campus environment they do not culturally identify with may struggle to transition to the “preferences, values, attitudes, and expectations of the majority” (McGrath, 2010, p. 27). The theories explored above all highlighted how important it is for students to feel as though they belong within their institution (Astin, 1999; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987; Waters et al., 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread Declaration, 2004). As culture is an integral part of a community, students who are not a part of the majority culture at an institution may experience some difficulty in feeling as though they belong.

It may be difficult for students who are members of a cultural minority at the institution to transition as they may have progressed through their previous education with a learning style that is incongruent with that of the post-secondary institution (Oloo, 2007). A change in teaching or learning styles means that students may not only have to adapt to a new environment, but they have the additional challenge of re-learning how to learn within a learning construct that may be unfamiliar to them. Students may also find it difficult to relate to the course content and understand learning objectives if the curriculum is not culturally relevant (Oloo, 2007).

Instructors can use examples or cases that use current events to help students relate to course

content. Students who do not identify with the culture of the institution may require different types of supports, services, or accommodations, depending on their cultural values (McGrath, 2010; Oloo, 2007). If supports, services, or accommodations are not available, these students may encounter difficulty in transitioning to their post-secondary environment and may experience challenges in meeting academic expectations.

Indigenous students in Canada. Canadian Indigenous students attending post-secondary education may struggle with the definition of ‘success,’ as ‘success,’ as defined by the government, for Indigenous students in a historical context in Canada often meant assimilation and conformity within the culture of the institution (Gallop & Bastien, 2016; Kirkness & Barnhardt, 2016). The educational system in Canada has traditionally prioritized western ways of knowing, which can make it difficult for Indigenous students to transition to and succeed in their new environment (Pidgeon, 2008).

Indigenous students attending post-secondary education in Canada may face additional challenges as they leave their communities and support networks behind to make the transition to post-secondary education. Going to a new educational environment without a support network could lead to isolation, which (Tinto, 1987) cited as a significant reason why students may leave their studies.

Many post-secondary institutions in Canada are attempting to increase the number of Indigenous students on campus without making broader changes to address challenges that Indigenous students may encounter in the institution (Gaudry & Lorenz, 2018). Post-secondary institutions need to do better in supporting Indigenous students in overcoming obstacles, rather than just removing barriers through Indigenous inclusion policies, such as flexible admissions policies or financial support (Gaudry & Lorenz, 2018). While these policies do increase student retention and completion rates, Indigenous inclusion policies do not change the structure of the modern Western university (Gaudry & Lorenz, 2018).

Conceptual Framework

The literature suggests that there are several factors which may influence student success in education as well as a student’s transition from high school to post-secondary. Some of these factors may be environmental or may relate to a student’s connectedness, involvement, motivation, or their transition and development. Astin (1993), in his studies on impact of college

programs on student development, stated that the basic issue was whether “being exposed to a particular type of environment *changes the prediction* of how the student will develop” (p. 20).

The environment of the school influences opportunities for involvement and interactions within that environment and a student’s development as a learner. Examples of student interactions include motivation, engagement, and connections. School connectedness theory (Wingspread Declaration, 2004; see also: Blum, 2005; Waters et al., 2009), student involvement theory (Astin, 1999), and self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) all address how environment can influence these interactions.

School environment and student interactions make up the overall student experience within the school. There are, however, developmental factors that may also impact a student’s overall educational experience or the way they experience the transition from high school to post-secondary. Based on the literature and theories reviewed, Figure 2.1 demonstrates how institutional environment can influence student interactions within that environment which can, in turn, impact student success. Environment (school characteristics, control), interactions (motivation, involvement, connectedness), and success (GPA or as defined by the student or institution) make up the overall student experience. A student’s experience in high school can influence their transition to and experience in post-secondary, including the way they interact in the institution and their likelihood of success. The dotted-line from high school to post-secondary interactions demonstrates the assumption that students who interact more in high school may interact more in post-secondary, ultimately leading to more success. The dotted-line arrow from high school interactions to high school success supports the assumption that students who are more involved in their high school may be more successful in their post-secondary studies. The dotted-line arrow from high school success to post-secondary success demonstrate the relationship between high school and post-secondary grades. It is not, however, a closed-system and several other factors (supported by theories in figure) can influence student experiences (positively or negatively) at any point during their high school or post-secondary experiences as well as during their transition.

Figure 2.1 *Conceptual Framework*

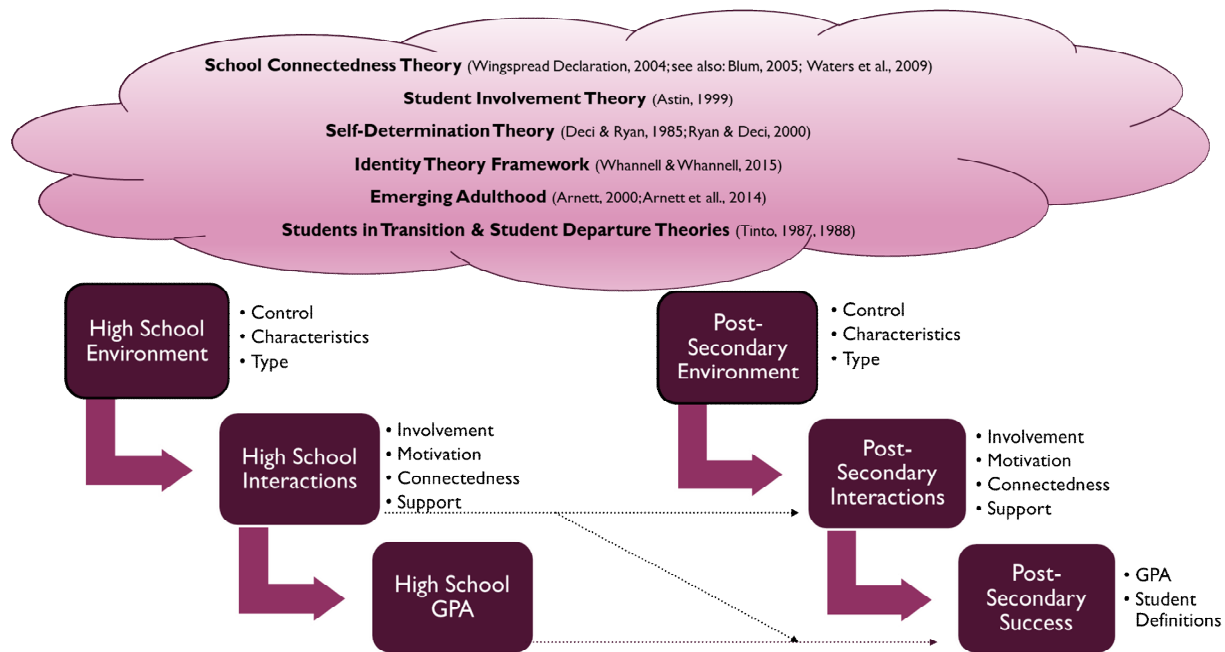


Figure 2.1. This figure demonstrates the link between school environment, student interactions, and student success.

Institutional environments are made up of “various institutional characteristics that are thought to be of potential importance in student development” (Astin, 1993, p. 33). While Astin’s (1993) study was concerned with post-secondary institutions, many of these characteristics, such as school size, student-teacher ratio, financial or funding dynamics, and faculty qualifications, also apply at the high school level. The environment of the school may also be influenced by the “principal source of governance or control” (Astin, 1993, p. 33), such as whether a school is public, private, or separate.

The environment of an institution influences the interactions that happen within the school. The size of a school impacts the amount of support a student will get as well as the resources available to the school to develop a curriculum and hire teachers (Lee et al., 2000). The control of the school a student attends (public/private/separate) also impacts the student experience (Birch & Miller, 2007; Cyrenne & Chan, 2012). Socioeconomic status impacts the resources that a school has available as well as the resources individual students have that support their access to supports and their ability to spend time on school work (Betts & Morell, 1999; Warikoo, 2016). The culture of a school may shape the curriculum and pedagogy, influencing the way a

student learns to learn and interact within their learning environment. The nature of the impact of school environment may vary from region to region.

The school environment influences the interactions a student has within the school and their development as a learner. Student interactions, derived from the theories above, include motivation, student involvement, school connections, and student support. Motivation can be encouraged or disrupted by the type of school environment (Ryan & Deci, 2000). Activities such as external rewards and punishments impact extrinsic motivation. Intrinsic motivation, however, can also be influenced by how connected a student feels to the values and activities they are partaking in (Ryan & Deci, 2000). Astin (1999) declared that students who are more actively involved in their school environment are likely to be more successful than those who are more passive. School connectedness is an idea where students feel a sense of belonging and that they are cared for and supported by their teachers and peers (Blum, 2005; Waters et al., 2009; Wingspread Declaration, 2004). Wenger (1999) said that educational institutions often assume that learning is an individual activity but argued that learning is more successful when it is a collective experience as “learning is, in its essence, a fundamentally social phenomenon” (p. 3). Educational institutions should be engaging students in the practice of learning, providing them with access to adequate resources, and make them feel as though they are a part of the community (Wenger, 1999). All of these interactions – motivation, involvement, connections, and support – rely on students feeling a sense of belonging within the school environment. School characteristics, school environment, and student interactions are all a part of the student experience, which impacts success in school.

School environment and student interactions contribute to the student experience. Student experience impacts not only success within a student’s current school environment, but student experience in high school also plays a role in a student’s transition from high school to post-secondary. While academic preparedness is a significant component of success, how successful (or not) a student is in navigating the transition also influences their likelihood of post-secondary success. Students transitioning from high school to post-secondary education will need to re-discover their identity (Whannell & Whannell, 2015). In high school, students will have an understanding of who they are and where they fit within their school environment. When they begin their post-secondary studies, they may need to re-discover who they are in the new environment. It may be especially challenging for a student to discover their identity if a student

is transitioning to a post-secondary institution where the cultural demographic is significantly different from that of their high school. Students experiencing a shift in culture may find it challenging to feel as though they are part of the community or they may find that they need to learn how to learn within a new type of learning construct (Oloo, 2007). If post-secondary education is not what a student expects or they do not find they fit within the new environment, they may experience incongruence, or a lack of fit within their new school (Tinto, 1987). Incongruence may lead to voluntary withdrawal from the institution or may impact a student's ability to succeed (Tinto, 1987). A sense of community and belonging is essential not only for fostering positive student interactions within the environment but also so that students can re-discover their identity once they transition to post-secondary education to have a higher likelihood of success.

There is a correlation between a high school GPAs and grades in the first year of post-secondary education (Betts & Morell, 1999; Cyrenne & Chan, 2012; Geiser & Santelices, 2007; Pike & Saupe, 2002). Students beginning their post-secondary education who achieved similar GPAs in high school should be starting their post-secondary studies with comparable academic skills. It is, however, a student's ability to demonstrate their academic skills that will impact their chance of succeeding in post-secondary education (Collier & Morgan, 2008). While grades are not the only indicator of success in post-secondary education, they are one of the best ways of determining eligibility for admission as they are a reflection of a student's academic performance over several years (Geiser & Santelices, 2007). Admissions offices in post-secondary institutions can make well-informed admissions decisions by using high school GPAs and historical data on students coming from particular schools.

Summary

This chapter provided an overview of literature that explores the use of high school grades as a means of assessing admission for post-secondary education and whether or not high school grades lead to student success in post-secondary education. There is a correlation between high school and post-secondary grades; however, there are many other factors that impact how strong of a relationship there is between high school and post-secondary grades, including the type of high school a student attends. School characteristics impact the experience that a student has in school at any level. The size, type, culture, and socioeconomic status of a school can all affect the school environment. There are several theories to support why students thrive better in

some educational settings than others; these theories explore how academic environments impact student involvement, school connections, student support, and student motivation. A student's experience in high school impacts not only their ability to succeed in high school but also impacts how they will transition to and be successful in their post-secondary studies. High schools can help prepare students for the transition to post-secondary education, and post-secondary institutions can provide support to help new students succeed. The purpose of this study was to explore how high school environment impacts a student's involvement at both the high school level and subsequently at the post-secondary level and how the high school environment could influence student transitions and academic success (as perceived by the student) in post-secondary education.

CHAPTER THREE: METHODOLOGY AND METHOD

This chapter provides an overview of the method and methodology that guided this study. This chapter reviews the purpose of the study, provides an overview of the methodology, and outlines the methods used for undertaking the study, including participant selection, data collection, and data analysis.

Purpose of the Study

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. High school grades are an indicator of post-secondary student success (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013); however, the environment of a high school that a student attends impacts the strength of the correlation between high school grades and post-secondary success (Betts & Morell, 1999; Cyrenne & Chan, 2012). Student involvement and a sense of belonging are both essential factors in students achieving academic success (Astin, 1999; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987; Waters et al., 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread Declaration, 2004). The environment of the high school influences opportunities for and the likelihood of student involvement and a sense of belonging (Blum, 2005; Waters et al., 2009).

Methodology

The study employed a mixed-method approach. While aspects of postpositivism exist in the inquiry in seeking to explore the cause and effect relationship (Creswell, 2007) between high school environment, student involvement, and post-secondary success, the paradigm that ultimately guided this study was pragmatism. Pragmatism often “provides the theoretical basis for conducting mixed-method studies,” as using multiple methods of data collection enables the researcher to use the best methods to answer the research question (McMillan & Schumacher, 2010, p. 6). Creswell (2007) stated that “individuals holding this worldview focus on the outcomes of the research – the actions, situations, and consequences of inquiry – rather than antecedent conditions” (p. 22). In this study, while a cause and effect relationship was explored, the research questions sought to determine what students need from their high school teachers,

counselors, and professionals in post-secondary education in order to be successful in their transition to post-secondary education.

Method

The study used an explanatory sequential mixed-method design (Creswell, 2014). Using both quantitative and qualitative methods, a comprehensive set of data was collected. Using both sets of data, methodological triangulation was used to assess validity (Cohen, Manion, & Morrison, 2002; Creswell, 2014; McMillan & Schumacher, 2010). Another reason for using a mixed-method design was so that “the disadvantages of both quantitative and qualitative methods will be minimized (or compensated for) by employing both methods together” (Bergin, 2018, p. 29).

Phase one of this study consisted of an online questionnaire (Appendix B) to gather demographic information as well as quantitative statistical data on student GPAs (self-reported), and student involvement. Phase two of the study consisted of in-depth interviews using an interview guide approach (Appendix C) to collect qualitative data on student experiences and student expectations regarding involvement, perceptions of the high school to post-secondary transition, and perceived success. Table 3.1 provides a summary of the sampling process, target sample size, instrument for data collection, variables, and processes for data analysis.

Table 3.1 *Research Design*

	Phase One	Phase Two
Method	Quantitative	Qualitative
Sampling	Convenience Sampling	Maximum Variation Sampling
Target Sample Size	100+	8-24 (4+ school types represented)
Actual Sample Size	55	5 (4 school types represented)
Variables	Demographics Involvement Success (GPA & Perceived)	Experiences Motivation Definitions of Success
Data Analysis	Descriptive Statistics Correlation Frequency	In Vivo Coding Emotions & Values Coding Axial Coding

Sample Selection

This study focused on the experiences of first-year, direct-entry students at one Canadian post-secondary institution. The study was designed to include students who came from a variety of high school environments and who began their studies the term immediately following their high school graduation. Convenience sampling (McMillan & Schumacher, 2010) was used for phase one of the study; all first-year, direct-entry students who transitioned directly to post-secondary education at the researcher's institution were invited to participate in an online questionnaire. Maximum variation sampling was used for phase two of the study in an attempt to "illuminate different aspects of the research problem" (McMillan & Schumacher, 2010, p. 327) by selecting and interviewing five students from phase one who attended high schools of different environments. Based on student involvement in phase one of the study, the school environments that are represented in the results include rural public, rural separate, urban public, and urban separate schools.

Participant Recruitment

All first-year, direct-entry undergraduate students at the researcher's post-secondary institution were invited to participate in an online questionnaire via the institution's student web portal (Appendix D). Announcements were posted three times from September through November 2020. The researcher also sent an e-mail to managers and directors of direct entry colleges at the institution inviting them to share the research invitation with students in their college (Appendix D). Both messages included an attachment with additional information regarding the research study (Appendix D). Participants were required to have access to the Internet and, should they wish to be eligible for the prize draw or participate in phase two, an email address. All students at the institution have access to computer labs with Internet access and have an institutional email address. Students were incentivized to participate by being entered into a random draw for an electronic gift.

Ideally, the largest possible number of students would choose to participate in phase one of the study. Initially the researcher had indicated that a minimum of 100 student participants would be deemed satisfactory, provided a minimum of four school environments were represented, with at least five students indicating they attended a particular high school environment for that environment to be included in the results. During the proposal defence, a member of the committee indicated that this was an ambitious number and that a smaller number of survey

participants would be reasonable. The committee member indicated that it would be up to the discretion of the researcher and her supervisor to determine what would be an acceptable number of participants.

Of the 97 students who began the survey, 65 completed the survey and met the eligibility criteria of graduating high school in 2019 and beginning their post-secondary studies in the summer or fall of 2019 at the institution's main campus. Four school types were determined based on student participation. Participant data from 55 students representing public and separate schools in rural and urban communities were included. Questionnaire results that were not used included one duplicate entry, students who did not indicate their high school or post-secondary GPA, or outlier students who did not fit in to one of the four school types identified. Although the rural separate school type had fewer than five participants, it was included in the analysis so that a minimum of four school types would be represented. Lower numbers of student participants could mean that the results might not be statistically significant. As such, data were analysed in two different ways: using the four categories listed above (public rural, public urban, separate rural, separate urban), as well as by rural and urban.

Students who wished to participate in phase two were asked to indicate their interest through the online questionnaire. Those who were selected for phase two of the study were contacted via the email address they provided to arrange an interview time (Appendix E) and those who participated were entered into a random draw for a second electronic gift. Five students were interviewed for the second phase of the study: two students from high schools in rural communities and three students from high schools in urban communities.

Students who participated in the online questionnaire were notified upon beginning the questionnaire that their involvement implied consent. Students who participated in phase two of the study were asked to review and provide verbal consent to a consent form (Appendix F) that outlined the expectations of the interviewee and the researcher, as well as parameters for anonymity and confidentiality.

Anonymity and Confidentiality

Students were asked to enter their email address should they wish to be eligible for the draw or participate in the second phase of the study. Students were not required to indicate their name, the name of their high school, or the name of their hometown in either phase of the study; however, they were asked to identify the college in which they were enrolled and their home

province and/or country. Students who did not enter their email address remained anonymous, as there is no link between the presented data and identifying student information (McMillan & Schumacher, 2010).

Email addresses entered by students interested in participating in the second phase of the study were used to contact students for the second phase of the study. Those not interested in participating in the second phase of the study were instructed to keep this field of the questionnaire blank. Although students were not asked to identify their name, names were revealed during email correspondence. As per the recommendations by McMillan and Schumacher (2010), any identifying student information was kept confidential, and only the researcher had access to this information. Identifying student information will be stored with research data and will be destroyed after five years. Pseudonyms are used in the presentation of the qualitative data to keep the identities of the participants confidential.

Students who wished to be eligible for the draw were asked to enter their email address on a separate page of the questionnaire. While email addresses were part of the overall results of the questionnaire, the email address data was only used to contact the winning student and was not consolidated with or compared to the overall results. These data are kept in an Excel file separate from the rest of the results. Those students who did not enter their email address will remain anonymous as there is no link between the data and identifying student information. Precautions regarding anonymity and confidentiality were communicated to participants for both the questionnaire and interview portions of the study.

Pilot Testing

A challenge of creating a new questionnaire is that the questionnaire has not yet been used before, so questions may be unclear, biased, or leading (Bergin, 2018). A pilot test of the online questionnaire was conducted with the young-adult children of colleagues to ensure the questions were clear and that they resulted in fulsome responses that would aid in addressing the research questions. The questionnaire (Appendix B) and interview guide (Appendix C) were also piloted with the research supervisor to identify areas where possible bias might occur. Following a review of the survey, a number of questions were removed to shorten the survey. The interview guide was edited to include more probing questions, to ensure the questions were clear and would elicit responses that would respond to the research questions, and to make sure the questions encouraged fulsome answers. The spirit of the questions remained the same; however

the edited version encouraged a more natural conversation between the interviewer and interviewee.

Validity and Reliability

The data was reviewed through checks of validity and reliability. Creswell (2014) suggested several strategies that can be used to check validity and reliability; the strategies that were used in this study were triangulation and peer debriefing.

Using a mixed-methods approach to see if both methods yield similar results is one means of achieving triangulation (Bergin, 2018; Cohen et al., 2002; Creswell, 2014; McMillan & Schumacher, 2010). The results of both phases of the study were reviewed to see if the quantitative data exploring the relationship between high school environment, involvement, and success aligned with the qualitative data that highlights the experiences of the students. Themes were established among the results of the quantitative and qualitative data, adding to the validity of the study (Creswell, 2014). The research supervisor acted as a peer debriefer. This process involves having a person review the findings and ask questions to ensure the findings of the study will resonate with the reader (Creswell, 2014).

To ensure reliability of the data analysis, interviews were recorded and transcripts were reviewed by participants to check for accuracy and to ensure no mistakes were made (Creswell, 2014; McMillan & Schumacher, 2010). A codebook was kept to ensure that the definitions and use of codes did not drift or change throughout the coding process (Bergin, 2018; Creswell, 2014). The final list of themes, categories, and codes is available in Appendix J.

Data Collection and Analysis

With an explanatory sequential mixed method design, quantitative data are collected and analyzed first, followed by the collection of qualitative data to build and expand upon the results of the quantitative data (Creswell, 2014). As such, data collection and analysis for this study was collected in two phases. Figure 3.1 demonstrates the process that was used for conducting this sequential mixed-method study. Quantitative data, collected via an online questionnaire, was used to make statistical inferences and to draw conclusions about the population (Bergin, 2018). Analysis of the qualitative data, collected through in-depth interviews, highlights the perceptions of student experiences, representing the experiences of students who attended different high

school environments from the sample. This section describes how quantitative and qualitative data were collected and analyzed.

Figure 3.1 *Explanatory Sequential Mixed-Method Design*



Figure 3.1. Adapted from Creswell (2014, p. 220)

An explanatory sequential mixed-method design was used so that demographic information could be gathered from phase one of the study to identify the school types that would be used prior to inviting students to participate in the second phase of the study. Further, collecting and analysing quantitative data before beginning the second phase of the study enabled the researcher to revisit the interview guide prior to beginning the interviews. Questions were revised to allow for the gathering of qualitative data that could expand upon any results that were surprising or required elaboration during the first phase of the study.

The following section outlines the process for data collection and analysis for both the quantitative and qualitative phases of the study.

Quantitative data collection. An online questionnaire was created for the first phase of the study (Appendix B). The dependent variable of this study – representing the outcome (Bergin, 2018) – is student success in post-secondary education. There are multiple independent variables in this study. Independent variables are those that might impact the dependent variable (Bergin, 2018). The independent variables are the environment of the high school a student attended, student involvement, and a student’s experience with the transition from high school to post-secondary education. High school grades and student success as perceived by the student are discrete variables; discrete variables “can only exhibit a few different values or categories” (Bergin, 2018, p. 73). Actual GPA – another measure of student success – is a continuous variable, as it “can exhibit a wide variety of values” (Bergin, 2018, p. 73).

The primary objective of this study was to explore how high school environment impacts a student’s involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. It has already been determined that the correlation between high school grades and post-secondary grades can be affected by the high

school environment (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Lee et al., 2000; Warikoo, 2016; Weiss et al., 2010). High school involvement was qualified by the type of involvement, the number of activities in which a student is involved, and the number of hours of their involvement. Data regarding high school success and post-secondary student involvement was also collected.

An online questionnaire (Appendix B) was created to conduct the quantitative phase of the study. By creating a new questionnaire, specific questions that pertain to the study could be addressed (Bergin, 2018). Questionnaires are economical, allow for the same questions to be asked of a large population, and can allow for participants to remain anonymous (McMillan & Schumacher, 2010). Most questions in the questionnaire were closed-form, which allowed students to select from a number of pre-determined answers (McMillan & Schumacher, 2010). Closed-form questions allowed for the gathering of demographic information about students, including information on the environment of the high school they attended, their high school and post-secondary grades, and to glean information about their experiences with involvement in the classroom and in their school. Likert scale questions also appeared in the questionnaire, allowing students to select their level of agreement or disagreement with a given statement about their involvement and their expectations about the transition from high school to post-secondary (McMillan & Schumacher, 2010). By using an online tool and utilizing scaled and closed-form questions, the data was easily exported to IBM SPSS Statistics for Windows, Version 27 and prepared for analysis (McMillan & Schumacher, 2010).

Quantitative data analysis. Quantitative data was “used to understand relationships between variables, or explain social phenomena” (Bergin, 2018, p. 66). Statistical methods are often used to “determine the likelihood that an observed relationship between variables is not due to chance” (Bergin, 2018, p. 66). The quantitative data was analyzed to explore the relationship between student grades in high school and post-secondary education, as well as the relationship between high school involvement, a student’s involvement in both high school and post-secondary education, a student’s experience with the transition from high school to post-secondary, and student success in post-secondary education as perceived by students.

Descriptive statistics (Bergin, 2018) were used to explain demographic information such as the environment of the high school attended, level of student involvement, and student perceptions of post-secondary success. The mean and standard deviation were calculated for high

school and post-secondary grades, and Pearson's correlation coefficient (Bergin, 2018) was used to determine whether or not there was a correlation between high school and post-secondary grades depending on the environment of the high school a student attended and their level of involvement at their high school. Involvement was measured based on frequency of engaging in an activity, the number of activities a student was involved in, or the number of hours a student spendt engaging in activities.

Qualitative data collection. The second phase of the research involved in-depth, semi-structured interviews (Appendix C). Interviews took place over the telephone due to COVID-19 limitations and restrictions. Interviews were recorded to allow for transcription by the researcher.

Semi-structured interviews, or the interview guide approach, are made up of pre-determined interview questions but allow for flexibility to change the order and precise wording of the questions as necessary (Cohen et al., 2002; McMillan & Schumacher, 2010). McMillan and Schumacher (2010) stated that the interview guide approach means that topics and experiences that the interviewee is more familiar with can be explored on a deeper level while also allowing for a more natural flow of conversation between the interviewer and interviewee.

Interviews can be used as a supplement to other methods of data collection (Bergin, 2018) and enable participants to “discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view” (Cohen, et al., 2002, p. 267). In designing the interview guide, the variables to be measured were determined; this is an important step in order to guide the development of the questions (Cohen, et al., 2002). While phase one of the study sought to identify the correlation between high school environment, involvement, and grades, the second phase of the study aimed to understand student experiences and expectations related to involvement, their transition from high school to post-secondary education, and their success as a student. Interview questions explored themes such as: what motivated or was a barrier to student involvement in high school; who/what helped shape student expectations regarding transitioning from high school to post-secondary education; what were the challenges and successes that students experienced in their transition; what students wished they had known prior to transitioning to post-secondary education; and more.

Open-ended questions were used in the interview guide as they put no restrictions on the interviewee in terms of their answer other than the subject of the response (Cohen et al., 2002). Further, open-ended questions allow for more flexibility in the rapport with the respondent,

allow for probing questions to be asked, and can result in “unexpected or unanticipated answers which may suggest hitherto unthought-of relationships or hypotheses” (Cohen et al., 2002, p. 275).

It is important to recognize where bias may occur in the analysis of the research findings (Creswell, 2014). Chapter one recognized that bias may occur based on past experiences. In this instance, the researcher has had personal experiences through their own transition from high school to post-secondary, as well as experiences supporting students transitioning from high school to post-secondary education. As such, the interview process was piloted and reviewed with the thesis supervisor to determine where bias might occur.

Qualitative data analysis. Following the student interviews, the audio recordings were transcribed. Preliminary coding began during the interview and transcription processes, as recommended by Saldaña (2013). Coding is “the process of applying descriptive labels to a qualitative dataset to identify key themes present within that dataset” (Bergin, 2018, p. 141). Coding facilitates analysis as themes can be identified within the dataset (Bergin, 2018). A template analysis style (McMillan & Schumacher, 2010) was used to derive categories and codes from the research questions and the interview guide; however, the initial codes and categories did evolve during the coding process. In Vivo Coding, which captures the language and nuances of the interviewees and has also been labelled as literal, verbatim, or emic coding (Saldaña, 2013), was used during analysis, especially during the initial stages of coding. In applying In Vivo Coding, specific words and phrases that the interviewees used were highlighted (Saldaña, 2013).

The second phase of coding continued to involve In Vivo Coding, but methods of affective coding were also used, such as Emotion Coding and Values Coding. Affective coding methods focus on human experience (Saldaña, 2013). As the qualitative portion of this study highlights student experiences in transition, affective coding methods were appropriate for this study. Emotion Coding is most relevant for studies “that explore intrapersonal and interpersonal participant experiences and actions” and uses “the emotions recalled and/or experienced by the participant, or inferred by the researcher about the participant” as codes (Saldaña, 2013, p. 105). In data analysis, Emotion Coding focuses on the emotional journey of an individual; in this study, the emotional journey relates to a student’s experiences with transition and their perceived success in their post-secondary studies. Values Coding places the focus on a participant’s values,

attitudes, and beliefs (Saldaña, 2013) and, through analysis, aids in an understanding of what is important to the interviewee; this is relevant to the research question and helped to identify what helps a student feel a sense of belonging and to understand what success means to them. Saldaña (2013) suggested that Emotion Coding and Values Coding are complementary and may be used together to understand a participant's values. Combining a "select and compatible combination" of multiple coding methods is called Eclectic Coding (Saldaña, 2013, p. 188).

Following the initial coding process, axial coding, a process of narrowing down topics and ideas and creating categories and sub-categories of data (Bergin, 2018), began. A codebook was assembled to define all codes and explain how the codes have been applied (Bergin, 2018). Axial coding is a process that aids in the identification of themes in the data and helps to facilitate the analysis process. Focused coding concluded the coding process to narrow down the findings to find key themes (Bergin, 2018). The final list of categories, sub-categories, codes, and subcodes can be found in Appendix J. Following the coding process, the findings of the qualitative phase of the research were interpreted. At this point, the results of the quantitative and qualitative findings could be compared.

Presentation of Data

Chapter four includes presentation of the data, including the demographic information of the students who participated in the study. The statistical findings of the quantitative phase of the study as well as an analysis of the student interviews from phase two of the study are presented. Findings from phase one of the study demonstrate the relationship between high school environment, student involvement, and student success as perceived by the student. The findings from phase two of the study highlight student experiences with involvement at the high school and post-secondary levels, their navigation of the transition from high school to post-secondary education, and their perceptions on student success.

Ethics

An application for ethics approval was submitted to the University of Saskatchewan Behavioural Research Ethics Board (Beh-REB). The application included the title of the study, an overview of the project and its potential significance and a description of the research design and methods to be used. The application also identified how information would be kept private and confidential, outlined risks and benefits, and discussed the participant recruitment and

consent processes. The complete application package included the invitation to participate in the research study (Appendices D), a copy of the online questionnaire including consent to participate (Appendix B), the invitation to participate in the interview portion of the study (Appendix E), the telephone interview consent form (Appendix F), the telephone interview guide (Appendix C), the transcript release form (Appendix G), and the email sent to students to inform them they won the prize (Appendix H). Initial ethics approval stated that the prize could not be advertised as an Apple Watch as the value of the prize would be apparent. A follow-up email exchange confirmed that the prize could be advertised as an “electronic gift” (Appendix I). The Certificate of Approval (Appendix A) was granted on September 17, 2020 after which research commenced.

Data Storage

There are no hard copies of research data. Electronic information, including survey results and audio recordings of interviews, is being stored on the researcher’s password protected institutional One Drive account, which is protected by two-factor authentication, for five years. After five years, digital copies of research information will be deleted.

Summary

This chapter reviewed the methods that were used to conduct this study. An explanatory sequential mixed-method approach was used to study direct-entry student success and student experiences with transitions from high school to one post-secondary education institution. Quantitative data was collected and analyzed in the first phase of the study through online questionnaires, followed by the collection and analysis of qualitative data through in-depth interviews that expand upon the results of the first phase of the study. The presentation of the collected data is outlined in the following chapter.

CHAPTER FOUR: PRESENTATION OF COLLECTED DATA

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the secondary school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The chapter includes a summary of participant recruitment, the participants, and the survey and interview processes. Data from the online surveys and telephone interviews are presented in this chapter.

Data collection for this study began in September 2020, following the receipt of the Certificate of Approval from the Behavioural Research Ethics Board in September of 2020. Details of the data collection are outlined below.

Method for Data Collection

The study used an explanatory sequential mixed-method design, where quantitative data was collected and analyzed first, followed by the collection and analysis of qualitative data (Creswell, 2014). The study was conducted in two phases: quantitative data was gathered in phase one of the study through an online questionnaire and qualitative data was gathered in the second phase through telephone interviews.

Phase One: Online Questionnaires

Phase one of the study consisted of an online questionnaire to gather primarily quantitative data. Most of the data collected was demographic information, self-reported grades, and measured frequency of student involvement in certain activities in high school. Students answered a few open-ended questions about their experiences transitioning from high school to post-secondary.

Pilot Testing

Pilot testing of the online questionnaire was conducted using convenience sampling (McMillan, 2010). The researcher invited peers and university-aged children of work colleagues to pilot the questionnaire. Those invited to participate in the pilot were not eligible to participate in the study as they were not direct entry students to the institution in the fall of 2019. Those who participated in the pilot were, however, asked to provide feedback regarding the questionnaire as they had all transitioned directly from high school to the post-secondary institution prior to 2019.

Pilot testing allowed the researcher to ensure that pilot participants found the online questionnaire was easy to understand and navigate. Feedback from the pilot testing of the online questionnaire resulted in changes to the survey prior to deployment. Changes to the questionnaire included eliminating redundancies and ensuring clarity.

Participant Recruitment

Following approval from the Behavioural Research Ethics Board, students at one Canadian post-secondary institution were invited to participate in the online questionnaire. All undergraduate students were notified of the research opportunity via the institution's online web portal on September 18, 2020 and students in some direct-entry colleges received targeted communication from their college on behalf of the researcher in the following week. Bulletin and email invitations were accompanied by a research information document (Appendix D). A reminder bulletin was posted to the institution's online web portal on October 5, 2020. Students were asked to complete the online questionnaire by October 16, 2020. Following an email exchange with the Research Ethics Board regarding the inclusion of a description of the prize (Appendix H), the questionnaire was posted a final time the week of November 30, 2020.

Student Participants

The methodology of the study indicated that a minimum of 100 student participants would be deemed satisfactory. During the proposal, a member of the committee indicated that this was an ambitious number and that a smaller number of survey participants would be reasonable. The committee member indicated that it would be up to the discretion of the researcher and her supervisor to determine what would be an acceptable number of participants.

Of the 97 students who began the survey, 65 completed the survey and met the eligibility criteria of graduating high school in 2019 and beginning their post-secondary studies in the summer or fall of 2019 at the institution's main campus. Students from each of the institutions' direct-entry colleges participated in the study and were enrolled as full-time students during the academic year, attempting a minimum of nine credit units per academic term during the 2019-2020 year. Ultimately, student data from 55 students was included in the data analysis. Questionnaire results that were not used included one duplicate entry, students who did not indicate their high school or post-secondary GPA, or outlier students who did not fit in to one of the four school types identified.

Participant School Type

The methodology prescribed that, for a school to be included, a minimum of five students representing that type of school would have completed the questionnaire. Based on student participation, the school types chosen for analysis in this study were public and separate schools in rural and urban populations. According to Statistics Canada (2017), an urban area – referred to as a population centre area since the 2006 census – “has a population of at least 1,000 and a population density of 400 persons or more per square kilometre” and that “all areas outside population centres are classified as rural areas.” Students were asked to report on the population of the community in which their high school was located. While students were not asked to report on population density, the Statistics Canada threshold of a population of 1,000 was used to divide schools into the rural and urban categories.

Participant data from 55 students representing the following four school types was analyzed: public schools in rural communities ($n=10$), separate schools in rural communities ($n=2$), public schools in urban communities ($n=35$), and separate schools in urban communities ($n=8$). Although the rural separate school type had fewer than five participants, it was included in the analysis so that a minimum of four school types could be represented, as was indicated in the methodology for the study. Lower numbers of student participants could mean that the results might not be statistically significant. As such, data in this chapter is displayed in two different ways: using the four categories above (rural public, rural urban, separate public, separate urban), as well as combined data to represent students from rural communities ($n=12$) and urban communities ($n=43$). Each table in this chapter displays data for the four school types and also combines the rural and urban data. This allows for a comparison of all four types as well as solely rural versus urban.

Presentation of Collected Data: Phase One

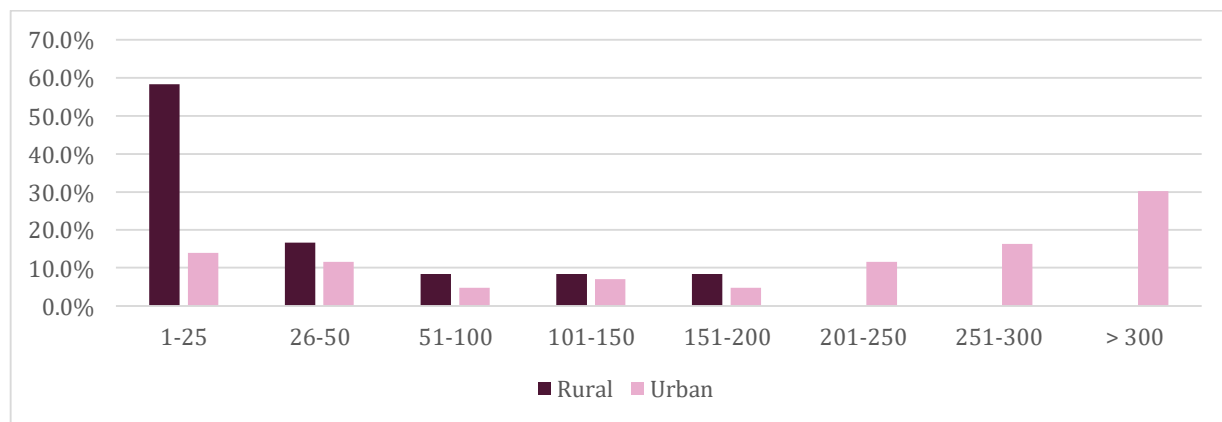
The first section of the student questionnaire asked students to describe their high school. Table 4.1 demonstrates the grade range at the high school student participants attended. For this study, schools in rural communities were most often K-12 schools, while schools in urban communities were most often high schools comprised of senior students in grades 9, 10, or 11 through 12.

Table 4.1 *High School Grade Range*

School Affiliation	K-12		Grade 6, 7, or 8 through 12		Grade 9, 10, or 11 through 12	
	N	%	N	%	N	%
Rural Communities						
Public	8	80.0			2	20.0
Separate	1	50.0			1	50.0
Total	9	75.0			3	25.0
Urban Communities						
Public	6	17.1	7	20.0	22	62.9
Separate					8	100.0
Total	6	14.0	7	16.3	30	69.8

Students were also asked to answer the question “how many students were in your graduating class” by choosing their answers from a pre-populated list. Students who attended rural schools had smaller graduating classes while those who attended urban schools had larger graduating classes (Figure 4.1).

Figure 4.1 *Size of Graduating Class*



The next section of the student questionnaire asked students about their experiences in their high school. The questionnaire inquired about their involvement in classroom discussions and how the students’ teachers encouraged classroom participation. Students were asked to indicate which athletic and non-athletic extracurricular activities they participated in as well as the

number of hours they spent participating in those activities each week. Students indicated how many hours they spent on homework in high school and what factors motivated them to achieve success.

High school involvement. To gauge levels of student involvement in high school, students were asked to indicate via multiple-choice options the frequency in which they engaged in academic and extracurricular activities. This section highlights the frequency of student engagement in these activities. Students were also asked how classroom participation was encouraged by their teachers.

Hours spent on homework. Students were asked the multiple-choice question “how many hours per week did you spend on schoolwork outside the classroom:” 0 hours, 1 – 5 hours, 6 – 10 hours, or 11 or more hours. Results, presented in Table 4.2, demonstrate that students who attended high schools in urban communities spent more time on homework in high school per week.

Table 4.2 *Hours Per Week Spent on Homework in High School*

School Affiliation	0 hours		1-5 hours		6-10 hours		11+ hours	
	N	%	N	%	N	%	N	%
Rural Communities								
Public			6	60.0	3	30.0	1	10.0
Separate			2	100.0				
Total			8	66.6	3	25.0	1	8.3
Urban Communities								
Public	1	2.9	13	37.1	16	45.7	5	14.3
Separate	1	12.5	4	50.0	2	25.0	1	12.5
Total	2	4.7	17	39.5	18	41.9	6	14.0

Engagement in classroom discussions. To determine how high school environment might impact a student’s level of participation in the classroom, students were asked to indicate the frequency (1 = never, 2 = rarely, 3 = sometimes, 3 = often, 4 = always) in which they engaged in classroom discussions in high school; the results of this question are represented in Table 4.3.

Student responses indicated that students attending high schools in rural communities ($n=12$) were most likely to engage in classroom discussions always or often at 83% of the time, compared to students attending high schools in urban communities ($n=43$) who often or always participated in classroom discussions at 62.8% of the time.

Table 4.3 *Frequency of Participation in Classroom Discussions in High School*

School Affiliation	Never or Rarely		Sometimes		Often or Always	
	N	%	N	%	N	%
Rural Communities						
Public	1	10.0%	1	10.0%	8	80.0%
Separate	0	0.0%	0	0.0%	2	100.0%
Total	1	8.3%	1	8.3%	10	83.3%
Urban Communities						
Public	5	14.3%	7	20.0%	23	65.7%
Separate	2	25.05%	2	25.0%	4	50.0%
Total	7	16.3%	9	20.9%	27	62.8%

Teacher-encouraged participation. Students were asked to respond to the question “how did your teacher encourage participation in the classroom?” by selecting from the following options: “encouraged classroom conversations through questions and discussion, encouraged working in teams or groups, awarded participation marks, no classroom participation was encouraged,” or “other.” Students could select multiple options, indicating that classroom participation was encouraged in more than one way by their teacher. As such, totals in each column represent the percentage of students who indicated their teacher encouraged participation in that particular way. Student responses, represented in Table 4.4, indicated that almost all students had teachers in high school who encouraged classroom discussions and that group or teamwork was used frequently as a way of encouraging participation. No students from any school type indicated that their teacher did not encourage any time of classroom participation. Two students from rural public schools said their teachers encouraged classroom participation in “other” ways, such as giving “many means of completing an assignment-such as offering a

speech, essay, powerpoint, or visual project to meet outcomes,” or “encouraged playing trivia games related to class material.”

Table 4.4 *Method of Participation Encouraged by Teachers in High School Classrooms*

School Affiliation	Questions and Discussion		Group or Teamwork		Participation Marks Awarded		Other	
	N	%	N	%	N	%	N	%
Rural Communities								
Public	9	90.0	7	70.0	1	10.0	2	5.7
Separate	2	100.0	2	100.0	1	50.0		
Total	11	91.7	9	75.0	2	16.7	2	16.7
Urban Communities								
Public	34	97.1	28	80.0	9	25.7		
Separate	8	100.0	8	100.0	1	12.5		
Total	42	97.7	36	83.7	10	23.3		

Table 4.4. No students indicated that their teacher did not encourage classroom participation.

Involvement in athletic activities. Students were asked to report on the athletic and non-athletic activities in which they were involved during their time in high school as well as the number of hours spent engaged in those activities (0 hours, 1 – 5 hours, 6 – 10 hours, or 11 or more hours). Students indicated which specific activities they participated in from a list of prepopulated activities. Students also had the option to select “other” and indicate any additional activities that were not included on the list. Survey results, reported in Tables 4.5 (number of activities) and 4.6 (hours spent engaged in activities), indicate that most students, across all school types, were engaged in at least one athletic activity. Students who attended public schools were engaged in a higher average number of athletic activities and spent more time engaged in those activities than students who attended separate schools. Most students (83.3%) who attended high school in a rural community participated in at least one athletic activity, while approximately 40.0% of students who attended high school in urban communities did not participate in any athletic activities.

Table 4.5 *Participation in Athletic Activities in High School*

School Affiliation	Participation in at least one athletic activity		Average number of athletic activities participated in per student
	N	%	
Rural Communities			
Public	8	80.0	3.0
Separate	2	100.0	2.0
Total	10	83.3	3.0
Urban Communities			
Public	20	57.1	2.5
Separate	6	75.0	1.2
Total	26	60.5	2.2

Table 4.6 *Hours Per Week Participating in Athletic Activities in High School*

School Affiliation	0 hours		1-5 hours		6-10 hours		11+ hours	
	N	%	N	%	N	%	N	%
Rural Communities								
Public	2	20.0	4	40.0	4	40.0		
Separate			2	100.0				
Total	2	16.7	6	50.0	4	33.3		
Urban Communities								
Public	13	37.1	12	34.3	6	17.1	4	11.4
Separate	1	12.5	7	87.5				
Total	14	32.6	19	44.2	6	14.0	4	9.3

Involvement in non-athletic extra-curricular activities. Students reported on the non-athletic activities they were involved in during their time in high school as well as the number of hours spent engaged in those activities. Students indicated which specific activities they participated in from a list of prepopulated activities. Students also had the option to select “other” and indicate any additional activities that were not included on the list. Survey results, as

demonstrated in Tables 4.7 (number of activities) and 4.8 (hours spent engaged in activities), demonstrate that students attending schools in urban communities were more likely to participate in at least one non-athletic extra-curricular activity and spend more hours engaged in non-athletic activities. Students from rural schools, however, reported a higher average number of non-athletic extra-curricular activities per student than those who attended urban high schools.

Table 4.7 *Participation in Non-Athletic Extra-Curricular Activities in High School*

School Affiliation	Participation in at least one non-athletic activity		Average number of non-athletic activities participated in per student
	N	%	
Rural Communities			
Public	6	60.0	2.7
Separate	1	50.0	2.0
Total	7	58.3	2.6
Urban Communities			
Public	28	80.0	1.8
Separate	6	75.0	2.2
Total	34	79.1	1.9

Table 4.8 *Hours Per Week Participating in Non-Athletic Extra-Curricular in High School*

School Affiliation	0 hours		1-5 hours		6-10 hours		11+ hours	
	N	%	N	%	N	%	N	%
Rural Communities								
Public	2	20.0	4	40.0	4	40.0		
Separate			2	100.0				
Total	2	16.7	6	50.0	4	33.3		
Urban Communities								
Public	13	37.1	12	34.3	6	17.1	4	11.4
Separate	1	12.5	7	87.5				
Total	14	32.6	19	44.2	6	14.0	4	9.3

Academic achievement and motivation. Students were asked to indicate on a Likert scale their response to the question, “how important was achieving high grades to you in high school?” Results to this question (Table 4.9) demonstrate that students attending schools in rural and urban communities place similar value on achieving high grades in high school.

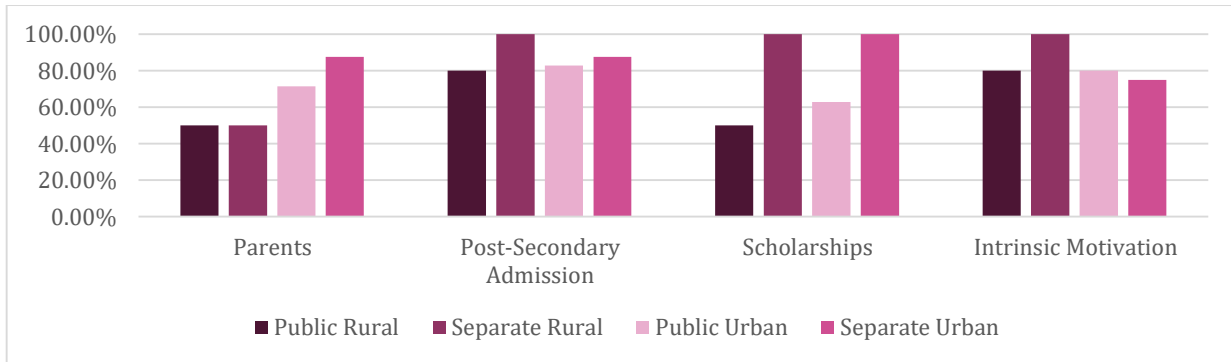
Table 4.9 *Importance of Achieving High Grades in High School*

School Affiliation	Extremely Important		Very Important		Somewhat Important	
	N	%	N	%	N	%
Rural Communities						
Public	7	70.0	1	10.0	2	20.0
Separate			2	100.0		
Total	7	58.3	3	25.0	2	16.7
Urban Communities						
Public	19	54.3	11	31.4	5	14.3
Separate	6	75.0	1	12.5	1	12.5
Total	25	58.1	12	27.9	6	14.0

Table 4.9. No student from any school type indicated that achieving high grades were “not so important” or “not at all important.”

Students were also asked, “what motivated you to achieve academic success in high school,” and were given the option to select all answers that were applicable to them. As seen in Figure 4.2, students attending schools in urban communities were more likely to be motivated by their parents than those who attended schools in rural communities. All students who attended separate schools said that they were motivated by scholarships, while this number was much lower among students who attended public schools.

Figure 4.2 Motivation for Achieving Academic Success



Before asking questions about involvement in post-secondary, the questionnaire asked students about their motivation for choosing to attend post-secondary.

Attending post-secondary education. Students were asked to indicate from a list of pre-determined options their primary reason for choosing to attend post-secondary education (Table 4.10). Most students across all school types indicated that their primary reason for choosing to attend post-secondary was “to get a career.” Students from urban communities were more likely to choose this answer, while more students from rural communities than urban communities indicated that they chose to attend post-secondary “for the pursuit of knowledge.”

Table 4.10 Primary Reason for Choosing Post-Secondary

School Affiliation	Career		Pursuit of Knowledge		Parents		Other	
	N	%	N	%	N	%	N	%
Rural Communities								
Public	5	50.0	5	50.0				
Separate	2	100.0						
Total	7	58.3	5	41.7				
Urban Communities								
Public	26	74.3	9	25.7				
Separate	4	50.0	2	25.0	1	12.5	1	12.5
Total	30	69.8	11	25.6	1	2.3	1	2.3

Table 4.10. The one student who indicated “other” said that their primary reason for choosing to attend post-secondary was “to follow my passion.”

Post-secondary involvement. To gauge levels of student involvement in their first term of post-secondary education, students were asked to indicate via multiple-choice questions the frequency in which they engaged in academic and extracurricular activities. This section highlights the frequency of student engagement in these activities during their first term of post-secondary education. Students were also asked how classroom participation was encouraged by their instructors.

Hours spent on homework. The survey asked students to indicate the amount of time per week – 0 hours, 1 – 5 hours, 6 – 10 hours, or 11 or more hours – they spent on homework during their first term of post-secondary education. The results of this question are displayed in Table 4.11. Most students (more than 80.0%) spent six or more hours per week on homework during their first term of post-secondary education.

Table 4.11 *Hours Per Week Spent on Homework in First Term of Post-Secondary*

School Affiliation	1-5 hours		6-10 hours		11+ hours	
	N	%	N	%	N	%
Rural Communities						
Public	1	10.0	4	40.0	5	50.0
Separate			2	100.0		
Total	1	8.3	6	50.0	5	41.7
Urban Communities						
Public	5	14.3	15	42.9	15	42.9
Separate	2	25.0	3	37.5	3	37.5
Total	7	16.3	18	41.9	18	41.9

Table 4.11. No students indicated that they spent zero hours per week on homework during their first term of post-secondary.

Engagement in classroom activities. Students were asked to indicate the frequency (1 = never, 2 = rarely, 3 = sometimes, 3 = often, 4 = always) in which they engaged in classroom discussions during their first term of post-secondary studies. Despite 67.3% of students ($n=55$) (Figure 4.3) indicating that their post-secondary instructors awarded participation marks to encourage classroom engagement, the results of this question, displayed in Table 4.12, show that

students were much less likely to engage in classroom discussions in post-secondary education than they were in high school. Students who attended high schools in urban communities were slightly more likely to engage in classroom discussions in post-secondary education than those students who attended high schools in rural communities.

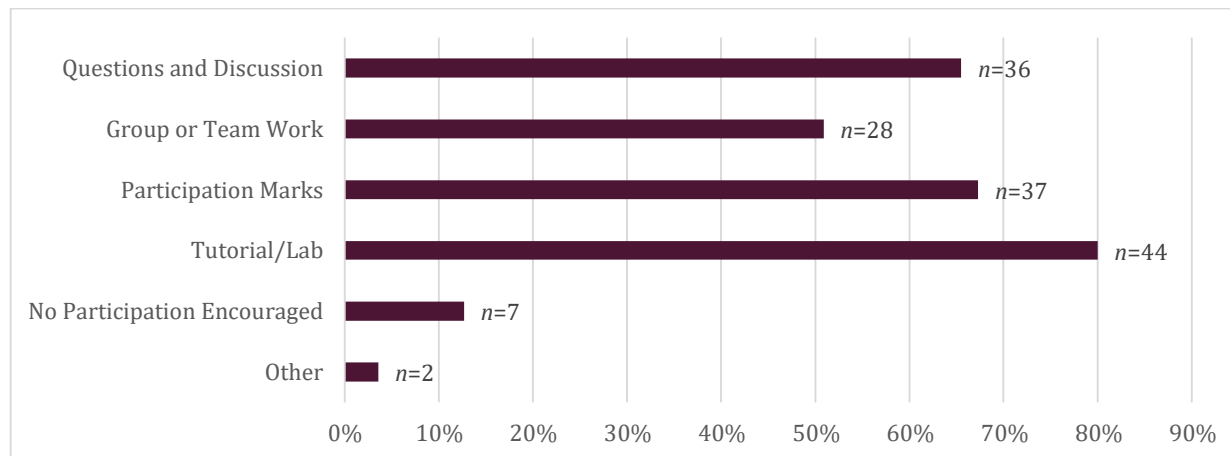
Table 4.12 *Frequency of Participation on Classroom Discussions in Post-Secondary*

School Affiliation	Never		Rarely		Sometimes		Often		Always	
	N	%	N	%	N	%	N	%	N	%
Rural Communities										
Public	2	20.0	6	60.0	1	10.0			1	10.0
Separate			1	50.0	1	50.0				
Total	2	16.7	7	58.3	2	16.7			1	8.3
Urban Communities										
Public	8	22.9	12	34.3	11	31.4	3	8.6	1	2.9
Separate	3	37.5	4	50.0					1	12.5
Total	11	25.6	16	37.2	11	25.6	3	7.0	2	4.7

Instructor-encouraged participation. Students were asked to respond to the question, “how was academic participation encouraged” in post-secondary by selecting from the following options: “encouraged classroom conversations through questions and discussion, group or teamwork was required/encouraged, participation marks were awarded, tutorial/lab requirement, no classroom participation was encouraged,” or “other.” Students could select multiple options, indicating that classroom participation was encouraged in more than one way by their instructor. As such, totals in each column represent the percentage of students who indicated their instructor encouraged participation in that particular way. Student responses, as seen in Figure 4.3, demonstrate that classroom conversations and working in teams was used less frequently by post-secondary instructors than high school teachers to encourage engagement, while participation marks were used more frequently as a means of encouraging participation than in high school (refer back to Table 4.4). Most students (80%) said that labs and tutorials accompanied their university classes. One student who indicated “other” said that their classes

were “similar to high school” and that their “classes took a lecture-based approach.” The other student who indicated “other” said “most first year profs were rude except my elective ones.”

Figure 4.3 *Post-Secondary Instructors Method for Encouraging Classroom Participation*



Involvement in competitive athletic activities. No students in the sample group indicated that they participated in competitive athletic activities in post-secondary education.

Involvement in extra-curricular activities. Participants were asked to describe their extra-curricular involvement during their first term of post-secondary studies. Students reported on the athletic and non-athletic activities they were involved in during their first term as well as the number of hours spent engaged in those activities. Students indicated which specific activities they participated in from a list of prepopulated activities. Students also had the option to select “other” and indicate any additional activities that were not included on the list. Survey results, as demonstrated in Tables 4.13 (number of activities) and 4.14 (hours spent engaged in activities), demonstrate that students who attended high schools in rural communities were more likely to participate in athletic and non-athletic extra-curricular activities in post-secondary. No student from any school type indicated that they spent six or more hours per week engaged in extra-curricular activities during their first term of post-secondary education.

Table 4.13 *Involvement in Post-Secondary Extra-Curricular Activities*

School Affiliation	Participation in recreational athletic extra-curricular activities		Participation in at least one non- athletic extra-curricular activity	
	N	%	N	%
Rural Communities				
Public	6	60.0	3	30.0
Separate	1	50.0	1	50.0
Total	7	58.3	4	33.3
Urban Communities				
Public	12	34.3	8	22.9
Separate	2	25.0	1	12.5
Total	14	32.6	9	20.9

Table 4.14 *Hours Per Week Participating in Post-Secondary Extra-Curricular Activities*

School Affiliation	0 hours		1-5 hours		No Response	
	N	%	N	%	N	%
Rural Communities						
Public	2	20.0	6	60.0	2	20.0
Separate			2	100.0		
Total	2	16.7	8	66.7	2	16.7
Urban Communities						
Public	17	48.6	17	48.6	1	2.9
Separate	6	75.0	2	25.0		
Total	23	53.5	19	44.2	1	2.3

Table 4.14. No students indicated they spent 6-10 or 11 or more hours per week involved in extra-curricular activities during their first term of post-secondary studies.

The previous section summarized the frequency that students participated in academic and non-academic activities during their time in high school and their first term of post-secondary studies. The following section demonstrates where correlations exist between involvement in

activities at the high school and subsequently at the post-secondary level and whether there is a correlation between the type of high school a student attended and a student's involvement in postsecondary education.

Correlations. Pearson's correlation co-efficient was used to calculate several correlations between data points to determine whether any correlations existed between involvement in high school and subsequently in post-secondary, involvement in high school and five-subject admission averages, involvement in post-secondary and term 1 post-secondary grades, and high school grades and post-secondary grades. If there is a correlation between two variables that means those two variables are related (Saldana, 2018). This does not, however, mean that one variable influences the other. A positive correlation means that as one variable increases so does the other, while a strong negative correlation means that as one variable increases the other decreases. If there is no consistent pattern between the two variables, then those two variables are not correlated. The more related the variables are the stronger the correlation is.

Involvement in high school and subsequently in post-secondary. The data that follows demonstrates that there is a positive correlation between involvement at the high school and subsequently at the post-secondary level in hours spent on homework, engagement in classroom activities, and engagement in athletic activities. There is no correlation between involvement in non-athletic extra-curricular activities at the high school and post-secondary levels.

Hours spent on homework. An analysis of time spent on homework in high school and subsequently in post-secondary demonstrated that there is a moderate positive correlation between hours spent on homework in high school and subsequently in post-secondary $r(53) = .483, p = .000$, suggesting that the more time a student spends on homework in high school the more time they will spend on homework in post-secondary.

Engagement in classroom activities. There is a moderate positive correlation between participation in high school classroom discussions and post-secondary classroom discussions, $r(53) = .371, p = .005$, suggesting that, regardless of school type, students who engage in classroom discussions in high school are more likely to engage in classroom discussions when they begin their post-secondary studies.

Involvement in athletic activities. There is a high positive correlation, $r(53) = .557, p = .000$, between the number of athletic activities a student is involved in during high school and involvement in campus rec athletic activities in postsecondary, suggesting that the more involved

in athletic activities a student is in high school the more likely they are to be involved in recreational athletic activities in post-secondary.

High school involvement and five-subject admission average. There is no significant correlation between hours spent on homework, engagement in classroom discussions, or participation in athletic extra-curricular activities in high school and a students' five-subject admission average.

Involvement in non-athletic extra-curricular activities. Overall, there was a moderate positive correlation, $r(53) = .478, p = .002$, between the number of non-athletic extra-curricular activities a student was involved in and their five-subject admission average. When looking at the data for only those students who attended rural schools, however, there was no significant correlation between involvement in non-athletic extra-curricular activities and a students' five-subject admission average; the positive correlation, $r(31) = .532, p = .001$, existed only among the urban students.

Post-secondary involvement and term 1 weighted average. There are correlations between post-secondary involvement and term 1 averages.

Hours spent on homework. There is a positive correlation, $r(53) = .471, p = .000$, between hours spent on homework in post-secondary and term 1 average, suggesting that time spent on homework is more important in post-secondary than in high school.

Engagement in classroom activities. While most students indicated that their post-secondary instructors encouraged classroom discussion through awarding participation marks (see Table 4.7), there is no significant correlation between the frequency of participating in classroom discussions and term 1 grades in post-secondary education.

Involvement in athletic and non-athletic extra-curricular activities. There is no correlation between a students' level of participation in extra-curricular activities in post-secondary education and their term 1 grades.

Five-subject admission average and term 1 weighted average. Participants were asked to report their five-subject admission average and their cumulative average after their first term of post-secondary studies. Pearson's correlation co-efficient was used to determine whether there was a correlation between students' five-subject admission averages and their term 1 post-secondary averages. From the sample of 55 students, the students' five-subject admission averages and their first term post-secondary cumulative averages were found to be moderately

positively correlated, $r(53) = .495, p = .000$. Table 4.15 demonstrates the correlation between the five-subject admission average a first term post-secondary averages by school type.

Table 4.15 *Correlation: Five-Subject Admission and Term 1 Post-Secondary Averages*

School Affiliation	Pearson's Correlation Co-efficient	Significance
	Rural Communities	
Public	.233	.536
Separate	1.000**	.
Total	.304	.337
	Urban Communities	
Public	.561**	.000
Separate	.761*	.028
Total	.554**	.000

** correlation is significant at the 0.01 level (2-tailed)

* correlation is significant at the 0.05 level (2-tailed)

Grades and expectations. Students were asked to report their university five-subject admission average as well as their averages for their first and second terms of study. Although averages were reported for both terms, the researcher used first term averages to analyze the data because this was the term immediately following the students' transition to post-secondary education. Further, COVID-19 had an impact on the student experience in the second term as students transitioned to remote learning and, without a physical learning environment, the shift to remote learning would have affected student involvement and may also have impacted student success. Table 4.16 shows the average admission average for a student by school type, the average first term average by school type, and the average drop from high school to post-secondary grades. Students who transitioned from rural communities saw a bigger drop from their high school average to their term 1 post-secondary average than those students who transitioned from urban communities.

Table 4.16 *Self-Reported High School and Post-Secondary Grades*

School Affiliation	High school (HS) 5-subject admission average		Term 1 post-secondary (PS) average		Drop from HS average to PS average (%)
	Mean %	Std. Dev.	Mean %	Std. Dev.	
Rural Communities					
Public (<i>n</i> =10)	92.0	4.4	75.0	7.5	17.0
Separate (<i>n</i> =2)	90.0	10.0	74.5	4.9	15.5
Total (<i>n</i> =12)	91.7	5.0	74.9	6.9	16.8
Urban Communities					
Public (<i>n</i> =35)	89.7	7.9	79.6	8.6	10.1
Separate (<i>n</i> =8)	93.5	5.3	78.5	11.1	15.0
Total (<i>n</i> =43)	90.4	7.6	79.4	8.9	11.0

Expectations. Students were asked to indicate whether their post-secondary grades were higher than expected, lower than they expected, or about what they expected. Then, in an open-ended question, students were asked to explain why they thought their grades might have been higher or lower than what they expected. Student responses were categorised by theme and are summarized in Figure 4.4. Reasons that students gave for their grades being lower than they expected included having challenges with instructors, experiencing difficulty in adjusting to the expectations of or not being familiar with the expectations of post-secondary education, having inadequate study skills, or dealing with depression or experiencing a lack of motivation. Reasons students gave for their grades being higher than they expected included that they began their post-secondary education with low expectations and they were able to exceed those expectations or that they were very determined to do well.

Figure 4.4 *Students Explain Mismatch Between Expected and Actual Grades*

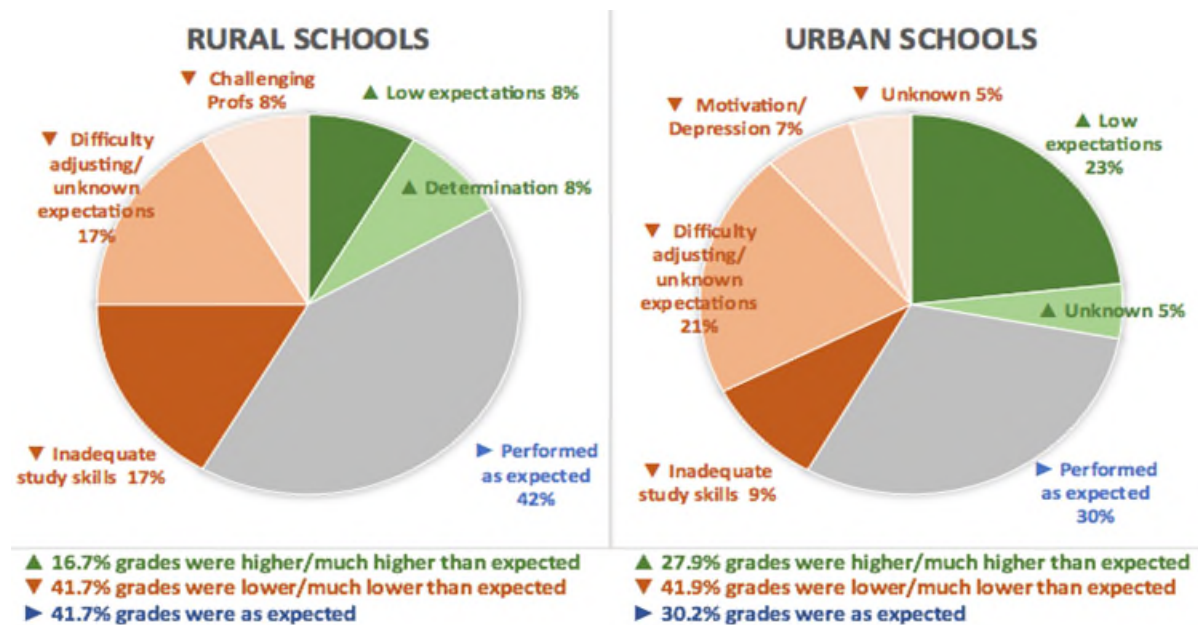


Figure 4.4. “Unknown” refers to the percentage of students who indicated that their grades were higher or lower than they expected but did not provide a response to the text-based follow-up question.

Post-secondary grade expectations for students coming from rural communities. One student who said their post-secondary grades were higher than they expected said that when they finished high school, they felt they would not be prepared for post-secondary education. Another student said they expected to do poorly in their post-secondary studies because they were used to being in a small school where their teacher knew them, they and felt that some of their success came from the teacher knowing them and not necessarily based on their work: “In rural schools, you are a name. In the first year of university, you are a number, and your success relies on what you can do, not what your name is.” This student felt they had to prove themselves, which they felt resulted in a higher grade than what they expected.

Two students from rural schools who said that their grades were lower than they expected said that they did not have the study skills necessary to succeed, two said that they struggled to adjust to the new environment, and one said they struggled with “rude profs who would have terrible lectures and be extremely condescending and unhelpful” when asked for help.

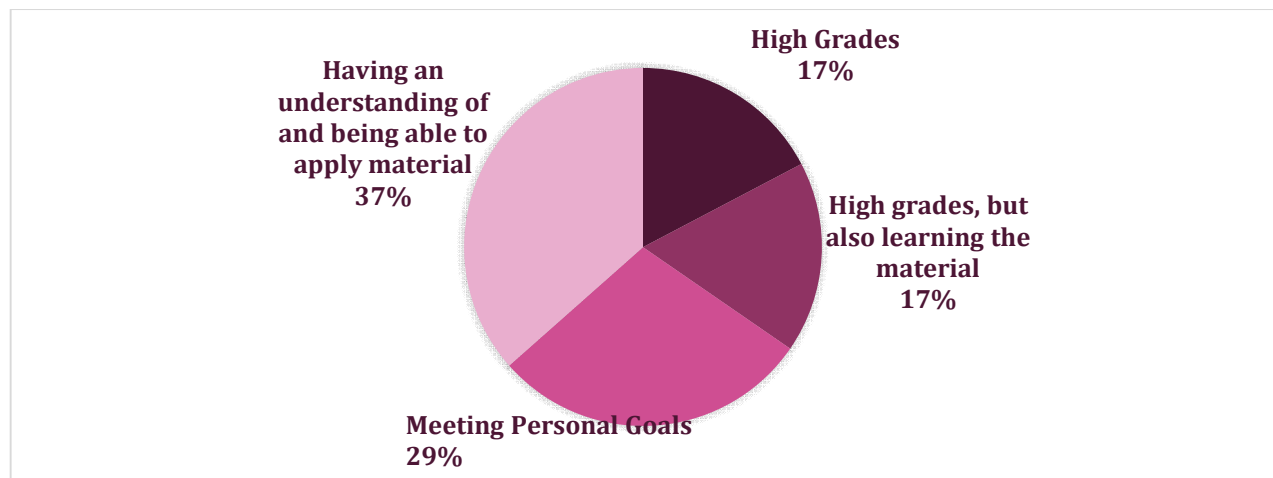
Post-secondary grade expectations for students coming from urban communities. Ten students who came from an urban community who indicated that their grades were higher than they expected said that they were told to expect a drop in their grades, but the drop they

experienced was not as significant as what they had expected. One student said that they were “pleasantly surprised,” to earn higher grades than they expected but indicated that they were, “still very challenged along the way.” Two students did not provide an answer to the follow-up question that asked why they felt their grades were higher than they expected.

There were 18 students who indicated that their term 1 post-secondary grades were lower than they expected. Nine students said that they struggled with transitioning to post-secondary. One student who struggled with the transition said that they were “totally overwhelmed by university. I was overwhelmed with the course loads and I didn’t have any guidance. I felt defeated after my first semester and thought about dropping out of uni.” Another student explained that the part of the transition that they found difficult was “learning to adjust to college teaching styles and taking proper notes.” Four students said that they did not have adequate study skills or were unprepared to put in the appropriate amount of time outside of class. Three students said that they were coping with depression or were experiencing a lack of motivation. “My depression got far more severe during University,” explained one student, “I didn’t find a group of peers until late November – I found it nearly impossible to motivate myself to do work outside of the classroom.” Two students did not provide an answer to the follow-up question that asked why they felt their grades were lower than they expected.

Defining academic success. Participants were asked to answer the open-ended question “how do you define academic success?” Student responses were grouped into themes and are summarized in Figure 4.5.

Figure 4.5 *Student Definitions of Success*



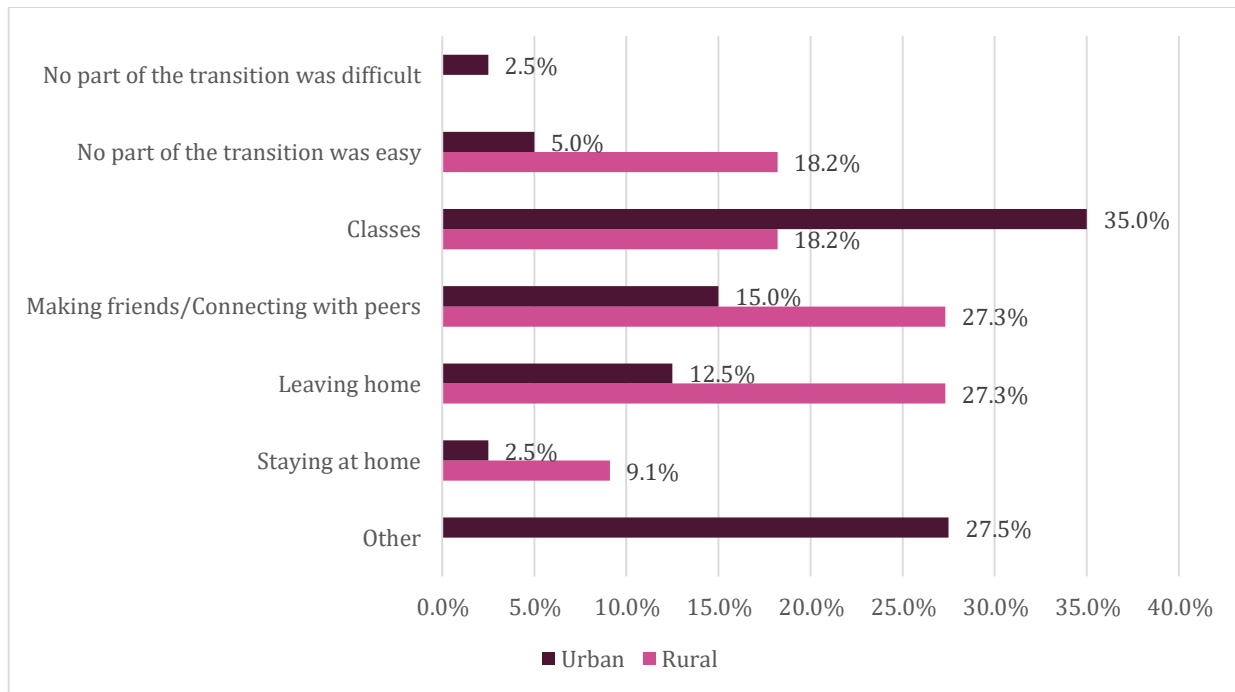
Definitions of success: Students coming from rural communities. Most students coming from rural communities cited the importance of understanding the material and reaching personal goals. Of the 11 students from rural communities who answered the question, no students indicated a specific mark or “high grades” as their primary definition of success. Three students (27.3%) said that grades were important, but so was learning and understanding the material. Another three students (27.3%) referenced personal goals and “feeling good about it” in their answers. The last five students (45.5%) said that it was about “having a true understanding of the material” and being able to apply the information to “daily life” or “connect it to other subjects.”

Definitions of success: Students coming from urban communities. Students coming from high schools in urban communities were more likely to use “high grades” or specific averages in their definitions of success. Of the 41 students who responded to the question, nine (22.0%) cited grades or correct answers (with no other qualifier) as their definition of success. Another six students (14.6%) said that high grades were important, but also said that learning, retaining, and understanding the course materials was an important part of success. Twelve (29.3%) students said that success was about goal setting and was dependent on the amount of effort that individual student put in; one of these students said that “everyone has different academic goals and so success is definitely different and varies on a person-by-person basis.” The remaining 14 students (34.1%) said that success was about learning, retaining, understanding, and applying the materials.

Transitioning from high school to post-secondary. Students were asked to answer two open-ended questions about the easiest and most difficult parts of their transition from high school to post-secondary. Student responses were grouped by themes and are presented below.

Easiest part of transitioning. The first question students were asked regarding the transition from high school to post-secondary was, “what was the easiest part about transitioning to post-secondary education?” Figure 4.6 provides a comparison of student responses from rural and urban schools.

Figure 4.6 *Easiest Part of Transitioning from High School to Post-Secondary*

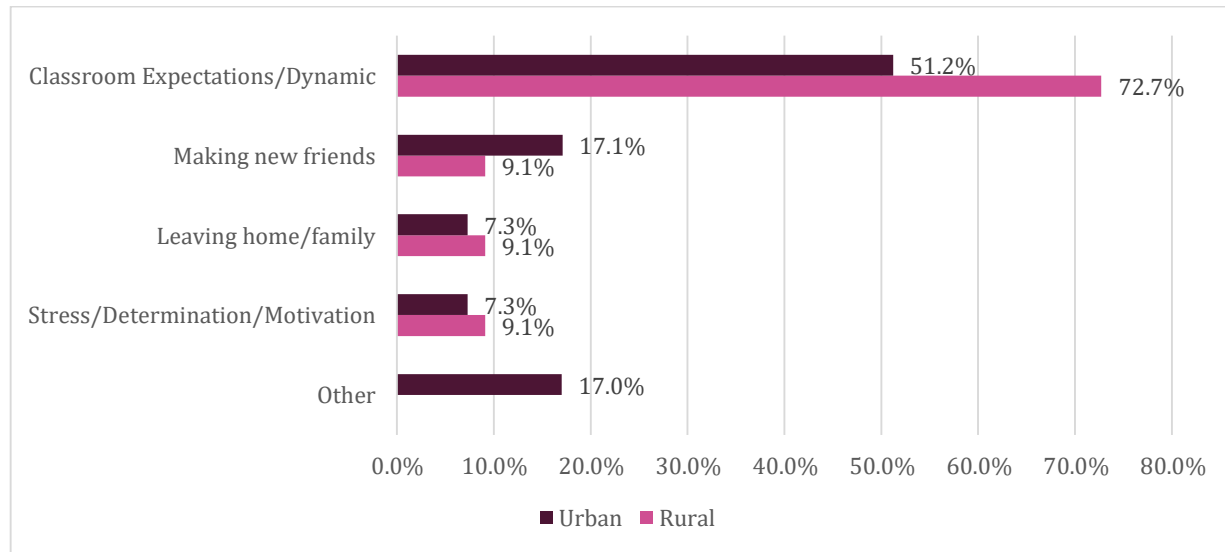


Rural students. Eleven students responded to the question; two of the respondents (18.2%) indicated that there was no easy part about transitioning. The other nine students cited the following as the easiest part of transitioning: leaving home or having to live on their (three students; 27.3%); the social aspects, including having or making friends or joining clubs (three students; 27.3%); the classes, as they are “more focused” than high school classes were (two students, 18.2%); and, not having to move away from home (one student; 9.1%).

Urban students. Of the forty students who responded to the question, one student (2.5%) said they “loved every second of it” and two students (5.0%) said that there was nothing that was easy about the transition. The 37 students who indicated a specific example said that the following aspects were the easiest part of the transition: the classes or the routine (14 students; 35.0%); making new friends or building relationships with peers (six students; 15.0%); moving away from home or gaining independence (five students; 12.5%) and staying at home with their parents (one student; 2.5%). “Other” responses included going to school with friends from their hometown (four students; 10.0%); moving into residence (four students; 10.0%); finding their classes (two students; 5.0%); and the anonymity (one student; 2.5%).

Most difficult part about transitioning. Students were then asked to respond to the question, “what was the most difficult part about transitioning to post-secondary education?” Figure 4.7 provides a comparison of student responses from rural and urban schools.

Figure 4.7 *Most Difficult Part of Transitioning from High School to Post-Secondary*



Rural students. Eleven students from rural communities answered the question about the most difficult part of the transition and gave the following answers: expectations or classroom dynamic, including interactions with instructors or the size of the classes (eight students; 72.7%); added stress (one student; 9.1%); making new friends (one student, 9.1%); and, leaving family (one student; 9.1%).

Urban students. Forty-one students coming from urban communities provided the following answers when asked about the most difficult part of the transition: expectations or classroom dynamic, including interactions with instructors or the size of the classes (21 students; 51.2%); making friends or connections with peers in classrooms (seven students; 17.1%); moving away from home (three students; 7.3%); and determination, motivation, or prioritization (three students; 7.3%). “Other” responses included dealing with the change in their grades or maintaining a satisfying average (two students; 4.9%); driving or using city buses (two students; 4.9%); going to class (one student; 2.4%); and money and budgeting (one student; 2.4%). One student (2.4%) said that “the only difficult part was when COVID started.”

The final question of the survey asked students to indicate whether or not they were interested in participating in the second phase of the study, the student interviews. The following

section includes a summary of the method undertaken for phase two of the study as well as a presentation of the qualitative data.

Phase Two: Student Interviews

Phase two of the study consisted of telephone interviews with students representing both rural and urban schools.

Pilot Testing

The interview instrument was piloted with the research supervisor to ensure clarity and to check for questions where bias may occur. Pilot testing gave the researcher an opportunity to practice asking questions, ask probing questions, and discuss ways to establish trust with student participants. Following a review of the survey, the instrument guide was edited to include more probing questions, to ensure the questions were clear and would elicit responses that would answer the research questions, and to make sure the questions encouraged fulsome answers. The spirit of the questions remained the same; however, the edited version encouraged a more natural conversation between the interviewer and interviewee.

Participant Recruitment

Students who participated in phase one of the study were asked to indicate on the questionnaire whether they were interested in participating in the second phase of the study. Due to the limited number of participants from separate schools, students were split into the categories of rural and urban for phase two of the study. Of the students who completed the online questionnaire, eight of 12 students from rural schools and 24 of 43 students from urban schools indicated they were interested in participating in the second phase of the study. Students were randomly selected and invited via email (Appendix E) to set up an interview time. Despite students indicating they were interested in participating in phase two, several declined the opportunity or failed to respond to the invitation. Ultimately, two students from rural communities and three students from urban schools participated in the interview.

Participant Interviews

Due to COVID-19, interviews were conducted by telephone rather than in-person. Interviews occurred over a three-week period where five students were interviewed. Each interview took from 30 to 45 minutes to complete. Rural student participants were Quinn and

Reese; urban student participants were Alex, Lindsay, and Drew. Student names were changed and identifying details about participants have also been excluded to protect anonymity. A semi-structured interview format was used, meaning that pre-determined interview questions were used but the order or precise wording of the questions was changed as necessary in order to allow for a natural flow of conversation and to explore certain topic areas on a deeper level (McMillan, 2010). All interviews followed the same format and used the same questions as a guide (Appendix C). Participants were asked questions about their identity, involvement, participation, and motivation for success in both high school and post-secondary. They were asked questions about the transition from high school to post-secondary, including how they prepared and what the easiest and most difficult parts of the transition were. They were also asked about how they define success and how their views on success have changed since high school. Finally, students were asked how involvement and success have been impacted by the move to remote learning as a result of COVID-19. Interviews were recorded and transcribed by the researcher.

Presentation of Collected Data: Phase Two

Initial codes and categories were derived from the research questions and interview guide. Interview transcripts were then coded and re-coded by the researcher several times, resulting in a list of categories, sub-categories, codes, and subcodes (Appendix J). The categories and codes derived during the analysis process informed the findings of the study.

Quinn. Quinn attended a small school in a rural community. During high school, Quinn described themselves as an “over-achiever” and an “involved” student. The high school that Quinn attended was small, and the relationships with teachers and peers was described as “close.” When asked about involvement in extra-curricular activities, Quinn explained that there were “not as many opportunities coming from that small of a school.” When Quinn did get involved, it was in activities that were enjoyable or provided self-fulfillment or because older students in the school acted as role models for getting involved. In the high school classroom, Quinn mostly participated out of obligation. However, Quinn did say that they had a teacher who was good at encouraging classroom participation:

We had a good teacher who would introduce us to different ways of starting a discussion, like not just an open-ended question where nobody answered, but we sometimes did debates

and set ourselves up on sides and kind of engaged in different ways that were better than other ways.

As for homework, Quinn did not have time to do homework after school because of a part-time job, so they did homework before school or during lunch or breaks. Quinn's motivation for success in high school was to earn scholarships and gain post-secondary admission.

In post-secondary, Quinn attended every class, was not overly involved, and "[made] sure my grades were good enough for where I think they should be." Quinn described themselves as "mediocre," in post-secondary, "doing well, but not overachieving." When asked about the environment of the post-secondary institution, Quinn said that there was not as much of a community in post-secondary as there was in high school; however, the university did provide a lot of services or support for students through emails or in other ways. Quinn did not really participate in classroom discussions, as "bigger classes are quite intimidating for me." Post-secondary required Quinn to put in a lot of time to homework: "I did schoolwork pretty much 24/7 [...] it became more of like your full-time job." Quinn was also focused on refining their time management skills and balancing priorities, saying that they would try to pick up shifts at work and try to keep weekends free of homework. The increased amount of time spent focusing on grades meant that Quinn did not have time to get involved in extra-curricular activities.

When asked about their preparedness for post-secondary, Quinn explained that they were more prepared than they initially thought:

I think walking in before it started, I felt unprepared, and like I didn't know what I was doing. Just from the unknown of not knowing what's going to happen. But as I got going, I really felt like I got into a habit and I got into a routine of things and that I was more prepared than I thought I was.

Quinn said that their high school teachers "went over and above to give us everything we need to not only succeed in high school but have a good foundation for moving forward" by providing them with a foundation for writing skills and formats for writing or pushed them to learn things that students in other schools might not be exposed to. Older peers would often "scare" Quinn with their stories about post-secondary, and when it came to transitioning, Quinn was "just kind of figuring it out on my own." The easiest part of the transition for Quinn was the independence from moving out of home. The most difficult part of the transition for Quinn was

figuring out the varying expectations of all their instructors. Quinn would advise students preparing to transition to post-secondary to not procrastinate and stay on top of their work.

When the institution shifted to remote learning as a result of COVID-19, Quinn said that they were able to maintain their success; however, they continued to have no motivation to be involved for classroom discussions:

Not much has changed. I didn't really feel motivated to participate in a big class in person, and I don't really feel motivated on a big [video call] to partake either. So, if anything, I'm less motivated to discuss or partake in things online.

When asked about success during the first year, Quinn felt that they did "better than expected." Quinn's definition of success is about learning and comprehending the material, and not just about working to have the highest average like they did in high school. Quinn thought "that's why I think I felt least prepared [for post-secondary] because I felt like I spent most of my high school just doing things to get the grades, not to get the material." Quinn felt that if they had been more focused on learning and comprehending the material they may have been better prepared for success in post-secondary.

Reese. Reese attended high school in a rural community and explained how that impacted their experience in the classroom:

It's a K-12 school and it has less than 200 students. So, it was really small. My high school class... like, the Gym teacher would teach Math. The Chem teacher would teach English. It was a lot of teachers who would come to do their practicums and leave.

They also indicated that there "wasn't an emphasis on academic excellence or success;" however, as the only student in their class applying for post-secondary, Reese explained that they received "undivided attention" from teachers. When describing themselves as a student in high school, Reese said they "had really good grades in high school, but I was a really bad student in the sense that I, like, consistently skipped class 'cause I found it easier to do it on my own." Reese was, however, a hard worker who achieved high grades. Reese felt comfortable participating in classroom discussions because they knew and were comfortable with everyone in their small class. Reese was not involved in school associated extra-curricular activities as there were very limited options due to the size of the high school. Reese did, however, get involved in activities with the school district and was often selected for participation due to "demographic

reasons” in that they were looking for rural participants. Reese’s motivation for getting involved in these activities was personal interest.

In post-secondary, Reese was determined to succeed, and their familiarity with their teachers in high school meant that they tried to maintain similar relationships with instructors in post-secondary. Reese did, however, find that it was difficult to engage with instructors, which negatively influenced their engagement:

Some profs are great. A lot of them aren't. A lot of TAs will just tell you you're stupid. And you're paying for it apparently [laughs]. [...] I found being in [my college] and especially my big lectures the unfriendliness of my professors and TAs was so shocking to me that I kind of made it a personal point to not attend classes that I hated the teachers in.

Reese added that this was more often a problem in their home college, and that instructors seemed to “lack passion,” but that it was better in classes outside their home college. Reese did, however, indicate that the campus itself is a great environment for students, and it was beneficial to have not only academic supports but also health services available right on campus for students. Reese said that friends attending other institutions have visited and have commented on the pleasant atmosphere of the campus. Reese indicated that they were too busy in first year to be involved in extra-curricular activities.

When asked whether or not they were prepared for post-secondary education, Reese exclaimed, “Oh God no [laughs]. Oh, absolutely not. It was horrible.” Reese felt they had nobody to help them prepare for what to expect:

I was used to figuring shit out on my own so I would go to class and the profs would literally tell me what to do. I did not expect them to make me understand it. And I think going in with zero expectations to have the professor actually help you learn the subject is exactly what you need to do.

The easiest part of the transition for Reese was attending the lectures, while the most challenging aspect was the varying expectations of the instructors: “every single class and every single teacher has a different syllabus, a different instruction style, different things to test you on. You simply cannot use the same method for every single class.” When asked what advice they would give to an incoming student, Reese said that incoming students should manage their expectations when it comes to time management and success:

You can't put 100% of your effort everywhere. You don't have the time. In high school you can put 100% into everything. And now it's... sometimes you're going to suck in some classes because you just didn't have the time.

Reese noticed an increase in the amount of work they were doing since COVID-19 and commented that their classes are all asynchronous. Online learning is “brutal” and “everyone's miserable. Everyone's sad. I look at three screens every day. I look at my phone to see my friends, I look at my computer to see my work, and I look at my TV for a break.” Reese also felt that remote learning has “taken all the learning out of learning” as instructors focus on ways to try to prevent students from cheating, such as limiting the amount of time students have to take online tests.

Reese defined success as when “you’ve got your mojo,” and that it’s more about learning to learn and trying your hardest:

I always saw that doing well in school, that was for me. That was for my own enjoyment, my own enrichment. Even going to school is a massive privilege, it's enriching you. Your world becomes more interesting the more you know about it.

Reese felt that they were successful in their first year of post-secondary, especially when compared to their peers.

Alex. Although Alex’s community meets the definition for an urban community as outlined in this study, Alex explained that they “went to school in a small town, and it was like 2,000 people in the community, and 300 people in a K-12 school.” When describing the environment, Alex said that “everyone knew each other. I felt that it wasn't super cliquey, like when you think of stereotypical high schools. Everyone knew each other and everyone was pretty nice to each other.” Alex described themselves as introverted, but noted they were involved in “every single club” they could be in as well as working full-time. Alex’s motivation for being so involved was that they did not like to spend time at home. Alex was comfortable being involved in classroom discussions and speaking up because they were comfortable with all their peers. Alex did not spend a lot of time on homework, as teachers often gave in-class time to work on projects and assignments. Scholarships and post-secondary admission were Alex’s main motivators for achieving success in high school.

When Alex began post-secondary, they described themselves as more withdrawn and not as involved as they were in high school. Alex found that the college was welcoming and that the

instructors tried to be supportive; however, Alex struggled to engage in classes outside of their college:

Outside of [my college] I felt that the bigger class size, and since I wasn't in those colleges, I didn't feel like contacting the academic advisors there and I didn't feel compelled to talk to anyone but my professor so that it affected my performance because I wasn't as engaged in the class work.

It was difficult for Alex to get engaged in classroom discussions in post-secondary because they “felt like [their] voice wasn’t as important as everyone else’s.” Alex got involved in their college student society because they were looking for an experience similar to high school and felt that being involved would help achieve this feeling. Alex felt they were “moderately successful” in their first year and thought that the excitement of first year helped them succeed.

Alex felt that they were moderately prepared for post-secondary. Most of Alex’s expectations for post-secondary came from older peers from their school: “It’s a small town there’s this kind of weird dynamic where sometimes graduated students will show up at the high school for some reason. And those students would talk about university sometimes.” Alex also felt that they could rely on their high school teachers for support even once they began post-secondary. The easiest part of the transition for Alex was attending lectures. The most difficult part of the transition for Alex was making friends:

[I thought] it would've been easier to make friends or to find other people in the same situation as you. But I found that my first few months in university everyone was kind of withdrawn and staying to themselves and it was harder to get to know people. Even though everyone's alone and everyone's trying to find a friend, I found that was a little bit surprising and a little bit difficult to deal with.

Alex’s advice for new students would be to build study habits and work on time management before making the transition to post-secondary education.

Alex said that when classes moved from in-person to remote due to COVID-19 they experienced challenges in participating in their asynchronous classes as there was little or no interaction and the lack of interaction impacted their motivation. Alex indicated that their depression has gotten worse since being isolated from people, making it more difficult to work on schoolwork and they have since discontinued their involvement with the student society. Alex commented that instructors and students all seem to be struggling with a lack of motivation.

Alex defined success as achieving personal goals and trying your hardest:

I think if you're trying as hard as you can and you pass the class with a 60 then you're very successful. I think that if you're passing the class with like an 80 and you only put in a moderate amount of effort then you're not that successful.

Alex's definition of success changed from high school, where success was defined by the grades they got. Alex's definition of success was inspired by their job working in a daycare, where workers focused more on the process and progress that children were making in activities rather than the outcomes of activities.

Lindsay. Lindsay attended a large school in an urban community. Lindsay said that they knew most students in their graduating class and knew all the teachers. Although the environment of the high school was friendly, it was also cliquy. Lindsay described themselves as being an involved student with good grades who maintained a good balance between academics and social activities in high school. When asked about homework, Lindsay said, "I don't think high school was that hard. I didn't study... like I don't study nowhere as much as I do now." Lindsay enjoyed spending a lot of time engaged in extra-curricular activities in high school and felt that involvement in leadership roles would help them attain scholarships.

Lindsay described themselves as someone who did their work on time, tried really hard, and "just barely managed it all together" in their first term of post-secondary. Lindsay spent a lot of time on homework in post-secondary and realized very quickly after receiving a low mark on a midterm that the habits they had from high school would not work in post-secondary. They described the institution as cliquy and said that "no one really cares about each other as much [...] People aren't gonna smile at you in the hallways and they're just minding their own business." Lindsay was not afraid to get involved in classroom discussions and asked questions when they were genuinely interested. Lindsay did not, however, enjoy math, and "never showed up to a class 'cause it was boring." Lindsay got involved in the college student society as a way to make friends and meet new people, as they did not have a lot of friends when they started post-secondary.

Lindsay felt prepared to start post-secondary, saying that an older peer told them what it would be like in regard to the workload, meeting new people, and living by yourself. In high school, Lindsay's teachers told their class that professors would be tough on them from time to

time, but overall, the way that the teachers described post-secondary was pretty “off.” Lindsay was surprised to find that a lot of students struggled in post-secondary:

I follow [the university confessions page], so watching everybody just be sad and not have a good time was surprising to me because in high school to me it seemed like there was less people who were worried about what they were gonna do with their lives. Like it seems like a lot of them got it figured out... a lot of them went into trades or ran family farms but in university I find that like people with specific degrees, even they don't know what they're gonna do after university, so that was really surprising.”

Lindsay explained that knowing that other people were struggling made them feel better and less alone:

It's OK to not know what you wanna do after college or after post-secondary. It definitely made me feel better and like it made me feel more relaxed 'cause I didn't have to like pressure myself into... I dunno, into figuring it out right away.

The easiest part of the transition for Lindsay was the newfound independence and moving away from home. Lindsay struggled most with time management and managing the financial responsibilities of paying rent and paying for groceries. Lindsay would recommend that new students work on their time management and study skills in high school to make for an easier transition.

Lindsay was able to maintain their level of success during the shift to remote learning; however, they did find that the workload was increased. Lindsay explained there was little interaction with remote learning, and they found they did more learning on their own instead of asking for help: “I ask less questions like it feels like it's burdensome to ask, to like email them all the time. So, I definitely just go with the flow and if I don't know it, I try to look it up online.” Lindsay was already involved in the student society and a club before COVID-19, but explained that they would not have been motivated to join anything new had they not already been involved.

Lindsay acknowledged that everyone has different standards for success, but for them success is about achieving personal goals and personal satisfaction:

I think success is just being happy and comfortable with where you are. So, like, just being happy with your life and satisfied. Like I don't think it's necessarily about money or income, I think it's just like you don't want more. You're satisfied with where you are in life.

Lindsay felt that they have been successful in post-secondary as they achieved the goals they wanted to and maintained satisfactory grades.

Drew. Drew attended a large high school with a graduating class of about 250 students in an urban community. While it was a big school, Drew explained that they still knew most of the teachers and students in their grade, at least to recognize their face and know their names. In high school, Drew was a hard worker who was committed to school but also liked to spend a lot of time with friends, so they maintained a balance with school and their social life. Drew worked hard to gain admission to post-secondary and secure scholarships. Drew described themselves as being intrinsically motivated, but also wanted to make their family proud. Drew was not overly involved in classroom discussions, but would participate if called upon: “If a teacher calls me out then obviously I would participate but I’m not the type of person to always raise my hands up. Mostly my academic abilities reflect on tests or projects.” Drew participated in volleyball earlier on in high school but stopped in the later years to focus on getting their grades up as high as possible.

When asked to describe themselves in post-secondary, Drew said that they were “confused” and were really surprised by the amount of course work and the expectations of the instructors. Although Drew struggled with time management and study skills, they were still determined to do well. Drew was not very engaged in the classroom, as most of their classes were too big to have discussions in and they were too shy to speak out in such large classes; Drew was, however, “engaged enough just to get the participation marks.” Drew didn’t feel they had time to get involved in extra-curricular activities as they were focused on maintaining a high average to gain admission into a competitive program.

Drew felt moderately prepared for post-secondary but was caught off guard with multiple midterms being in one week and the challenges of interacting with instructors. High school teachers and counselors told Drew that post-secondary was going to be hard and that it would be nothing like high school. High school teachers helped Drew with post-secondary expectations by being tough graders:

They wouldn’t give you an easy ‘A’ which I found helpful because at least my expectations were a bit lower coming into university. Like I didn’t expect high 90s coming from my classes which really humbled me and also prepared me for I guess failure in my standards. Like I wasn’t upset when I would get like 70s in my classes.

Making new friends and maintaining relationships with high school acquaintances was the easiest part of the transition for Drew: “I had some high school friends, I guess, or acquaintances, that I didn’t really talk to in high school. But then since we kinda knew about each other we’d kinda just hang out and help each other.” The challenging aspects of the transition for Drew were that everything seemed to happen at once and there was not any flexibility if you happened to have two midterms or assignments due on the same day, which was something they came to expect in high school. When asked what advice they would give to transitioning students, Drew suggested that students should keep in mind that “getting a low mark in one of your classes is not the end of the world. It's not really gonna define your whole college career. Like that one mark shouldn't stress you out.” Drew also encouraged students to prepare for post-secondary by working on their time management and study skills.

The change to remote learning during COVID-19 did not negatively impact Drew’s success; however, it has been more stressful, and Drew explained that they were “happier and enjoyed myself more in first year than I did in second year.” Drew indicated that most of their classes are asynchronous and that style of learning does not help to encourage student participation. Drew noted that they participated more often in the remote environment because they were not as worried about embarrassing themselves.

For Drew, success is about achieving your goals while at the same time maintaining happiness: “at the end of your journey you should look at yourself, be proud of your journey, and be happy with the results.” Drew felt that they have been successful throughout high school and post-secondary as they have been able to achieve their goals and have been happy with what they have achieved.

The following section considers how the results of the online questionnaire compare to student comments from the telephone interviews.

Summary

Using a mixed-methods approach to see if both methods yield similar results is one means of achieving triangulation (Bergin, 2018; Cohen et al., 2002; Creswell, 2014; McMillan & Schumacher, 2010). This section serves as both a summary of and comparison of the data from both phases of the study.

Involvement

Variables of student involvement included the amount of time students spent on homework, their engagement in classroom discussions, the way their teachers encouraged discussion in the classroom, and their participation in athletic and non-athletic extra-curricular activities.

Hours spent on homework. Quantitative data showed that students who attended high schools in urban communities spent more time on homework in high school per week than those who attended high schools in rural communities. Most students from all school types indicated that they spent six or more hours per week on homework in post-secondary. There was a moderate positive correlation between hours spent on homework in high school and subsequently in post-secondary, as well as a positive correlation between hours spent on homework in post-secondary and term 1 average.

During the telephone interviews, participants who attended rural schools explained that they spent very little time outside of school on homework. Reese said their homework habits were “pretty non-existent” while Alex, who attended an urban school but described their school as a “small town” school said that they were given time during class to work on assignments, but they still spent two to three hours per week outside of school on homework. Lindsay, who attended an urban community school said they did not study nearly as much as they do now, but they “wish they tried harder because I could’ve taken advantage of how easy it was.” Drew attended a separate school in an urban community and said that during grades 11 and 12 they spent around two or three hours per day doing homework.

Engagement in classroom discussions. Despite 67.3% of students indicating that their post-secondary instructors awarded participation marks to encourage classroom engagement, students were, overall, much less likely to engage in classroom discussions in post-secondary education than they were in high school. While student engagement in the classroom among participants did decrease from high school to post-secondary, there was a moderate positive correlation between participation in high school classroom discussions and post-secondary classroom discussions, $r(53) = .371, p = .005$, suggesting that, regardless of school type, students who engaged in classroom discussions in high school are more likely to engage in the classroom discussions when they begin their post-secondary studies.

The qualitative results of the study aligned with the findings of the quantitative results. When discussing participation in high school classrooms, students from rural or smaller schools

noted the small class sizes and said that they felt comfortable engaging in classroom discussions because they knew everyone in their classes. Quinn, who attended a high school in a rural community, said they felt obligated to participate, but that their teacher was good at encouraging discussions through debates or in other interactive ways beside just asking questions. Quinn felt that this type of engagement was possible due to the small classes. Lindsay and Drew, who both attended urban schools, were not as involved as the rural participants in classroom participation. Lindsay said if they needed help, they would ask the teacher for help after class or send them an email. Drew would participate if called out, but they would not participate voluntarily. Both Drew and Lindsay came from schools with upwards of 200 students, and while they knew most people by name, they didn't recount the close and comfortable environment that was described by Quinn or Reese, who came from schools in rural communities, and Alex, whose school was in an urban community but had fewer than 200 students.

Student responses in the telephone interview supported the finding that students were less involved in discussions in post-secondary than high school, most often because they found the larger class sizes in post-secondary to be intimidating or that the large lecture style classes made it difficult to get involved. Quinn said that "bigger classes are quite intimidating for me" and, as such, they did not participate in a lot of classroom discussions. Reese did engage in classroom discussions in their smaller classes, saying that they came from a small school where they had familiarity with their teachers and classmates, so they took that attitude with them to those classes. Alex was more withdrawn in post-secondary than in high school, saying that they didn't feel comfortable speaking up in class because they felt their voice wasn't as important as those of their classmates. Lindsay got involved in classes they liked and wasn't afraid to ask questions when they were genuinely interested. Drew commented that most of their classes were large lectures that didn't have a lot of conversation in them, but they did participate in smaller classes that had participation marks: "I was not very engaged," Drew said, "but engaged enough just to get the participation marks."

Involvement in extra-curricular activities. More than half of students across all school environments (83.3% for rural and 75.0% for urban) participated in at least one athletic activity in high school. Students who attended separate schools participated in a higher average number of athletic activities per student than those who attended public schools. Results of the online questionnaire demonstrated that students who attended schools in urban communities were more

likely to participate in at least one non-athletic extra-curricular activity and spend more hours engaged in non-athletic activities. Students from rural schools, however, reported a higher average number of non-athletic extra-curricular activities per student than those who attended urban high schools. Reese, Quinn, Alex, and Lindsay were all motivated to get involved in extra-curricular activities. Alex and Lindsay both indicated that one motivator for their involvement was to increase their chances for getting scholarships.

Drew was the only student interviewed who wasn't involved in extra-curricular activities in grade 12, as they stopped being involved in their senior years of high school to focus on grades. Drew, who attended a high school in an urban community, indicated that they spent two to three hours per day on homework, which did not leave time for extra-curricular activities. As students who participated in this study from urban communities typically spent more time per week on homework than students from rural communities, time spent on homework could be a barrier to their involvement in extra-curricular activities.

Overall, there was a significant decline in engagement in extra-curricular activities from high school to post-secondary. While more than half of students indicated they participated in at least one athletic (83.3% rural; 60.5% urban) or non-athletic (58.3% rural; 79.1% urban) extra-curricular activity in high school, in post-secondary, the number of students who participated in extra-curricular activities was much lower for both recreational athletic (rural 58.3%; urban 32.6%) and non-athletic (33.3% rural; 20.9% urban) activities. Students who attended high schools in rural communities were more likely to participate in both athletic and non-athletic extra-curricular activities in post-secondary. No student from any school type indicated that they spent six or more hours per week engaged in extra-curricular activities during their first term of post-secondary education.

The students who participated in the second phase of the study also demonstrated a decreased level of involvement in extra-curricular activities from high school to post-secondary. During the first term of post-secondary, Quinn and Drew were both more focused on school than getting involved in extra-curricular activities. Both also had part-time jobs that took up a portion of their time outside of class. Reese did not participate during the first term because they wanted to figure out how things worked first. Reese had plans to be more involved during their second year but COVID-19 and the remote learning environment stopped that from happening. Both Alex and Lindsay were involved in their college student societies. Alex was not nearly as

involved as they were in high school but got involved because they wanted to recreate some of the same feelings of belonging that they experienced in high school. Lindsay's motivation for getting involved was to make friends.

Grades and Expectations

In high school, the mean high school five-subject admission average for students coming from rural schools was 91.7% while the mean average for students coming from urban schools was 90.4%. The mean term 1 post-secondary average for students coming from rural communities was 75.9% (a drop of 16.8% from high school to post-secondary) compared to 79.4% (a drop of 11.0% from high school to post-secondary) for students coming from urban communities.

Approximately 40% of students from each school type indicated that their grades in their first term of post-secondary were lower or much lower than expected. The most common reason students gave for achieving lower grades than what they had anticipated was that they experienced difficulty adjusting to the post-secondary environment or they were unsure what the expectations were of them when they began their studies. A slightly higher percentage of students from rural schools cited not having adequate study skills as their reason for not achieving higher grades. This aligns with results on hours spent on homework where rural students were not as prepared for the increased homework demands when they began their post-secondary studies.

Students from urban schools (27.9%) were more likely to achieve higher or much higher grades than they expected in their first term of post-secondary than students from rural schools (16.7%). Most students who said their grades were higher or much higher than they expected said that they had low expectations for their post-secondary grades, often because they were told to expect their average to drop.

Quinn and Reese, who attended high schools in rural communities, both said that they struggled with not knowing what the expectations of each instructor would be. Alex knew the increase in homework was coming, but their habits during the first term of post-secondary were "horrible" and they did not do as much studying as they should have. Alex wished they had known how hard it would be to build study habits and that they had worked on building those habits before beginning post-secondary. Lindsay said they learned quickly that their high school homework habits were not going to work anymore, and they followed the rule that for every hour

spent in class they should spend an additional two hours on homework. Drew, who said they did two to three hours per day of homework in high school, kept their homework habits from high school and that worked well, but they did make some small changes in the second term. The biggest challenge for Drew was that everything would happen at once, and there was no flexibility if you had assignments and tests all due in the same week.

Defining Academic Success

Participants of the online questionnaire were asked to answer the open-ended question, “how do you define academic success?” Student responses were grouped into themes. Most students (36.5%) said that they defined success as having an understanding of and being able to apply the material. Meeting personal goals was the next most common answer, cited by 28.8% of students. Another 17.3% of students said that it was important for them to achieve high grades, but they said that it was important to learn the material. Only 17.3% of students defined success just by achieving high grades; all of the students who defined success as “high grades” were from schools in urban communities.

Students who participated in the telephone interviews, like those who participated in the online questionnaire, gave varied responses when defining success and did not prioritize high grades in their definitions. Reese said that while they felt pressure to get high grades, they ultimately felt that doing well in school is for your own enjoyment and enrichment. Quinn’s focus was on understanding the material, while Alex said that success is about putting in effort, and that is what prepares you for the workforce. Lindsay and Drew both said that success was about being happy. Lindsay said that success is not about a specific number as everyone has different standards. The variety of definitions provided by students in the online questionnaire and the student interviews echo Strange’s (2010) assertion about success being “complex and multi-dimensional” (p. 18).

Quinn and Alex both said that their definitions of success changed since high school, as in high school they both were striving for the highest grades. Quinn acknowledged that their habits and definition of success in high school did not help them prepare for success or a high GPA in post-secondary. Reese, Lindsay, and Drew all said that their definitions of success have stayed relatively the same since high school. Lindsay did recognize that their goal to enter a competitive post-secondary program does mean that their definition of meeting goals to achieve success also

means they need to meet a certain academic average; however, they do acknowledge that every student has different goals.

All interview participants indicated that they felt they were successful during their first term of post-secondary. There were no consistent themes among the qualitative responses in the online questionnaire or the interview questions regarding high school environment success other than students who attended high schools in urban communities were more likely to define success as achieving a certain grade.

In the online questionnaire students were asked, “what motivated you to achieve academic success in high school,” and were given the option to select all answers that were applicable to them. Most students across all school types indicated that they were intrinsically motivated (80.0%) as well as motivated by post-secondary admission (83.6%). All students who attended separate schools said that they were motivated by scholarships, compared to 60.0% of students who attended public schools. More students who attended schools in urban communities (74.4%) than those who attended schools in rural communities (50.0%) said that they were motivated to do well by their parents.

Transitioning from High School to Post-secondary

When asked what the most difficult part of transitioning to post-secondary was, 72.7% of students from rural communities and 51.2% of students from urban schools responded that classroom expectations or classroom dynamic was the most difficult aspect of the transition for them. While students from rural communities seemed to struggle more with expectations during their transition, it was still a challenge for more than half of the students surveyed. Quinn, Reese, and Drew all echoed the sentiment that adjusting to classroom expectations was the most difficult part of their transition. A common theme was the challenge of getting used to the specific expectations of each professor.

The most common responses to the question “what was the easiest part about transitioning to post-secondary education” for students from rural communities were making friends/connecting with peers (27.3%) and leaving home (27.3%). The most common response from students from urban communities was that the classes themselves was the easiest part of the transition (35.0%). Alex said that attending the lectures was the easiest part of the transition before them because they were already used to attending classes.

Alex, who attended a small school in an urban community, said that neither of their parents attended post-secondary and their school had access to one counsellor that moved around the district to each of the schools. So, while they did receive some support from a counsellor, they did not have access to a dedicated school counsellor. Reese, who attended a school in a rural community, commented that post-secondary was not set up for student success and said that they did not receive much support at all from instructors, commenting that it was “impersonal” and that “profs don’t care” and the instructors within their college were “completely lacking in any kind of, like, passion or interest,” which was a big change from their high school. While no student thought they were very well prepared for what to expect, most of their comments on why or why not did not provide tangible examples of what they could have been better prepared for.

Lindsay commented that they wished they had put more thought into choosing their electives, and that they would suggest that incoming students do not just choose easy electives, but rather to choose something that is interesting to them. This suggestion from Lindsay aligns with the results on classroom participation, where students said that they were more likely to participate in classroom discussions when they were interested in the subject.

COVID-19 and Remote Learning

Interview participants were asked how they felt the shift to remote learning impacted their involvement and success during their second year. Most students said that once the classroom environment moved online, they had no motivation to get involved in classroom discussions or extra-curricular activities. Lindsay was already involved in a couple extra-curricular activities, but said that if they were not already involved, they would not have sought out opportunities for involvement during the pandemic. Reese commented that everyone seemed miserable and sad since the transition, while Alex said that they had clinical depression, and the isolation impacted their motivation. Alex commented that everyone, including classmates and instructors, seemed to be less involved and less motivated. Drew commented that they were “happier and enjoyed myself more in my first year than I did in my second year.”

Lindsay commented that it feels “burdensome” to engage in discussions in the classroom. Drew was the only interview participant who said that the shift to online learning increased their participation in online discussions, saying that they felt more comfortable to get involved in classroom discussions because it was not in a face-to-face environment. Reese commented that the change to remote learning has “taken all of the learning out of learning” as it is just about

memorizing for tests now and instructors are so worried about ensuring that students cannot cheat on tests that they are not motivated to learn the material, but rather figure out the best way to do well on the assessments. The overall consensus was that the remote learning environment is more difficult because it requires more independent learning, but at the time of this study, participants perceived that it had not had a negative impact on success.

Conclusion

Student responses to the online questionnaire allowed the researcher to gather quantitative data about student involvement in high school and post-secondary education. The interview portion of the study had five students participate who shared their experiences and provided more in-depth, qualitative data that the questionnaire was not able to capture. Each student had different experiences in high school and post-secondary and had different experiences with their transitions; however, commonalities among students were identified during the coding process. Themes and findings of the questionnaire and interviews have been compiled and are presented in chapter five.

CHAPTER FIVE: DISCUSSION OF THE FINDINGS

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. Based on responses to the online questionnaire, four distinct school environments were identified: rural public schools, rural separate schools, urban public schools, and urban separate schools. Survey data from 55 students representing these four school environments was analyzed for phase one of the study; five of those students participated in a telephone interview for phase two of the study. Responses to the research questions were identified through analysis of both quantitative and qualitative sets of data. This chapter contains a discussion of the findings, responses to the research questions, and recommendations based on the findings.

Methodological Orientation

This study used an explanatory sequential mixed-method design (Creswell, 2014). Using both quantitative and qualitative methods, a comprehensive set of data was collected. Methodological triangulation, which allows for the comparison of both sets of data, was used to assess validity (Cohen, Manion, & Morrison, 2002; Creswell, 2014; McMillan & Schumacher, 2010). The study was conducted through a pragmatic worldview, focusing on the “outcomes of the research – the actions, situations, and consequences of inquiry” (Creswell, 2007, p. 22).

Research Design

Phase one of this study consisted of an online questionnaire (Appendix B) to gather demographic information as well as quantitative statistical data on student GPAs (self-reported), and student involvement. Phase two of the study consisted of in-depth interviews using an interview guide approach (Appendix C) to collect qualitative data on student experiences and student expectations regarding involvement, perceptions of the high school to post-secondary transition, and perceived success. This study focused on the experiences of first-year, direct-entry students at one Canadian post-secondary institution. The study was designed to include students who came from different high school environments who began their studies the term immediately following their high school graduation.

Student Participants

For phase one of the study, the online questionnaire, participant data from 55 students representing the following four school types was analyzed: public schools in rural communities ($n=10$), separate schools in rural communities ($n=2$), public schools in urban communities ($n=35$), and separate schools in urban communities ($n=8$). Although the rural separate school type had fewer than five participants, it was included in the analysis so that a minimum of four school types would be represented, as was indicated in the methodology for the study. Lower numbers of student participants could mean that the results might not be statistically significant. As such, data in the previous chapter was displayed in two different ways: using the four categories listed above, as well as by rural ($n=12$) and urban ($n=43$). Due to the small sample of students from separate schools, most of the discussion focused on the combined rural and urban environments.

Five students participated in phase two of the study, the telephone interview. Rural student participants were Quinn and Reese; urban student participants were Alex, Lindsay, and Drew. Although Alex's community meets the definition for an urban community as outlined in this study, Alex explained that they "went to school in a small town, and it was like 2,000 people in the community, and 300 people in a K-12 school." Pseudonyms were used and identifying details about participants have also been excluded to protect anonymity.

Discussion

Again, the purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. High school grades are an indicator of post-secondary student success (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013); however, research shows that the environment of a high school that a student attends impacts the strength of the correlation between high school grades and post-secondary success (Betts & Morell, 1999; Cyrenne & Chan, 2012). Student involvement and a sense of belonging are both essential factors in students achieving academic success (Astin, 1999; Blum, 2005; Ryan & Deci, 2000; Tinto, 1987; Waters et al., 2009; Wenger, 1999; Whannell & Whannell, 2015; Wingspread Declaration, 2004). The environment of the high

school influences opportunities for and the likelihood of student involvement and a sense of belonging (Blum, 2005; Waters et al., 2009).

The following discussion considers student definitions of success, analyzes the connection between high school involvement and student success, and explores student experiences with the transition from high school to post-secondary.

Student Perceptions of Success

Success is a “complex and multi-dimensional” concept (Strange, 2010, p. 18). As defined by the institution, success could be measured by program completion (Strange, 2010), student retention (Sawyer, 2013; Strange, 2010), or student grade point average (GPA) (Sawyer, 2013). Success as defined by the student could mean “the achievement of a specific, short-term academic goal” (Strange, 2010, p. 18). Students were asked in the online questionnaire to explain what success means to them. During the telephone interview, students reflected on how their definitions of success have changed from high school to post-secondary and whether or not they felt they were successful during their first term.

Most students indicated that they defined success as having an understanding of and being able to apply the material or meeting personal goals. While some students did indicate that high grades were part of their definition of success, GPA was not a primary measure of success for the students involved in this study. All interview participants indicated that they felt they were successful during their first term of post-secondary. Although there were no significant findings related to definitions of student success and school environment, student definitions of success did relate to several of the theories that were discussed during chapter 2.

Participant definitions of success suggest that students were generally intrinsically motivated rather than extrinsically motivated. Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) examines how the environment impacts motivational tendencies. It is rooted in intrinsic motivation, which is “the inherent tendency to seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn” (p. 70, Deci & Ryan, 1985) and can either be supported or hindered by environmental factors. Student comments regarding their desire to participate more in classes that they liked or when they felt the instructor was more approachable align with self-determination theory, as students were more involved in those classes and were seeking out opportunities to learn. Students were also asked questions regarding their motivation for success.

Most students across all school types indicated they were intrinsically motivated to achieve success during high school. Intrinsic motivation for success aligns with the student's definitions of success, as many said they valued learning the material and meeting goals. It makes sense that most students were motivated by post-secondary admission, as they are currently studying in a post-secondary program. It is interesting that more students from separate schools were motivated by scholarships than those who attended public schools. This could be because there are more scholarships available to students attending separate schools, the scholarships are more competitive, students attending separate schools receive more guidance in applying for scholarships, or they have a higher need for financial support in attending post-secondary.

Relationship Between High School and Post-secondary Grades

For this sample of students there was a correlation between high school and post-secondary grades. As post-secondary institutions often look to a student's high school grades to assess a student for admission, this correlation confirms that the high school average could be an indicator of grades in post-secondary. However, the sample only included students who progressed beyond their first year of study. A further analysis that includes data from "unsuccessful" students would provide a more robust data set (see *suggestions for future research*). Students from rural schools also saw a more significant drop in their average during their first term compared to their peers who came from schools in urban communities. The correlation between high school and post-secondary grades varied between school environment. The variation in results by school environment could confirm that the environment of a high school that a student attends impacts the strength of the correlation between high school and post-secondary grades (Betts & Morell, 1999; Cyrenne & Chan, 2012). The variation in results could, however, be due to the smaller sample size of 12 students in the rural community population.

The analysis on correlation between high school and post-secondary grades aligned with the literature that was reviewed and confirmed the first assumption of the study as outlined in chapter one: *there is a correlation between a student's high school grades and their post-secondary grades* (Betts & Morell, 1999; Birch & Miller, 2007; Cyrenne & Chan, 2012; Fishman, 1961; Geiser & Santelices, 2007; Greene et al., 2004; Lee et al., 2000; Pike & Saupe, 2002; Sawyer, 2013). With this assumption confirmed, the following section discusses the remaining findings of the study and seeks to answer the research questions that guided the study.

Research Questions

The study was guided by five research questions:

1. How does high school environment impact a student's level of involvement in their high school?
2. What is the connection between high school environment, student involvement in high school and subsequently in post-secondary education, and student success (GPA and student perception) in post-secondary education?
3. How do student expectations align with their experiences in transitioning from high school to post-secondary education?
4. What do students identify as the easiest and as the most difficult aspects of the transition from high school to post-secondary education?
5. How do students feel they could have been better prepared for what to expect when making the transition from high school to post-secondary education?

This section responds to these questions through a discussion of the findings of the online questionnaire and the telephone interviews.

High School Environment and Student Involvement

The first research question sought to determine how high school environment impacts a student's level of involvement in their high school. Variables of involvement included: the amount of time students spent on homework, their engagement in classroom discussions, the way their teachers encouraged discussion in the classroom, and their participation in athletic and non-athletic extra-curricular activities.

Hours spent on homework. Results from the online questionnaire indicated that students who attended high schools in urban communities spent more time per week on homework than students who attended high schools in rural communities. Both the quantitative and the qualitative results demonstrated that students who attended high schools in urban communities spent more time on homework in high school than students who attended schools in rural communities. Students from rural schools were more likely to comment that they were able to complete their homework during classtime or breaks, while those who attended urban schools spent more time outside of class on homework. The results suggest that the high school environment does impact the amount of time students spent on homework.

Participation in classroom discussions. Students who attended high schools in rural communities were more likely to engage in classroom discussions in high school. While the sample is small, this could indicate that although teachers of students in this study from urban schools might spend a bit more time encouraging discussion in the classroom, students from rural schools are still more likely to actively engage in classroom discussions. The qualitative results of the study align with the findings of the quantitative results.

Smaller classrooms or schools lead to higher engagement (Weiss et al., 2010) and offer more of a community feel for students (Lee et al., 2000) than larger ones. Weiss et al., also found that students in smaller schools were typically more engaged in the classroom, which aligned with the results of this study. As such, students from rural schools could be more likely to participate due to the size of their classes and their familiarity with their peers. Most students from rural communities indicated that their schools were K-12 schools, while most students from urban communities said their schools were grades 9, 10, or 11 through 12. Graduating classes were quite different depending on whether the school was rural or urban as well; in the online questionnaire, most students from rural schools indicated that there were only 1-25 students in their graduating classes and no graduating class was larger than 200. For those who attended schools in urban communities, most students indicated that their graduating classes were comprised of upwards of 200 students. While these numbers are not indicative of the number of students in a classroom, it does mean that it would be much more difficult for a student in an urban community high school to know all their classmates.

The results of this analysis indicate that there are several factors that influence student involvement in the classroom. Students are more likely to participate if they feel comfortable in the classroom, and this often comes from familiarity with peers. Astin (1999) and Ryan and Deci (2000) both stressed that a sense of belonging and a desire to be involved can influence a student's motivation to learn. Student comments in the telephone interviews highlighted that students from smaller schools felt more of a sense of community and were more motivated to be involved in the classroom.

Involvement in extra-curricular activities. Most students across all school environments participated in at least one athletic activity. The high level of student involvement seen in the online questionnaire and the telephone interviews may be because this is a study on student involvement and may have attracted students who are more likely to self-select to participate in

research studies. The results of the analysis on student involvement in extra-curricular activities suggest that students from rural communities may have fewer opportunities for involvement while students from urban communities may prioritize schoolwork over extra-curricular activities.

This section looked at how the high school environment impacts a student's level of involvement in their high school. The following section explores the correlation between student involvement in high school and post-secondary, whether students from some school environments are more or less likely to be involved in post-secondary than others, and how success is connected to high school environment and student involvement.

Environment, Involvement, and Success (GPA)

Based on student responses in the online questionnaire, frequencies were calculated for each variable of involvement to determine how often students engaged in certain activities in post-secondary. Results were compared by the environment of the high school the student attended. Pearson's Correlation Co-efficient was calculated to determine whether or not there was a correlation between involvement at the high school and post-secondary levels and if there was a relationship between involvement in certain activities and a student's five-subject admission average or their term 1 post-secondary grades.

Involvement and GPA in high school. There is no significant correlation between hours spent on homework, engagement in classroom discussions, or participation in athletic extra-curricular activities in high school and a student's five-subject admission average. This suggests that students who spend more time on homework, engage more frequently in discussions, or participate in athletic activities do not necessarily graduate high school with the highest averages.

Overall, there was a moderate positive correlation between the number of non-athletic extra-curricular activities a student was involved in and their five-subject admission average. It could be that higher achieving students are more likely to get involved in these types of activities or perhaps teachers favour students who get involved in school activities; however, there is not enough data to support either of these ideas.

Hours spent on homework. Students who attended schools in urban communities spent more time on homework than rural students did. An analysis of time spent on homework in high school and subsequently in post-secondary demonstrated that there was a moderate positive correlation between hours spent on homework in high school and subsequently in post-

secondary, suggesting that the students who begin post-secondary with a habit of spending time on homework may be more successful in post-secondary. This means that students coming from urban schools may be more prepared for the increased workload in post-secondary, as they tend to spend more time on homework in high school.

There was also a positive correlation between hours spent on homework in post-secondary and term 1 post-secondary average, suggesting that the more time students spend on homework in post-secondary the higher their grades might be. Most students, regardless of which school type they attended, indicated that they spent six or more hours on homework during their first term of post-secondary education.

The assumption that urban students would be better prepared for the homework requirements aligned with the analysis of the open-ended questions in the online questionnaire as well as the telephone interviews. When asked what the most difficult part of transitioning to post-secondary was, most students responded that classroom expectations or classroom dynamic was the most difficult aspect of the transition for them. Students from rural communities found this aspect of the transition more difficult than their peers from urban communities. Another reason that students from rural communities may have found this transition more difficult than their peers from urban communities may be that smaller schools tend to offer a narrower curriculum, while students from larger schools may be exposed to more offerings at their school and, therefore, more prepared for post-secondary (Lee et al., 2000). While students from rural communities seemed to struggle more with knowing what to expect in the classroom, it was still a challenge for more than half of the students surveyed.

The results of the quantitative and qualitative analysis indicate that students from urban high schools may be a bit better prepared for the homework expectations in post-secondary; however, all students regardless of school type could have benefited from being more prepared for what the expectations were. Students who did not spend time doing homework in high school struggled more with the transition as they indicated that they had not developed any of the homework habits that they would need in post-secondary. Given that there is a positive correlation between hours spent on homework in high school and post-secondary and a correlation between hours spent on homework and grades in term one of post-secondary, this study confirms that it is important that students have good homework habits when they begin their post-secondary studies.

Participation in classroom discussions. Although more than half of respondents indicated that their post-secondary instructors awarded participation marks to encourage classroom engagement, students were, overall, much less likely to engage in classroom discussions in post-secondary education than they were in high school. While student engagement in the classroom among participants did decrease from high school to post-secondary, there was a moderate positive correlation between participation in high school classroom discussions and post-secondary classroom discussions suggesting that, regardless of school type, students who engaged in classroom discussions in high school are more likely to engage in the classroom discussions when they begin their post-secondary studies.

Although students who attended high schools in rural communities were more likely to participate in discussions in their high schools, students who attended high schools in urban communities were slightly more likely to engage in classroom discussions in their post-secondary classrooms. This could be because students who attended high schools in urban communities are more used to being in classrooms where they do not know all of their peers, whereas students from rural communities were used to knowing and feeling comfortable around all of their classmates.

Student responses in the telephone interview supported the finding that students were less involved in discussions in post-secondary than high school, most often because they found the larger class sizes in post-secondary to be intimidating or that the large lecture style classes made it difficult to get involved.

While most students indicated that their post-secondary instructors encouraged classroom discussion through awarding participation marks, there was no significant correlation between the frequency of participating in classroom discussions and term 1 grades in post-secondary education. This does not necessarily mean that there is no connection between participation in classroom discussion and *success*, as success is not necessarily defined by student's grades. Students who participated in this study were more likely to define success as having an understanding of and being able to apply the material or meeting personal goals, and involvement in classroom discussions may help students achieve success in that way.

Extra-curricular activities. While there was no correlation between involvement in non-athletic extra-curricular activities at the high school and post-secondary levels, there was a high positive correlation between the number of athletic activities a student is involved in during high

school and involvement in campus rec athletic activities in postsecondary, suggesting that the more involved in athletics a student is in high school the more likely they are to be involved in recreational athletic activities in post-secondary.

The results of this study suggest that, for one or more reasons, students who were involved in extra-curricular activities in high school are less involved in similar activities in post-secondary. Given that participants indicated an increase in the amount of homework they were doing in post-secondary compared to high school it makes sense that they would have less time to spend on extra-curricular activities. It could also be that students are prioritizing social activities to meet peers or maintain relationships with high school friends.

This section explored student involvement in high school and subsequently post-secondary by looking at frequency of involvement in certain activities and examined the relationship between high school environment and student success in high school and subsequently in post-secondary. The following section is a discussion of the findings related to student experiences as they transitioned from high school to post-secondary education.

Student Experiences in Transitioning from High School to Post-Secondary

Students were asked questions about their transition from high school to post-secondary, including whether their grades were higher or lower than they expected, why there might be a mismatch in expected and actual grades, and what they thought were the easiest and most difficult aspects of the transition.

Grades and expectations. Students often have unrealistic expectations regarding what kind of grades they can expect to achieve when they begin their studies (Maloshonok & Terentev, 2017). Stone (2010) said that “students report[ed] being warned to expect a drop from 10 to 20 percentage points in grade average from high school” (p. 134). Schunk (2008) determined in their expectancy-values theory of motivation that students are less likely to engage in a task if they are expecting to fail. If students have done well through all of their high school careers and believe that they are doing poorly in their post-secondary education, they may choose to withdraw as they no longer consider themselves to be successful.

Several students in this study acknowledged that they were aware that they should expect to see their grades drop. In the sample group of students, those from rural schools saw a more significant drop in their average during their first term than students from urban communities.

The most common reason students gave for achieving lower grades than what they had anticipated was that they experienced difficulty adjusting to the post-secondary environment or they were unsure what the expectations were of them when they began their studies.

Easiest aspect of transition. Overall, students found that attending classes was the easiest part of the transition. Students also found that it was easy to make friends or connect with peers and several mentioned that they found it was easy to leave home and be on their own. This indicates that, although students might not know exactly what to expect in the classroom, they found it to be the easiest, probably because it was what they expected their experience to be like. Students also highlighted their newfound independence and connections with peers.

Most difficult aspect of transition. Most students said that classroom expectations and classroom dynamic were the most difficult aspects of the transition. A common theme was the challenge of getting used to the specific expectations of each professor.

Expectations and reality. A critical means of supporting students as they transition is preparing them to understand what to expect from post-secondary education and to help students form reasonable expectations as to what success in post-secondary education means (Collier & Morgan, 2008; Maloshonok & Terentev, 2017; Miller et al, 2005; Stone, 2010). Students need to be able to re-align their expectations and adjust quickly to their new educational environment to diminish frustration and increase their likelihood of success (Miller, Bender, Schuh, & Associates, 2005).

To understand whether students in this study had realistic expectations regarding their transition, interview participants were asked how their experiences aligned with their expectations and who helped them prepare for what to expect. Most participants stated that they thought they felt moderately prepared, but they weren't entirely sure what to expect. Overall, interview participants did not feel that their high schools really helped them to prepare for what to expect and they were mostly left on their own to figure things out. Their high school teachers would tell them that post-secondary is "hard" or "nothing like high school," but did not offer them any concrete ideas of what the experience would be like. Participants generally relied on older siblings, parents, or older students from their schools to help them set their expectations.

Students from urban communities may be better positioned to know what to expect when transitioning to post-secondary education than students who came from rural communities.

Students from urban communities are used to larger classes where they may not necessarily know everyone in their class.

Students who struggled with the transition from high school to post-secondary often indicated that they did not know what to expect in the classroom. In the model proposed by Collier and Morgan (2008), academic skills and actual capacity are what a student brings with them when they begin their post-secondary studies. Academic skills involve a student's ability to read and acquire the knowledge and technical skills necessary to succeed, whereas actual capacity is what the student already knows and understands (Collier, 2008). As demonstrated by their performance in high school and during their first term of post-secondary, the participants in this study all seemed to demonstrate the academic skills and actual capacity necessary to succeed. Cultural capital is "preexisting knowledge about interacting successfully in academic settings, including such essentially social skills as the ability to recognize and respond to the standards faculty members use when they evaluate assignments" (Collier & Morgan, 2008, p. 429). Collier and Morgan (2008) explained that a student's cultural capital and their ability to demonstrate their capacity are factors in a student's ability to successfully transition from high school to post-secondary. Based on the comments provided by the students, they seemed to be lacking in the cultural capital necessary to experience a smooth transition to the post-secondary classroom, as they struggled with the classroom expectations. Although all the students may have received similar educations and began their studies with comparable academic skills (represented by their GPAs), some students were better prepared than others to express their knowledge.

While reflecting on their own personal experiences with beginning their post-secondary studies, students were also asked to provide advice for future students.

Advice for Future Students

When reflecting on what they wished they had known or what advice they could offer for other students, all students in this study said they wished that they had come into their post-secondary studies with better time management, organization, or study habits. While this is good advice, it could be difficult for a student to develop study habits to help them succeed in the post-secondary environment if their high school environment does not require or encourage them to develop good study habits.

Given that the institution was still engaged in remote learning due to the COVID-19 pandemic, interview participants were asked two questions regarding their experiences since the shift to remote learning.

COVID-19 and Remote Learning

This was a study on student involvement and student success in high school to post-secondary education. The study began prior to the COVID-19 pandemic, which impacted the planned methodology for the study (prior to the proposal) and removed the physical post-secondary environment for most students. Most of the new literature in the area of student involvement and motivation to come out in the last year is related to remote learning and student engagement during the pandemic. As this is not a study on the effects of the pandemic, the new literature was not included in the review. The pandemic did, however, provide the researcher with an opportunity to ask students what happened to their involvement and success when the physical environment was no longer available to them. While the results to this question do not directly address any of the research questions, they provide insight into motivation for involvement and how environment influences success.

Most students said that once the classroom environment moved online, they had no motivation to get involved in classroom discussions or extra-curricular activities. The interview participants discussed the challenges with asynchronous learning, saying that it was more difficult to approach or engage with instructors and that there are fewer opportunities for involvement. The overall consensus was that the remote learning environment is more difficult because it requires more independent learning, but at the time of this study, participants perceived that it had not had a negative impact on success.

Summary of Findings

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The discussion in this chapter confirmed that, for this sample of students, there is a correlation between high school and post-secondary grades. The correlation was stronger for students who attended schools in urban communities. While students generally indicated that they expected their post-secondary grades would be lower, students from

rural communities saw more of a drop from their 5-subject admission average to their term 1 post-secondary average.

High school environment did have some relationship with student involvement. Most notably, students who attended high schools in urban communities spent more time on homework in high school, while students who attended schools in rural communities often said that they had non-existent or very minimal homework habits. Although students across all school environments said that their high school teachers encouraged classroom participation, students who attended high schools in rural communities were more likely to engage in discussions, saying that they felt comfortable getting involved because they knew everyone in their classes and felt a sense of community.

There was no significant correlation between hours spent on homework, engagement in classroom discussions, or participation in athletic extra-curricular activities in high school and a student's five-subject admission average. This suggests that students who spend more time on homework, engage more frequently in discussions, or participate in athletic activities do not necessarily graduate high school with the highest averages. There was, however, a positive correlation between involvement in non-athletic extra-curricular activities and grades.

The most significant result when looking at the connection between high school environment, student involvement in high school and subsequently in post-secondary education, and student success (GPA) in post-secondary was found within the results on time spent on homework. There is a moderate positive correlation between time spent on homework in high school and subsequently post-secondary as well as hours spent on homework in post-secondary and term 1 averages. This suggests that students who spend more time on homework in high school are better prepared for success (GPA) in post-secondary. Students from urban communities spent more time on homework in high school and reported that they tended to adjust to the homework expectations better than students from rural communities did.

Despite most students indicating that their post-secondary instructors encouraged classroom participation, there was a significant drop in participation in classroom discussions from high school to post-secondary. There was, however, an overall positive correlation between involvement in classroom discussions in high school and subsequently in post-secondary, with students from high schools in urban communities being more likely to be involved. Generally, students commented that they felt uncomfortable speaking up in large classes where they did not

know their peers. Participation in classroom discussions did not correlate with GPA; however, students indicated that they were more likely to participate in classes they were interested in. Given that student definitions of success were about meeting goals and learning, students may feel a greater sense of success or accomplishment in those classes where they are more involved, even though it may not be reflected in their GPA.

Students said that the act of attending classes was the easiest part of the transition, but the biggest challenge was not knowing what the expectations of each instructor would be. Similarly, students who said they got lower grades than they expected generally said it was because they had difficulty transitioning to the environment. When students did better than they expected it was most often because they had low expectations. This response more commonly came from students who attended urban schools, and they did not see their grades drop as much as the students who came from rural schools.

Overall, students were not entirely sure what to expect when they began their post-secondary studies. Students generally thought they were prepared but felt that their high schools didn't really prepare them for the transition. They were told it was "hard" or "nothing like high school," but were most often surprised by the amount of time they needed to spend on school – that was the most common piece of advice.

The findings reaffirm that students need to form reasonable expectations as to what success in post-secondary education means (Collier & Morgan, 2008; Maloshonok & Terentev, 2017; Miller et al, 2005; Stone, 2010). This is important not only for the student experience, but also for the institution if they want to retain students (Gorgodze et al., 2020). If a student's expectations do not meet reality, then they may experience stress or anxiety, which may impact their ability to be successful or their desire to continue their studies (Miller et al., 2005).

Students often find that they must be much more self-directed and self-sufficient when they begin their post-secondary studies, as they may have had a lot more guidance and support from their teachers and parents when they were in high school (Whannel & Whannel, 2015). The authors suggest that the transition to post-secondary may be especially hard for students who come from smaller or rural schools, as students may go from an environment where they know every student in their classroom – or even school – to a campus where there are thousands of students within a large and possibly unknown city.

To successfully integrate into their new environments, students must establish connections with others in the institution; failure to make these connections may result in isolation and voluntary withdrawal (Tinto, 1988). Tinto's (1987) main argument for why students may have trouble transitioning to post-secondary education is because of issues with incongruence or isolation. "Incongruence refers in general to the mismatch or lack of fit between the needs, interests, and preferences of the individual and those of the institution" (Tinto, 1987 p. 50). Depending on the environment of the high school a student attended, students may have varying ideas as to what to expect when they transition to post-secondary education. If a student received specific supports or experienced a particular learning environment, they may experience incongruence, or a lack of fit, with their post-secondary institution. Incongruence could go beyond the school experience and might be a "perceived mismatch between the social value, preferences, and/or behavioral styles of the person and those which characterize other members of the institution, expressed individually or collectively" (Tinto, 1987, p. 53). Tinto's (1987) main argument for why students may have trouble transitioning to post-secondary education is because of issues with incongruence or isolation.

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The findings of this study have potential implications for practice in post-secondary education, as well as a couple of considerations for provincial policy and high school practitioners.

Recommendations Arising from the Research

As this study focuses on student transitions to post-secondary, the recommendations within are focused on how post-secondary advisors, instructors, recruitment and admissions officers, and other professionals within the institution can support students in their transition. Positive transitions are important for student success, as students who do not feel they belong or fit at their institution may choose to discontinue their studies (Tinto, 1987; Tinto, 1999). While there are some practices that high school teachers and counselors could implement to help prepare students for the transition from high school to post-secondary, not every high school student will go on to pursue further education upon graduation. While some considerations for high school

educators have been included within the recommendations, the primary focus is on how post-secondary professionals can support students.

Table 5.1 summarizes the recommendations of the study and the finding from which each recommendation was derived.

Table 5.1 *Recommendations Arising from the Study*

Finding	Recommendations
Understand the demographics of the student population	
Students from rural and urban communities had different expectations, habits, and experiences with the transition from high school to post-secondary education.	High school and post-secondary administrators: collect and leverage student data to help manage student expectations, create habits of student involvement, and (re)consider student definitions of success.
Manage student expectations	
The most difficult aspect of the transition for students was not knowing what the expectations of each instructor would be.	<p>Post-secondary instructors: spend extra time going through the syllabus and set clear classroom expectations.</p> <p>High school counselors and teachers: create mentorship opportunities for students.</p>
Create habits of student involvement	
Students who spend more time on homework in high school are better prepared for success (GPA) in their post-secondary studies.	<p>Post-secondary instructors: provide guidance on homework expectations, encourage access to or incorporate in resources from student support services.</p> <p>Student support services: provide guidance with homework and study skills.</p> <p>Post-secondary administrators and high school counselors: promote opportunities for dual credit courses so students can create habits while still in high school.</p>

<p>There was an overall positive correlation between involvement in classroom discussions in high school and subsequently in post-secondary</p>	<p>Post-secondary administrators: provide extra support and create opportunities collaboration among first year courses (learning communities).</p> <p>Students: understand the importance of creating habits in high school.</p> <p>Post-secondary instructors: encourage participation through group work and tutorials.</p> <p>Post-secondary administrators: Create opportunities for students to connect (learning communities).</p>
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(Re)consider student definitions of success

<p>Students most often identified that their definition success was having an understanding of and being able to apply the material. Few students identified grade point average as their primary way of defining success.</p>	<p>Institutions: be clear in what success means in the context of the program.</p> <p>Students: consider what success means to them and seek out a program that aligns with their definition.</p>
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Each recommendation includes a review of the finding on which it is based, as well as recommendations for practice for program design or relevant stakeholders including post-secondary program administrators (associate deans, directors, and/or managers of undergraduate programs), post-secondary instructors, student support services, students, and high school educators.

Understanding Student Demographics

This study found that students from rural and urban communities had different expectations, habits, and experiences with the transition from high school to post-secondary education. The over-arching recommendation arising from the research is that administrators, recruiters, and admissions officers in post-secondary education should collect and leverage student data to understand the specific needs of their incoming students. Based on the unique experiences of

each institution's incoming student population, specific supports could be implemented to support students through their transition to post-secondary education.

Post-secondary administrators. Post-secondary college and program administrators could survey incoming students regarding their expectations and experiences after the first year (a modified version of the survey used for this study). While there were some general experiences that all students who participated in this study could relate to, the results of this study demonstrated that students coming from different environments might struggle more or less with different aspects of the transition. The student data collected by each institution or program could be leveraged to understand what guidance students may need in managing their expectations, cultivating habits and getting involved, and understanding what success means to them.

High school educators. Similar to how post-secondary administrators could seek to understand their incoming students, high school administrators and educators could collect data in an attempt to understand what their students do after graduation. Based on the findings of a high school survey, keeping in mind that not all students will seek to attain further education, there may be considerations for practice at the high school level to prepare students for the transition to post-secondary education.

There are different ways that environmental high school data (collected at either the high school or post-secondary level) could be leveraged, but the first step is for educators and educational professionals to understand who their students are so they can understand what students expect, reinforce realistic expectations, create opportunities for student involvement, and support students in creating habits that will help them be successful. Finally, educators and educational professionals should consider how their definitions of success align with those of their students. The following recommendations build off the first recommendation of *knowing your students*, as well as incorporating some general considerations regardless of the high school environment students come from.

Manage Student Expectations

This study found that the most difficult aspect of the transition for students was not knowing what the expectations of each instructor would be. Interview participants also indicated that they were not entirely sure what to expect when they began their post-secondary studies. The following paragraphs explain how post-secondary instructors and high school counselors (or teachers, where schools do not have counselors) can help students to manage expectations.

Post-secondary instructors. The most difficult aspect of the transition for students in this study was not knowing what the expectations of each instructor would be. One thing that post-secondary instructors could do to support students in managing expectations is to ensure they spend extra time going through the syllabus and explaining classroom expectations. Although students are ultimately responsible for their own success, instructors of first year classes could revisit the syllabus at various times throughout the semester to remind students of expectations and ensure they are aware of upcoming deliverables, which would help students make a habit of doing this throughout their academic careers.

High school counselors/teachers. Students, especially those from rural schools, commented that they did not have role models who could help them prepare for what to expect in post-secondary. While teachers or counselors would have experienced the transition at one time in their lives, the educational landscape could be different than it was at that time, or they may have come from a different high school environment or attended some other post-secondary institution. Students should be paired with or encouraged by high school professionals to reach out to previous graduates of their high school (or a high school of a similar environment) who have gone on to attend higher education. Previous students can act as mentors to current high school students and help them prepare for what to expect.

Cultivate Habits of Student Involvement

Student involvement in this study was measured by hours spent on homework, participation in classroom discussions, and participation in athletic and non-athletic extra-curricular activities. The study found that there was a moderate positive correlation between time spent on homework in high school and subsequently post-secondary as well as hours spent on homework in post-secondary and term 1 averages. This suggests that students who spend more time on homework in high school are better prepared for success (GPA) in their post-secondary studies. When reflecting on what they wished they had known or what advice they could offer for other students, all students during the second phase of this study said they wished that they had come into their post-secondary studies with better time management, organization, or study habits.

The study also found that there was a significant drop in participation in classroom discussions from high school to post-secondary. There was, however, an overall positive correlation between involvement in classroom discussions in high school and subsequently in post-secondary, with students from high schools in urban communities being more likely to be

involved in classroom discussions. Generally, students commented that they felt uncomfortable speaking up in large post-secondary classes where they did not know their peers. Although participation in classroom discussions did not correlate with GPA, students did indicate that they were more likely to participate in classes they were interested in. Given that student definitions of success often included references to meeting goals and comprehending material, students may feel a greater sense of success or accomplishment in those classes where they are more involved, even though it may not be directly reflected in their GPA. These findings regarding student involvement led to the recommendation to *cultivate habits and encourage student involvement*, which can be supported by post-secondary instructors and student support services or formalized programming such as dual credit courses or learning communities. Finally, as students are ultimately responsible for their learning, this section provides some recommendations for students and how they can take ownership for their habits.

Instructors. While first year classes are often large, lecture-style classes, instructors can encourage participation through asking students to work together in small groups or by supplementing lecture classes with smaller tutorial sections where discussions can occur more comfortably. Although it may be difficult to achieve in a large class, providing students with opportunities to create connections with their peers may make them more likely to engage in the classroom.

When it comes to cultivating homework habits, instructors can help students set expectations as to how much time they may need to spend on coursework outside of the classroom. Instructors can also encourage students to access student support services that will help them build homework and study skills. Having students access these services could even be built into the requirements for the course, such as having students access writing help through a library program as a part of one of their written assignments.

Student support services. Student support services exist in many forms at post-secondary institutions. They are already offering supports to students to help them be successful in their studies. Professionals offering these services, however, could create more impactful or tailored programming by *knowing their students* (see the first recommendation). For example, one student who participated in the telephone interview of this study indicated that they had never learned how to write using APA guidelines in high school. If this is a common occurrence

among students coming from a certain high school environment in an institution, then that institution may want to provide additional support to students in building these skills.

Post-secondary administrators/high school counselors. While several high schools offer Advanced Placement (AP) or International Baccalaureate (IB) courses where students can take a high school class and get university credit, there are also opportunities for students to take post-secondary courses and also get credit at both the high school and post-secondary levels through dual credit courses. Encouraging students to work classes from their chosen post-secondary institution into their high school schedule is a good opportunity for them to understand how a post-secondary class works while they are still getting the support of their high school teachers and being at home. Survey responses also indicated that students struggled to balance the demands of all the classes with different instructors, so this is an opportunity for them to take one post-secondary class while still enrolled in high school classes and while they have access to and support from teachers and parents. Dual credit opportunities can be promoted to students by high school counselors, teachers, and post-secondary recruitment and admissions officers.

Post-secondary administrators. If students are in structured programs where most first-year students take the same courses, program administrators could work together with instructors in attempt to balance deliverables so that students do not become overwhelmed by everything happening all at the same time. This could be achieved either through instructor collaboration or a formal learning community. While this programming and balancing of assignments could likely not be maintained throughout the entirety of a student's program, students could at least ease into understanding what the post-secondary environment is like and build some study habits before balancing the independent demands of all their classes.

Students. Given the correlation between classroom involvement at the high school and subsequently at the post-secondary level, students should get comfortable with classroom participation during their time in high school, so they are more comfortable participating in the post-secondary classroom. Although not linked to GPA, participating in classroom discussions could help students apply what they are learning, which can help them meet their definitions of success of learning and comprehending classroom materials. High school teachers may be able to facilitate involvement in the classroom, but it is ultimately up to students to decide how involved they get. If students understand that participating in the high school classroom may help them

feel more comfortable in post-secondary, they may be encouraged to participate more during high school.

Students also indicated that they had trouble making friends. Besides meeting peers in the classroom, students can meet new people by getting involved in extra-curricular activities. During the interview portion of the study, most students indicated that they were too busy studying or wanted to get a feel for what university was like before they got involved in extra-curricular activities. Students should know that creating a balance between school and social activities will help them to maintain motivation and satisfaction.

Given the positive correlation between hours spent on homework in high school and subsequently in post-secondary as well as the positive correlation between hours spent on homework in post-secondary and GPA, it is clear that homework habits are an important skill for achieving high grades in post-secondary. Students need to understand that they will likely need to put more time into their work in post-secondary so, even if they can do the bare minimum and achieve high grades in high school, they should try to create good habits in high school and put extra time into their assignments.

The final recommendation of this study, based on the variety of responses to the question, “how do you define success,” is for all stakeholders in a student’s education to what success means as defined by the student.

(Re)consider Student Definitions of Success

It is important for all stakeholders in a student’s education – the student, parent/guardian, teacher, instructor, academic advisor, senior leadership, etc. – to consider what success looks like to students. The most important stakeholder in a student’s education should be the student themselves. By understanding what success means to students then those responsible for learning environments or those supporting students can help students set reasonable expectations and create environments that are conducive to creating habits, encouraging involvement, and helping students meet their goals. An understanding of how students define success could help high school teachers and professionals working in post-secondary institutions assist students in setting expectations.

Students should start thinking about how they define success and what they hope to get out of their post-secondary experience while they are still in high school. In this study, students who participated in the second phase indicated that their definition of success changed from high

school to post-secondary. In high school, students often defined success as high grades and their motivation for achieving success was usually to gain post-secondary admission or scholarships. Once they began post-secondary, students were more likely to define success as learning or applying material or achieving goals.

To help ensure that students do not experience incongruence with the institution, post-secondary recruitment officers and program coordinators can be clear in their marketing as to what success means in the context of that program. Some institutions may be more competitive and value high grades, while others may favour collaborative learning and measure success by student satisfaction or community engagement. Through this transparency, students can make decisions about the type of institution they want to attend based on how they define success.

In addition to resulting in some recommendations for practice, the findings of the study also led to a review of the conceptual framework that guided the study, resulting in a new framework and implications for theory.

Implications for Theory

The findings of the study support and expand upon the theories that made up the conceptual framework that guided the study. The study confirmed that there is a correlation between high school and post-secondary grades. While high grades in high school do not lead to high grades in post-secondary, high school grades are an indicator of potential success (as measured by GPA). This study contributed to the literature by exploring how high school environment impacts a student's level of involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The study found that high school environments encourage (or discourage) different types of involvement, and these experiences shape how students will navigate the transition from high school to post-secondary education.

A revised conceptual framework (Figure 5.1), updated from chapter one, demonstrates how, informed by literature review and the findings of this study, institutional environment can influence student interactions within that environment. Student interactions within the high school environment can, in turn, impact student success (GPA or as defined by the student). A student's experience in high school can influence their transition to and experience in post-secondary, including the way they interact in the institution and their likelihood of success. The dotted-line from high school success to post-secondary success demonstrates the correlation

between high school and post-secondary grades. It is not, however, a closed-system and several other factors (supported by the theories in figure) can influence student experiences (positively or negatively) at any point during their high school or post-secondary experiences as well as during their transition.

Figure 5.1 *Revised Conceptual Framework*

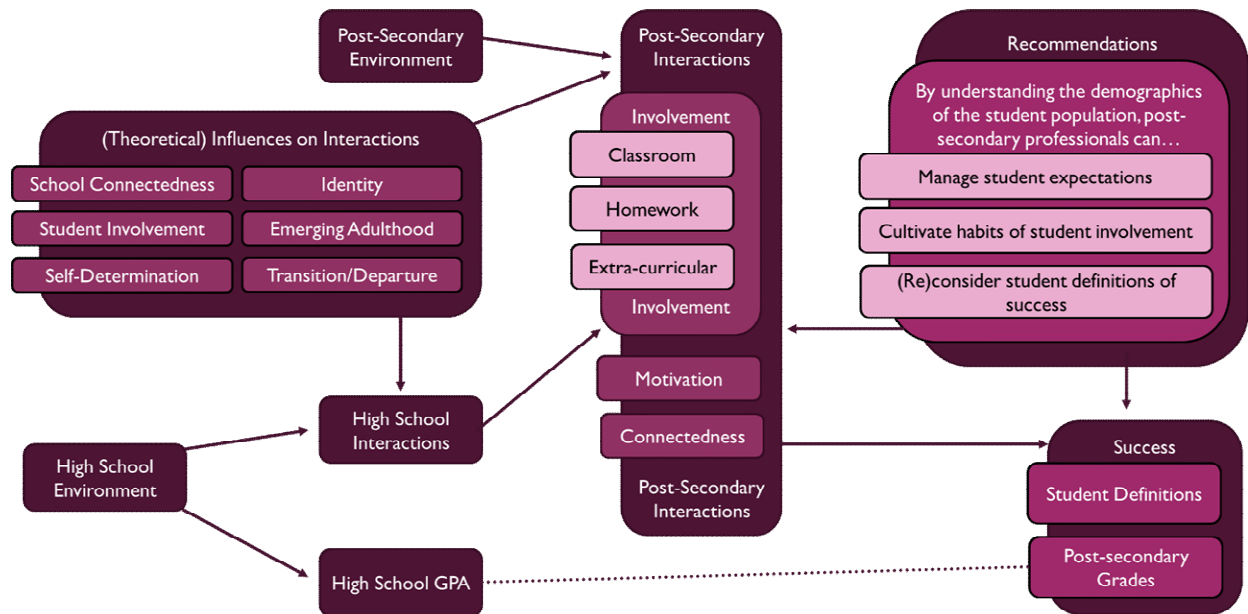


Figure 5.1. This revised conceptual framework demonstrates the relationship between institutional environment, student interactions, and success. Theoretical influences on interactions include school connectedness theory (Wingspread Declaration, 2004; see also: Blum, 2005, Waters et al., 2009), student involvement theory (Astin, 1999), self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000), identity theory framework (Whannell & Whannell, 2015), emerging adulthood (Arnett, 2000), and students in transition and student departure theories (Tinto, 1987; Tinto, 1988).

The theories explored in chapter two were reviewed as phenomena occurring in three categories: students and belonging, student motivation, and students in transition. This study contributes to the existing body of literature by exploring the interplay between the theoretical underpinnings of the study during a students' education and during their transition from high school to post-secondary. The results of the study demonstrate that these phenomena will impact students at different parts of their educational journeys in several different ways depending on their own identity and the experience they have in their unique high school environment.

The following section discusses suggestions for future research.

Suggestions for Future Research

While this study resulted in four recommendations for practice, there is still much to be discovered about high school and post-secondary environments, student involvement, and student success. This section explores some areas where future research may be considered.

Unsuccessful Students

The limitations of the study recognized that this was a study on student involvement, and those students who are more likely to be involved were more likely to self-select for the study. This was also a study on success and, as interviews occurred during the students' second year of study, students who struggled may no longer be at the institution. While the study still resulted in some recommendations based on student responses to both the online questionnaire and the telephone interviews, what is missing is data on students who were not successful during their first term or first year of studies. What kind of high school environment did those students come from? Were those students involved in their high schools? What supports did they have or not have as they transitioned to their post-secondary studies? How did those students define success? While the data gathered from this study did help determine what kinds of environments foster student involvement and success, a study focused on or including un-successful or un-involved students may discover what aspects of educational environments hinder students from getting involved.

School Environments

This study aimed to gather data from students who attended high schools of a variety of environments. However, only four school environments (rural public, urban public, rural separate, urban separate) yielded enough student participants to analyze the results, with only two school types (rural and urban) yielding consistently reliable results due to the small number of students in each group. While the study still produced valuable results as seen by the recommendations within this chapter, a study including a more robust number of student participants from additional school types would be beneficial to provide even further recommendations.

Institutional Studies

The literature reviewed in chapter 2 revealed that two separate studies in Canada (Cyrenne & Chan, 2012) and Australia (Birch & Miller, 2007) yielded different results for student outcomes of students coming from public and private schools. The different outcomes in these studies as well as the diverse educational landscape in Canada demonstrate how student experiences can be quite different from one place to another and how important it is for post-secondary institutions to understand the academic backgrounds of students applying to their specific institution. Post-secondary institutions could leverage studies similar to the one undertaken here to understand their incoming student population, as outlined in the *know your incoming class* recommendation for practice earlier in this chapter. Similarly, high schools could survey graduates who go on to attend different post-secondary environments to understand how they experience the transition and what could be done at the high school level to help prepare them for future studies.

COVID-19: Losing the Physical Environment

The COVID-19 pandemic resulted in students around the world losing access to their physical post-secondary environment. While remote and online learning opportunities existed pre-pandemic, the students in this study chose to pursue the first year of their studies in an on-campus learning environment and in March of 2020 their choice to attend in-person classes was taken away from them. When seeking out new literature to incorporate into the review a wealth of material on student success during the pandemic was discovered. As this was not a study on the effects of the pandemic, this new literature was not explored. Based on the comments of the five students who were interviewed in this study the shift to remote learning has impacted their interactions with classmates and instructors as well as their motivation to engage. Given that this was a study on student involvement, the students who self-selected to participate in the study were likely inclined to be more involved than some of their peers. While these students missed the physical environment, other students who do not seek to be involved could very well thrive in a remote environment. As such, there is much to be learned about the impact of COVID-19 on student involvement and the learning environment, or remote learning and student involvement in general.

The final section of this chapter contains reflections regarding the researchers experiences in pursuing a master's thesis.

Researcher Reflections

The experience of undertaking a thesis has inspired me to reflect as a researcher, as a professional, and also as an individual.

Methodological Reflections

Having never undertaken academic research before, this experience was a monumental learning opportunity for me. The following are a few of my reflections on the academic process.

Methodology. The study employed a mixed-method approach. I was told that a mixed methods study was ambitious for a master's level thesis, but a mixed-methods approach seemed most appropriate for this study. As the study focused on the outcomes of the research – a hallmark of pragmatic research (Creswell, 2007) – a mixed-methods approach was the best fit. With a background in the humanities, quantitative research methods and statistics were not topics that I had experience with. When I first considered pursuing a thesis, I thought I would pursue a qualitative study as I am more comfortable with words than numbers. For this study, however, I saw value in measuring both student involvement and student GPAs as well as gathering stories from students. Collecting both sets of data allowed for me to check for validity by comparing the results of both the quantitative and qualitative data sets. Another value of collecting quantitative data before collecting qualitative data was that I was able to check for bias before hearing students' experiences. Further, if any of the quantitative results surprised me (which they did) I was able to review my interview questions before beginning the second phase of the study. Finally, I believe that I gained an incredibly valuable set of skills as a researcher and a professional by exposing myself to quantitative methods and stepping outside my comfort zone.

Bias. With my own personal experiences transitioning from high school to post-secondary as well as professional experiences supporting students with their transition, I was very wary of bias going into this study. Prior to engaging in either phase of the study, my supervisor and I discussed my concerns. The first time I analyzed the quantitative data, I was surprised to find that the results were not as I expected. In fact, I did not really find anything at all. I shared these concerns with my supervisor, and she encouraged me to run the data in a number of different ways. By considering different sets of school environments, I was able to see where differences in experiences by school environment came through in the data. This was a good lesson in bias, but also in considering that there may be unexpected findings if you consider the data in ways

you had not anticipated. My biggest learning moment in terms of bias was in realizing that unexpected findings (or not finding anything at all) is indeed a finding in and of itself.

Incentive. My initial plan was to advertise that students who participated in either phase of the study would be entered to win one of two Apple Watches (one per phase). I have frequently seen specific prizes or values advertised on the student bulletin as an incentive to participate in research studies. I (and my supervisor) was surprised to discover that, although a prize could be referenced, the value of the prize could not be apparent. As this was my primary way of incentivizing student participation, I was disappointed. However, I was still pleased with the number of students who participated in the study. One of the telephone interview participants even said that they get involved in studies they see posted on the bulletin because they know that the researchers need participation. All of the interview participants were engaging and seemed genuinely happy to share their experiences with me. The two students who did receive the Apple Watches were incredibly grateful for and excited about the prize. My hope is that these students share their experiences with participating in a research study with their peers and that they encourage other students to get involved – either because they may be eligible to receive a prize or because they, too, got value from participating in the study.

I have learned several things during my time as a master's student pursuing a thesis-based program. This process has encouraged me to grow both professionally and personally.

Professional Growth

My experience pursuing the Master of Educational Administration program and, particularly, the thesis-based program, has supported my professional growth immensely. My professional role involves writing reports and proposals and, as a result of my academic studies, I am a stronger writer and a more confident researcher. I have also been able to apply some of the skills in data analytics that I have learned through pursuing a mixed-methods study. My supervisor in my professional role has acknowledged on a number of occasions that she believes my academic experiences have supported my growth as a professional.

Personal Growth

When I finished my undergraduate degree, I did not imagine that I would pursue any further education. When I started my master's degree, I thought that I would stick to the course-based program. I never thought I would consider undertaking a quantitative study. I have surprised

myself several times over the last five years by choosing to challenge myself time and time again and I am so glad that I chose this path. I was not an outstanding student in my undergraduate studies, but I know now that I can excel in academic studies if I apply myself and am passionate about the topic. When I started working in post-secondary education, I knew that this was the environment for me. I have now discovered that I can thrive as a professional as well as an academic on campus.

Concluding Thoughts

The purpose of this study was to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education. The study was conducted using a mixed-method approach. The research problem was explored through a pragmatic lens, which focuses on the outcome of the results and allows for the selection of the method or methods that best match the research problem (Creswell, 2007). The quantitative aspect of the study sought to explore a cause-and-effect relationship between high school environment, student involvement, and post-secondary success. The qualitative phase of the study elaborates on the results of the quantitative phase by determining how individual students interpret their involvement and successes in their high school and post-secondary environments. The results of the study culminated in recommendations for policy and practice that would help to support students in transition from high school to post-secondary education. The findings of this study highlight the importance of staff, faculty, and administrators in both high school and post-secondary institutions working better together to support students in transition. With a better understanding of how students coming from different high school environments experience the high school to post-secondary transitions, those in staff, faculty, and administrative roles at both levels of education could be better prepared to foster for students an environment and experience that is conducive to student success.

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APPENDICES

Appendix A: Ethics Approval



Behavioural Research Ethics Board (Beh-REB) 17/Sep/2020

Certificate of Approval

Application ID: 2111

Principal Investigator: Michelle Prytula

Department: College of Education

Locations Where Research

Activities are Conducted: University of Saskatchewan, Canada

Student(s):

Funder(s):

Sponsor:

Title: Student involvement and student success in high school to post-secondary transitions

Approved On: 17/Sep/2020

Expiry Date: 17/Sep/2021

Approval Of: Behavioural Research Ethics Application

Invitation to Participate

Consent for Online Questionnaire

Online Questionnaire

Thank you for Participation (Phase I-Online)

Invitation to Participate (Phase III Interview)

Interview Consent Form

Telephone Interview Questions

Transcript Release Form

Gift Draw Winner Message (both phases)

Acknowledgment Of:

Review Type: Delegated Review

Appendix B: Online Questionnaire

Student involvement and success: High school to post-secondary transitions

Researcher: Vicky Parohl, Graduate Student
Department of Educational Administration, College of Education
Telephone:
Email: vicky.parohl@usask.ca

Supervisor: Dr. Michelle Prytula
Department of Educational Administration, College of Education
Tel: 306-966-7647
Email: michelle.prytula@usask.ca

Purpose: The purpose of this study is to explore how high school environment impacts a student's involvement at the high school level and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education.

Time Commitment: Please take 20 minutes to answer the survey questions.

Potential Risks: There are no known or anticipated risks to you by participating in this research.

Student Supports: Students who are feeling overwhelmed or wish to seek support are encouraged to review campus resources, including the [Student Wellness Centre](#). [Please click here for more information on additional student supports.](#)

Potential Benefits: The results of this study may be of value to students who are transitioning from high school to post-secondary education or adults who are supporting students in their transition from high school to post-secondary education.

Compensation: Students who complete this survey will be entered in a draw to win a prize. Students who are selected for participation in phase two of the study will be entered into a draw for a second prize.

Confidentiality: Your responses will be kept strictly confidential. Only the researcher will have access to the raw data. To be eligible for the draw, you will be asked to enter your email address on a separate survey; as such email addresses will not be tied to survey data. If you are interested in participating in the second phase of the study you will be asked to enter your email address. This email address will be used to contact selected students for the second phase of the study. Email addresses entered in this phase of the study will be linked to survey data; however, when the results of the qualitative phase are reported, pseudonyms will be used so that the identities of these participants remain anonymous.

Storage of Data: Research data may be temporarily stored on a password protected computer in the researchers home due to the COVID-19 pandemic. Only the researcher has access to the computer. Hard copies of research data will be stored in a locked cabinet in Dr. Michelle Prytula's office at the University of Saskatchewan for five years. Electronic information, including survey results, will be stored on the researcher's institutional One Drive account for five years. After five years, hard copies and digital copies of research information will be destroyed.

Right to Withdraw: Participation in this survey is voluntary. You can decide not to participate at any time by closing your browser, or choose not to answer any questions you do not feel comfortable with. Survey responses will remain anonymous. Since the survey is anonymous, once it is submitted it cannot be removed.

Follow Up: To obtain results of this study, please contact the researcher using the information at the top of this page.

Questions or Concerns: Should you have any questions or concerns, contact the researcher using the information at the top of this page. This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: ethics.office@usask.ca; 306-966-2975; out of town participants may call toll free 1-888-966-2975.

By completing and submitting this questionnaire, **your free and informed consent is implied** and indicates that you understand the above conditions of participation in this study.

Eligibility Criteria

This survey seeks to understand the experiences of students who transitioned directly from high school to post-secondary education at the University of Saskatchewan main campus in the Fall 2019 term.

* 1. In what year did you graduate high school?

2019

Other

* 2. In what year did you begin your post-secondary studies?

- Summer or Fall 2019
- Other

* 3. Did you attend the Saskatoon main campus in the Fall of 2019?

- Yes
- No

High School Environment

* 4. Where did you attend high school?

* 5. Which of the following best describes the high school you attended:

- Public School
- Private School
- School with Religious Affiliation
- First Nations Band School
- French (or other language immersion) School
- Home School
- Other (please specify)

6. What was the grade range at your high school?

- K-12
- Grade 6, 7, or 8 through 12
- Grade 9, 10, or 11 through 12
- Other (please specify)

7. How many students were in your graduating class?

- 1 - 25
- 26 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 300
- More than 300

8. What is the population of the community in which you attended high school?

- 500 or less
- 501 – 1000
- 1001 – 5000
- 5001 – 10,000
- 10,001 – 50,000
- More than 50,000

9. Did your school have a dedicated career or guidance counsellor?

- Yes
- No
- I don't know

High School Involvement - Academics

10. How many hours per week did you spend on school work outside the classroom?

- 0
- 1 - 5
- 6 - 10
- 11 or more

11. Please indicate the frequency in which you engaged in the following activities

	Never	Rarely	Sometimes	Often	Always
How often did you participate in classroom discussions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a parent/guardian?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a friend/peer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a teacher?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a tutor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. How did your teacher encourage participation in the classroom? (Select all that apply)

- Encouraged classroom conversations through questions and discussion
- Encouraged working in teams or groups
- Awarded participation marks
- No classroom participation was encouraged
- Other (please specify)

High School Involvement - Extra-Curricular

13. Which school-associated extra-curricular athletic activities were you involved in? (Check all that apply)

- None
- Badminton
- Baseball
- Basketball
- Cross-Country
- Football
- Rowing
- Soccer
- Swimming
- Tennis
- Track and Field
- Volleyball
- Other (please specify)

14. How many hours per week did you spend participating in school-associated extra-curricular athletic activities?

- 0
- 1 - 5
- 6 - 10
- 11 or more

15. Which school-associated extra-curricular non-athletic activities were you involved in? (Check all that apply)

- None
- Business Club
- Debate Club
- Drama
- Gay-Straight Alliance
- Language Club
- Music
- Outdoor Club
- Student Council
- Yearbook
- Other (please specify)

16. How many hours per week did you spend participating in school-associated extra-curricular non-athletic activities?

- 0
- 1 - 5
- 6 - 10
- 11 or more

17. How important was achieving high grades to you in high school?

- Extremely important
- Very important
- Somewhat important
- Not so important
- Not at all important

18. What motivated you to achieve academic success in high school? (Select all that apply)

- Parents
- Post-secondary admission
- Scholarship opportunities
- Intrinsic/Self Motivation
- Other (please specify)

Post-Secondary Transitions

Students apply for admission based on a 5-subject high school average. You can view the courses used and calculate your 5-subject average by [viewing your unofficial transcript in PAWS](#). To calculate your average, add up all five numbers and divide by 5.

19. What was your university 5-subject admission average?

20. In which college were you enrolled during the 2019-20 Fall Term (September-December)?

- Agriculture and Bioresources
- Arts and Science
- Education
- Edwards School of Business
- Engineering
- Kinesiology
- St. Thomas More College

21. Did you seek advice from any of the following people when making post-secondary admission decisions?

	Yes	No
Teacher	<input type="radio"/>	<input type="radio"/>
High School Guidance Counsellor	<input type="radio"/>	<input type="radio"/>
Parent/Guardian	<input type="radio"/>	<input type="radio"/>

Other (please specify)

22. Why did you choose to attend the University of Saskatchewan? (Select all that apply)

- Proximity to my hometown
- It offers the program(s) I want
- The U of S has a good reputation
- I had a scholarship/funding for the U of S
- Other (please specify)

23. What was your primary reason for choosing to attend post-secondary education?

- To get a career
- For the pursuit of knowledge
- My parents wanted me to
- Other (please specify)

Post-secondary Transition

24. How did you prepare for the transition to post-secondary education? (Select all that apply)

- Read about my program online or in a brochure
- Attended Open House
- Attended U-Start
- Attended Orientation
- Met with an advisor before the start of the term
- I did not prepare for the transition to post-secondary education
- Other (please specify)

25. Did anyone help you prepare for what to expect as you began your studies? (Select all that apply)

- Nobody helped me prepare
- Parent(s)/Guardian(s)
- High School teacher(s) or counsellor(s)
- Older sibling(s)
- Peer(s)
- Other (please specify)

26. Did you move from your home community to Saskatoon to attend post-secondary education?

- Yes
- No

27. Did you have a support network when you arrived in Saskatoon? (Select all that apply)

- Yes - Family in Saskatoon
- Yes - Friends in Saskatoon
- No - I had no support network
- Yes - Other (please specify)

28. Did any of your peers begin their post-secondary education at this institution at the same time as you?

- Yes – we remained in contact throughout the term
- Yes – but we did not stay in contact
- No

29. What best describes your living situation during your first term of post-secondary studies?

- Lived at home (no change from high school)
- Lived in dorm-style residences
- Lived in apartment-style residences
- Lived off-campus with a friend
- Lived off-campus with someone I didn't know
- Lived off-campus alone
- Other (please specify)

Post-secondary Involvement - Academics

Please answer the following questions with term 1 (September - December) of the 2019-20 academic year in mind.

30. How many hours per week did you spend on school work outside the classroom?

- 0
- 1 - 5
- 6 - 10
- 11 or more

31. Please indicate the frequency in which you engaged in the following activities.

	Never	Rarely	Sometimes	Often	Always
How often did you participate in classroom discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a parent/guardian?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a friend/peer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from an instructor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often did you seek help on school work from a tutor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. How was academic participation encouraged? (Select all that apply)

- Encouraged classroom conversations through questions and discussion
- Group or team work was required/encouraged
- Participation marks were awarded
- Tutorial/lab requirement
- No classroom participation was encouraged
- Other (please specify)

33. Did you seek advice from an academic advisor during term 1 of the academic term?

- Yes
- No

Post-secondary Involvement - Huskie Athletics

Please answer the following questions with term 1 (September - December) of the 2019-20 academic year in mind.

34. Were you involved as a Huskie Athlete?

- Yes
- No

Post-secondary Involvement - Huskie Athletics

35. How many hours per week were you involved in Huskie athletics during term 1 of the 2019-20 academic year?

- 0
- 1 - 5
- 6 - 10
- 11 or more

Post-secondary Involvement - Extra-curricular

Please answer the following questions with term 1 (September - December) of the 2019-20 academic

year in mind.

36. Which university-associated extra-curricular activities were you involved in? (Check all that apply)?

- Campus Rec
- University Student Council (USSU)
- College Student Council
- Other (please specify)

37. How many hours per week did you spend participating in university-associated extra-curricular activities?

- 0
- 1 - 5
- 6 - 10
- 11 or more

Post-secondary Success

[Click here](#) for information on how to calculate your weighted average. You can view your grades in PAWS by viewing your [unofficial transcript](#).

38. How many courses did you attempt during the 2019-20 Fall Term (September - December)? This includes failed classes, but does not include classes where you have a 'W'.

39. What was your weighted average (including all attempted courses) during the 2019-20 Fall Term (September - December)?

40. How many courses did you attempt during the 2019-20 Winter Term (January - April)? This includes failed classes, but does not include classes where you have a 'W'.

41. What was your weighted average (including all attempted courses) during the 2019-20 Winter Term (January - April)?

Post-secondary Expectations

42. Were your grades during the 2019-20 Fall Term (September – December) higher, lower, or about the same as what you expected?

- Much higher
- Somewhat higher
- My grades were about what I expected
- A little lower
- Much lower

43. If your grades were higher or lower than expected, what do you think contributed to this mis-match in expectations and actual grades?

44. How do you define academic success?

45. What was the easiest part about transitioning to post-secondary education?

46. What was the most difficult part about transitioning to post-secondary education?

47. Phase two of this study will involve individual interviews with a selection of students who represent different high school environments. Students selected to participate in phase two of the study will be entered into a draw for a second prize. Do you wish to be considered for phase two of this study?

Yes

No

You have indicated you would be interested in participating in phase two of this study. Please note that email addresses entered here will be associated with survey results for the purpose of selecting students for phase two and for preparing interview questions. Only the researcher will have access to the raw data and pseudonyms will be used in the presentation of data to assure the anonymity of student participants.

By entering your email address below your free and informed consent is implied and indicates that you understand the above conditions.

Only students selected for the second phase of the study will be contacted.

48. Please enter your uSask email in the field below should you wish to be considered for phase two of this study. Should you no longer wish to be considered for phase two of this study please leave this field blank.

Thank you for taking the time to participate in this survey.

Please click here if you wish to enter the prize draw. Clicking this link will take you to an external survey so that email addresses are not tied to survey responses.

1. Please enter your usask email address to be entered to win the survey prize.

Thank you for your entry. Only the successful student will be contacted.

Appendix C: Interview Guide

Good morning/afternoon/evening.

Thank you for taking the time to speak with me today. My name is Vicky and I am a graduate student in the College of Education studying Educational Administration. Through my research I hope to learn about the type of school you attended, your experiences with student involvement, your transition from high school to post-secondary education, and your ideas about what *success* means.

I anticipate that these questions will take approximately 30-45 minutes to answer.

Your participation in this interview is voluntary, and you can choose to answer only those questions that you are comfortable with. You may withdraw from the research project for any reason without explanation or penalty of any sort. At any time if you wish to end the interview, only the completed portion of the interview will be used in the study. Should you wish to withdraw completely, let me know and none of your interview will be used. Your right to withdraw data from the study will apply until December 18, 2020. After this, it is possible that some form of research dissemination will have already occurred, and it may not be possible to withdraw your data.

The interview will be recorded to allow for me to transcribe the interview. You may request that the recorder be turned off at any time without giving a reason. After the completion of this interview I will transcribe the recording and email you a complete transcription. Upon reviewing the transcription, you can let me know if there are any changes you would like to see made.

If you choose to participate, your identity will be kept anonymous in the findings of the study. Only the researcher will have access to the research information. All recordings, transcripts, and notes will be kept in locked storage for five years.

Upon completion of the interview your email addresses will be entered into a draw for an electronic gift.

Review consent form

Do you have any questions? If not, we will start the interview.

Please take your time to consider your responses before you answer the questions.

1. What were you like as a student in high school? How would your friends or teacher describe you?
 - a. Why?....
2. In high school, what motivated or deterred your involvement in classroom discussions? Extra-curricular activities?
3. How would you describe your high school?
 - a. How many students?
 - b. Did you know everyone in your class?
 - c. Did you know your teachers?
4. Do you feel that you were successful in high school?
 - a. What helped or hindered your success?
 - b. How do you feel that your high school environment influenced your ability to succeed in high school?
5. How did you feel about your work in high school?
 - a. How did you feel about homework?
 - b. What were your homework habits in high school?
 - c. Where did these habits come from?

6. What were you like as a student in university? How would your friends or instructors describe you?
 - a. Why?....

7. In post-sec, what motivated or deterred your involvement in classroom discussions? Extra-curricular activities?

8. How would you describe the [institution]?

9. Do you feel that you were successful in your first year of post-secondary?
 - a. What helped or hindered your success?
 - b. How do you feel that the post-secondary environment influenced your ability to succeed in your first year?

10. In post-secondary, what motivated or deterred your involvement in classroom discussions? Extra-curricular activities?

11. How did you feel about your work in post-secondary?
 - a. How did you feel about homework?
 - b. What were your homework habits in your first year?
 - c. Where did these habits come from?
 - d. How did these change or evolve over the year?

12. Did you feel prepared for post-sec?
 - a. Why
 - b. Why not
 - c. What prepared you?
 - d. How did HS prepare you?
 - e. How did your high school experience prepare you for your transition to post-secondary education?

13. What did you expect in your first year?
 - a. How were your expectations compared to your actual experiences?
 - b. What surprised you?
 - c. What was easy?
 - d. What was hard?
 - e. What do you wish you had known about transitioning to post-secondary education?

14. What advice would you give to someone from your high school who will be attending the [institution]?

15. How do you define success
 - a. What influenced your definition of success?
 - b. Did your definition of success change from HS to PS?
 - c. Has your definition of success changed now that you're in your second year?

16. How do you feel that moving from a physical environment to a remote environment has impacted your opportunities for involvement?
 - a. How are you remaining involved?

17. How do you feel that moving from a physical environment to a remote environment has impacted your opportunities for success?

Thank you for taking the time to answer my questions and participate in this study. I will email you a copy of the transcribed interview for your review. Please note that only the winner of the prize will be contacted.

Thank you again for your time. Have a good (day/evening).

Appendix D: Phase One Invitation

PAWS Announcement to Undergraduate Students

AND

Email announcement to students beginning their second year of study in direct entry colleges (at the discretion of the college)

Subject: Participate in a Research Study

Body of announcement:

Students who graduated high school in Spring 2019 and began their studies in a direct-entry college in the Fall of 2019 are invited to participate in a research study exploring student involvement and student transitions from high school to post-secondary education.

This study involves the completion of an online questionnaire. The questionnaire will take approximately 20 minutes to complete. Students who participate in the online questionnaire will be entered in a draw to win a prize. Students will have the opportunity to indicate their interest in participating in a second phase of this study, a telephone interview. Students who are selected to participate in the second phase of the study will be entered into a draw to win a second prize. Please note that only a limited number of students will be selected to participate in phase two of the study.

If you wish to participate, please click the following link:

<https://www.surveymonkey.ca/r/vcp562research>.

Surveys must be completed by **Friday, October 16, 2020**.

Please see the attached document for complete details.

For more information about this study, please contact Vicky Parohl (vicky.parohl@usask.ca)

PDF Attachment to accompany announcement:

Students who graduated high school in Spring 2019 and began their studies in a direct-entry college in the Fall of 2019 are invited to participate in a research study exploring student involvement and student transitions from high school to post-secondary education.

This study involves the completion of an online questionnaire. The questionnaire will take approximately 20 minutes to complete. Students who participate in the online questionnaire will be entered in a draw to win a prize. Students will have the opportunity to indicate their interest in participating in a second phase of this study, a telephone interview. Students who are selected to participate in the second phase of the study will be entered into a draw to win a second prize. Please note that only 8-16 students will be selected to participate in phase two of the study.

Your participation in this study is completely voluntary. Should you decide to not participate you may close your browser or choose not to answer any questions you do not feel comfortable with. Survey responses will remain anonymous. Since the survey is anonymous, once it is submitted it cannot be removed.

Should you choose to participate in the questionnaire your identity will be kept anonymous. Email addresses for the prize draw will be collected in a separate survey so email addresses cannot be linked to student data.

If you are interested in participating in phase two of the study you will be asked to enter your email address. This email address will be used to contact selected students for the second phase of the study. Email addresses entered in this phase of the study will be linked to survey data; however, when the results of the study are reported, pseudonyms will be used so that the identities of these participants remain anonymous.

If you wish to participate in the online questionnaire, please click the following link:

<https://www.surveymonkey.ca/r/vcp562research>.

Surveys must be completed by **Friday, October 16, 2020**.

For more information about this study, please contact Vicky Parohl (vicky.parohl@usask.ca), graduate student in the Educational Administration program at the University of Saskatchewan under the supervision of Dr. Michelle Prytula (michelle.prytula@usask.ca; 306-966-7647).

This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: ethics.office@usask.ca; 306-966-2975; out of town participants may call toll free 1-888-966-2975.

Appendix E: Phase Two Email Invitation

Subject: Request for Telephone Interview

Hello,

Thank you for participating in the online survey regarding student involvement and transitions to post-secondary education. I am inviting you to participate in phase two of this study, a telephone interview.

Should you decide to participate in the second phase of this study, you will be asked a number of open-ended questions regarding your experiences with student involvement, the transition from high school to post-secondary education, and your ideas about what *success* means. The interview is anticipated to take 30 to 45 minutes to complete.

Your participation is voluntary and you can choose to answer only those questions that you are comfortable with. You may withdraw from the research project for any reason without explanation or penalty of any sort. At any time if you wish to end the interview, only the completed portion of the interview will be used in the study. Should you wish to withdraw completely, let me know and none of your interview will be used. Your right to withdraw data from the study will apply until December 18, 2020. After this, it is possible that some form of research dissemination will have already occurred, and it may not be possible to withdraw your data.

The interview will be recorded to allow for transcription (to be undertaken by the researcher); you may request that the recorder be turned off at any time without giving a reason.

If you choose to participate, your identity will be kept anonymous in the findings of the study. Only the researcher will have access to the research information. All recordings, transcripts, and notes will be kept in locked storage for five years.

If you wish to participate, please reply to this email to set up a time for the telephone interview. After you complete the telephone interview, your name will be entered to win a prize.

Please read the informed consent form below carefully. We will review the form together during the interview and I will confirm your consent at that time.

Thank you for your consideration.

Sincerely,

Vicky Parohl, Student Researcher

Appendix F: Phase Two Consent Form



Participant Consent Form

You are invited to participate in a research study entitled: *Student involvement and student success in high school to post-secondary transitions*

Researcher: Vicky Parohl, Graduate Student
Department of Educational Administration, College of Education
vicky.parohl@usask.ca

Supervisor: Dr. Michelle Prytula
Department of Educational Administration, College of Education
306-966-7647
michelle.prytula@usask.ca

Purpose of the study: The purpose of this study is to explore how high school environment impacts a student's involvement at the high school and subsequently at the post-secondary level, and how the high school environment influences student transitions and academic success (as perceived by the student) in post-secondary education.

Procedures: The researcher is inviting you to participate in an interview to take place via telephone. The interview should take approximately 30-45 minutes. The interview will be recorded to allow for transcription (to be undertaken by the researcher); the participant may request that the recorder be turned off at any time without giving a reason. Please feel free to ask any questions regarding the procedures and goals of the study or your role. Following the interview, I will prepare a transcript of the interview and email it to you for review. You will have two weeks upon receiving the email to review the transcript and send any changes back to

me. If no changes are received within two weeks of receiving the transcript your approval of the transcribed interview will be implied.

Please provide oral consent that you grant permission to be audio recorded. The researcher will indicate your consent on this form.

I grant permission to be audio recorded

Potential Risks: There are no known or anticipated risks to you by participating in this research.

Student Supports: University of Saskatchewan students have access to several support services, including the Student Wellness Centre. Contact information for the centre can be found online or at <https://students.usask.ca/health/centres/wellness-centre.php>. A copy of this consent form including the aforementioned link will be emailed to you.

Potential Benefits: The results of this study may be of value to students who are transitioning from high school to post-secondary education or to adults who are supporting students in their transition from high school to post-secondary education.

Compensation: Students who complete the interview will be entered in a draw to win a prize.

Confidentiality: Data from this research will be presented in the Master's thesis and may also be used in scholarly articles, presentations, or in reports to professional organizations. Your identity will be kept confidential. Survey data may be used in conjunction with the interview to report on the size or type of high school, approximate GPA, and your level of involvement in classroom and extra curricular activities. Although direct quotations may be reported from the interview, you will be given a pseudonym and all identifying information (such as the name of your high school or the name of your home town) will be removed from the report.

Storage of Data: Research data, including audio recordings, may be temporarily stored on a password protected computer in the researchers home due to the COVID-19 pandemic. Only the

researcher has access to the computer. Hard copies of research data will be stored in a locked cabinet in Dr. Michelle Prytula's office at the University of Saskatchewan for five years post publication. Electronic information, including audio recordings of interviews, will be stored on the researcher's institutional One Drive account for five years post publication. After five years, hard copies and digital copies of research information will be destroyed. A master list of pseudonyms will be maintained to link the survey and interview data. This list will be stored in a password protected Excel sheet on a password protected computer. This list will be deleted upon completion of data analysis.

Right to Withdraw: Your participation is voluntary and you can choose to answer only those questions that you are comfortable with. You may withdraw from the research project for any reason without explanation or penalty of any sort. Should you wish to withdraw, please contact the researcher by email using the contact information at the top of this page and the transcripts and audio recording of your interview will be destroyed. Your right to withdraw data from the study will apply until October 31, 2020. After this, it is possible that some form of research dissemination will have already occurred, and it may not be possible to withdraw your data.

Follow up: To obtain results from the study, please contact the researcher using the contact information at the top of this page.

Questions or Concerns: Should you have any questions or concerns, contact the researcher using the information at the top of this page. This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: ethics.office@usask.ca; 306-966-2975; out of town participants may call toll free 1-888-966-2975.

Oral Consent: I read and explained this consent form to the participant before receiving the participant's consent, and the participant had knowledge of its contents and appeared to understand it.

Name of Participant

Researcher's Signature

Date

A copy of this consent will be sent to the participant.

Appendix G: Transcript Release Form

Data/Transcript Release Form

Dear [student],

Thank you again for your participation in this study. Please find attached to this email the transcript from our interview that occurred on [insert date] for your review. Please send the signed release form and any changes you wish to report to Vicky Parohl at vicky.parohl@usask.ca no later than [two weeks from send date]. If no changes are received by this date, your approval of the transcribed interview will be implied.

Thank you,
Vicky Parohl

Student involvement and student success in high school to post-secondary transitions

I, _____, have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter, and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Vicky Parohl. I hereby authorize the release of this transcript to Vicky Parohl to be used in the manner described in the Consent Form. I have received a copy of this Data/Transcript Release Form for my own records.

Name of Participant

Date

Signature of Participant

Signature of Researcher

Appendix H: Prize Email

Subject: Congratulations - Apple Watch Winner!

Congratulations!

Your email address has been randomly drawn from those students who participated in Phase Two of the research study you participated in (*Student involvement and student success in high school to post-secondary transitions*).

Please respond to this email to make arrangements to receive your Apple Watch.

Thank you,
Vicky Parohl

Appendix I: Email with Ethics re: Prize

From: **Aschim, Joni** joni.aschim@usask.ca
Subject: RE: Incentives
Date: December 2, 2020 at 2:45 PM
To: Parohl, Vicky vicky.parohl@usask.ca



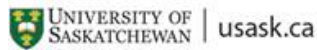
Hello Vicky,

I have spoken with our Chair and she would prefer that if a description of the gift is to be offered in the recruitment material, it would be preferred to keep the description more generic, such as “electronic gift” or “electronic device”.

All the best,

Joni

Joni Aschim
Research Ethics Coordinator
Research Excellence and Innovation
Office of the Vice-President Research
Ph: 306-966-5252



From: Parohl, Vicky <vicky.parohl@usask.ca>
Sent: Friday, November 27, 2020 9:41 AM
To: Aschim, Joni <joni.aschim@usask.ca>
Subject: Incentives

Good morning, Joni,

Dr. Prytula followed up with me regarding your conversation around incentives for research participation. First, I want to thank you for taking this to the Chair. You had suggested perhaps advertising the prize as an “electronic gift.” I was wondering if a “smart watch” might be appropriate? These vary greatly in their value. If not then I am happy to go with electronic gift.

Thank you again,
Vicky

Appendix J: List of Codes

Category: High School

Subcategory 1: High School Identity

Code: INVOLVED

Code: GOOD/HIGH GRADES

Code: APPLIED/HARD WORKER

Code: "OVER-ACHIEVER" (*Rural*)

Code: BALANCED (*Urban*)

Subcategory 2: High School Environment

Code: SMALL SCHOOL

Subcode: CLOSE RELATIONSHIPS / SENSE OF COMMUNITY

Subcode: LIMITED OPPORTUNITIES (*Rural*)

Code: BIG SCHOOL (*Urban*)

Subcode: "KNOW MOSTLY EVERYONE" (*Urban*)

Subcode: FRIENDLY (*Urban*)

Subcode: CLIQUEY (*Urban*)

Subcategory 3: Motivation for Engagement (High School)

Code: ENJOYMENT/SELF-FULFILMENT

Code: ROLE-MODELS (*Rural*)

Code: "DIDN'T LIKE TO SPEND TIME AT HOME" (*Urban*)

Subcategory 4: Involvement (High School)

Code: CLASSROOM PARTICIPATION

Subcode: Obligation to participate

Subcode: Comfortable with participation

Subcode: "Easier to do it on my own" (*Rural*)

Subcode: Teacher encouraged participation (*Rural*)

Code: HOMEWORK

Subcode: Limited effort

Subcode: No time for homework (*Rural*)

Subcode: A lot of homework (*Urban*)

Subcode: Used in-class time (*Urban*)

Subcategory 5: Motivation for Success (High School)

Code: SCHOLARSHIPS

Code: POST-SECONDARY ADMISSION

Code: “MAKE MY FAMILY PROUD” (*Urban*)

Code: INTRINSIC MOTIVATION/COMPETITIVENESS (*Urban*)

Code: REPUTATION (*Urban*)

Code: CAREER (*Urban*)

Category: Post-Secondary

Subcategory 1: Post-secondary Identity

Code: ENGAGED / DETERMINED

Code: CONFUSED / INSECURE

Code: POOR ATTENDANCE (*Urban*)

Subcategory 2: Post-secondary Environment

Code: SUPPORTIVE / FRIENDLY

Code: LONELY / “LESS OF A COMMUNITY”

Code: BIG/INTIMIDATING

Code: CHALLENGE OF INTERACTING WITH INSTRUCTORS

Code: CLIQUEY (*Urban*)

Subcategory 3: Involvement (Post-secondary)

Code: CLASSROOM PARTICIPATION – DETERRENT FOR PARTICIPATION

Subcode: Intimidated/Uncomfortable

Subcode: Boring (*Urban*)

Code: CLASSROOM PARTICIPATION – MOTIVATION FOR PARTICIPATION

Subcode: Participation Marks (*Urban*)

Subcode: Genuine Interest (*Urban*)

Code: HOMEWORK

Subcode: A lot of homework

Subcode: Time management / Finding a balance

Code: EXTRA-CURRICULAR ENGAGEMENT

Subcode: Meeting people (Motivation for involvement)

Subcode: No time (Deterrent for involvement)

Subcategory 4: Motivation for Success

Code: EXCITED / DRIVEN

Code: ADMISSION TO A COMPETITIVE PROGRAM (*Urban*)

CATEGORY: Transition/Expectations

Subcategory 1: Preparedness

Code: MODERATELY PREPARED

Code: NOT PREPARED

Subcategory 5: Shaping Expectations

Code: TEACHERS

Subcode: Expectations

Subcode: Writing Skills (*Rural*)

Subcode: Time Management / Study Skills (*Urban*)

Subcode: Support (*Urban*)

Code: OLDER SIBLINGS / PEERS

Code: HIGH SCHOOL COUNSELLOR

Code: PARENTS

Code: MEDIA, UNREALISTIC EXPECTATIONS (*Rural*)

Code: "FIGURED IT OUT ON MY OWN" (*Rural*)

Subcategory 2: Easiest Aspects of Transition to Post-secondary

Code: INDEPENDENCE

Code: ATTENDING LECTURES

Code: MAKING FRIENDS (*Rural*)

Subcategory 3: Challenges of Transition to Post-secondary/Advice for New Students

Code: TIME MANAGEMENT / STUDY HABITS

Code: FINANCIAL

Code: VARYING EXPECTATIONS OF INSTRUCTORS

Code: MAKING FRIENDS (*Urban*)

CATEGORY: Success

Subcategory 1: Defining Success

Code: ACHIEVING PERSONAL GOALS / BEST EFFORT

Code: PERSONAL GROWTH / ENRICHMENT

Code: LEARNING / COMPREHENSION (*Rural*)

Code: HAPPINESS / SATISFACTION (*Urban*)

Code: SATISFACTORY GRADES (*Urban*)

Category: COVID-19

Code: MAINTAINED SUCCESS

Code: LITTLE OR NO MOTIVATION

Code: DEPRESSION / SADNESS

Code: ISOLATED / LITTLE OR NO INTERACTION (*Urban*)

Code: INCREASED WORKLOAD/STRESS (*Urban*)

Code: CHALLENGES OF ASYNCHRONOUS CLASSES (*Urban*)

Code: SELF-LEARNING (*Urban*)