

**Learning Spaces - International Graduate Students' Perceptions In A Canadian Post-  
Secondary Institution**

A Thesis Submitted to the College of Graduate and Post-Doctoral Studies  
in Partial Fulfillment of the Requirements  
for Degree of Master's of Education  
in the Department of Educational Administration  
University of Saskatchewan  
Saskatoon Saskatchewan

By  
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**Department of Educational Administration  
University of Saskatchewan**



**PARTICIPANTS NEEDED FOR  
RESEARCH ON LEARNING SPACES**

We are looking for volunteers to take part in a study of international graduate students' perceptions of learning spaces.

As a participant in this study, you would be asked to: participate in an online interview and if you have a particular interest in this subject, a focus group as well.

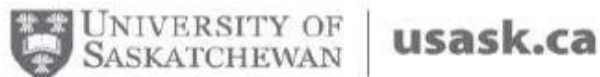
Your participation would involve up to two sessions, each of which is approximately sixty to ninety minutes.

Participants will receive compensation in appreciation of their time in the form of a gift card.

For more information about this study, or to volunteer for this study, please contact:

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Email: [connie.kocsis@usask.ca](mailto:connie.kocsis@usask.ca)

This study has been approved by the University of Saskatchewan Behavioural Research Ethics Board





## **Chapter 1: Introduction**

An increase in the number of international graduate students attending Canadian post-secondary institutions has prompted institutions to provide student supports for international students. There has been limited research, however, examining if, how and why learning spaces could be included as one of these support programs and services that support international graduate student success. The purpose of chapter one is to introduce the problem being studied, as well as the background of the problem, and the purpose of the study. Assumptions, description of study, delimitations and limitations, definitions and the methodology and methods are also introduced.

### **Learning Spaces - The Final Frontier: An Introduction to the Study**

This study comes from my long-standing interest in learning spaces and my new-found interest in the experiences of international graduate students. As the former Operations Officer/Facility Manager at the College of Education, University of Saskatchewan (U of S), I am interested in built environments in general. Bartuska (1999) simply defined built environments as a “concept of all human endeavours that is defined by four interrelated components which includes everything humanly made, arranged or maintained; to fulfill human purposes (needs, wants and values); to mediate the overall environment; and results that affect the environmental context” (p.5). This study was also formed by being a graduate student in the Department of Educational Administration and being surrounded by international graduate students in one of my classes. I noticed that the international graduate students seemed to enjoy a sense of community and belonging in the classroom.

The topic is important because in order to attract and retain international students, institutions need to know what international graduate students need to be successful in their learning, including the type of learning spaces that are beneficial to international graduate student success and engagement. My relationship to the topic is that an aspect of my position at the USaskis to ensure the institution is providing quality learning environments at the College of Education. When taking graduate classes, I observed that international graduate students seemed to be looking for and/or attracted to different types of learning experiences than other graduate students. I questioned if international graduate students may require a different type of instruction to promote their learning. This differentiated type of instruction included helping the international graduate students create community and thus enhancing their engagement and their success.

With less funding being awarded to Canadian institutions international graduate students are becoming an important revenue stream for Canadian institutions. An increasing number of international students are coming to study in Canada, and Canadian institutions need to know how to support international graduate students in their learning. Research on learning spaces as a student support service for international graduate students has not been fully explored (Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2010).

This observation led me to become interested in researching the topic of international students and learning spaces. I participated in a graduate class on international and comparative education perspectives. The course had approximately 20 students and the majority were international students. These international graduate students were from China, Jamaica, Africa and Saudi Arabia. I noted how they interacted in and out of class and began to wonder if what

they wanted, and needed, in terms of learning spaces was different than what I wanted and needed. The international graduate students seemed to have wanted the support system, social interaction, and communication with other international graduate students in a way I did not. I originally thought about what international students may need in terms of classroom design, but then I began to think of what they might need in terms of learning space. There seemed to be a sense of community and social interaction that was important and I began to wonder where that could be found on campus. I wanted to examine if learning spaces could be perceived as a student support service by international graduate students, and if learning spaces could create engagement for international graduate students. Additionally, I wondered if this engagement, influenced by satisfaction, social interaction, belonging and agency, could be a factor in their success. Programs and services have been developed at the USask to encourage engagement, vis-à-vis satisfaction, social interaction and community; however, these were mostly for undergraduate students. With the growing population of international students, developing and incorporating learning spaces as a support for international students should become a priority for institutions as well.

## **Significance**

In order to attract and retain international students, institutions need to know what international graduate students need to be successful in their learning, including the type of learning space. International graduate students are becoming an important revenue stream for Canadian institutions and an increasing number of international students are coming to study in Canada (Browne, et al., 2015; Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2010; Yan & Cardinal, 2013).

Canadian institutions need to know how to support international graduate students in their learning. Research on learning spaces as a student support service for international graduate students has not been fully explored. I am questioning whether learning spaces could be a support for creating community, social interaction, belonging, satisfaction and agency, which lead to engagement. This research may result in being able to better provide supports, through appropriate learning spaces, to international students, especially as international students are becoming more prevalent in post-secondary institutions

Cresswell (2002) stated the six main purposes for educational research are to improve practice, add to knowledge, address gaps in knowledge, expand knowledge, replicate knowledge and add voices of individuals to knowledge. The primary purposes of this study are to improve the international graduate student experience to help them succeed, and to inform policy by adding voices of individuals to knowledge – in this case, international graduate student voices.

### **Statement of the Problem**

International graduate students in Canadian post-secondary institutions may have different academic and social needs, based on their history and culture, and different types of learning spaces may enhance their success in post-secondary institutions. The research problem to be addressed through this study is that the literature on learning spaces focusses on what the traditional students need to succeed, not international students, who might have different needs. I studied this problem by defining what the research indicates about international graduate students' success, and I conducted research with international graduate students on how they perceive their learning spaces. I studied if international graduate students feel learning spaces could be part of the path to their success. Institutions actively recruit international students to

Canadian institutions and these institutions are providing supports for international graduate students; however, I want to study whether learning spaces can be a student support that international graduate students use to succeed. International graduate students have not been frequently studied in terms of how learning spaces may affect their engagement and success.

### **Background to the Problem**

The problem originates from a lack of research on international graduate students in Canadian post-secondary institutions with respect to their perceptions of learning spaces. The research problem to be addressed through this study on learning spaces focusses on what the international students need to succeed. I will explore how learning spaces provide engagement via influencers such as a sense of community, social interaction, belonging, satisfaction, and agency. This in turn could help lead to their success.

### **Purpose of the Study**

The research purpose of this study is to identify the perceptions of international graduate students of various types of learning spaces, and to explore their perceptions of both formal and informal learning spaces. The purpose is also to establish whether learning spaces, both formal and informal, can enhance student engagement and success via influencers such as social interaction, community, satisfaction, belonging and agency for international graduate students.

### **Research Questions**

The following are research questions that will guide the study:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?

- b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?
- 3) What can institutions do to provide learning spaces for international graduate students that international graduate students value and may promote their engagement and success?

### **Methodology and Method**

This study falls in to the category of qualitative research design. The research methodology and method that I employed was a bi-instrument exploratory interpretivist case study. International graduate students at the USask will be the participants for this study. The participants agreed to discussions on online focus group regarding learning spaces and agree to answer some questions during a semi-structured online interview.

The participants participated in an on-line interview about different types of learning spaces and environments on campus. In the on-line semi-structured interviews, the participants shared their perceptions of the spaces. Data was collected by recording, in detail, online one-on-one interviews with international graduate students and recording these online interviews. A focus group involved more in depth discussions on how international grad students engage and interact with the spaces and how they perceive those spaces. Data was recorded, analyzed and categorized into themes. Eight participants participated in online one-on-one interviews and preceding focus group. Online interviews and focus groups were for approximately one hour each discussed how international graduate students perceive different types of learning spaces.



## **Delimitations**

Although their learning styles may be similar, I did not study the perceptions of undergraduate students. Private spaces that are not on university campuses are not included in the study. A further delimitation is that I am not going to study learning outcomes.

## **Limitations**

This study was conducted at a Western Canadian post-secondary institution at a midsized U15 research university. The participants in the study were international graduate students, within various colleges at the University of Saskatchewan(USask). Other specific constraints I placed on the study will be limiting the number of participants and limiting the number and type of learning spaces that are discussed. I was not be able to control whether the students will be authentic or not. However, as a graduate student myself, I believe graduate students are keen to take research seriously, and would not have agreed to participate if they did not think there was some value in the research being conducted. I could not control the depth of data that the participants are able to provide, and I realize that there may be issues with communication, depending on my ability to express myself clearly to those who may not speak English as a first language. I controlled how clear I was in helping the international graduate students understand what the study involves. Other specific constraints that might be placed on the study by other individuals or organizations may be language barriers, time and my novice status as a researcher. An additional limitation that has been added since the original proposal is that I was restricted to virtual interviews and a virtual focus group. Access to campus had been limited for the time because of the global pandemic, so actual observations of international graduate students in different types of learning spaces was not possible.

## **Definitions Used in this Study**

**Agency** – the sum of a person’s capacity to act on her/his own behalf, (Marginson, 2014, p. 14)

**Atmospherics** - the man/made physical environment where services and products are delivered. (Han, H., et al., 2018 p. 113)

**Experiential learning theory** - the process whereby knowledge is created through the transformation of experiences (Kolb, 2005, p. 194)

**Formal learning spaces** – spaces such as traditional classroom, lecture hall, technology infused classroom, lab, active learning classroom/next generation learning space (Painter, S, et al., 2013)

**Identity** – what a person understands themselves or others to be. Identity is not the whole person but a cloak the person puts on, one that might be changed later. (Marginson, 2014, p. 10)

**Informal learning spaces** –spaces such as libraries, gathering spaces and corridors, and spaces created within corridors (Painter, S.,et al., 2013)

**International students** - students in Canada on a visa or refugees, neither of which have a permanent residency status in Canada. This concept of 'international students' differs from that of 'foreign students' which includes permanent resident students (Statistics Canada, 2017)

<https://www150.statcan.gc.ca/n1/pub/81-004-x/2010006/def/intlstudent-etudiantetranger-eng.htm>

**Internationalization** – the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary, education (Knight, J. 2003) p.2)

**Self-formation** – the process of discovering a balanced self through identity and agency.

(Marginson, 2014)

### **The Researcher**

My personal background in the field is that I have managed spaces in a post-secondary institution and am interested in the built environment, facilities and space. Being an employee and a student has allowed me to view and think about how international graduate students perceive their learning spaces and how they are impacted by them. I may have preconceived ideas of what international graduate students need based on my own observations, occupational knowledge and personal interests. I also, while not an international student, am a non-traditional student, with my own unique experiences and learning needs.

This topic and subject area are important to me because in my career, as both professional and student, I have interacted with international graduate students enrolled in graduate studies at a post-secondary institution. I observed that international graduate students' needs and perceptions may be different than domestic graduate students, as they bring their own cultural histories and paradigms to the classrooms and other learning spaces. I felt international graduate students' perceptions of learning spaces, both informal and formal needed to be examined. In terms of facilities and space, knowing international graduate students' perceptions of different types of learning spaces will help to design better learning spaces and to better design and allocate space, thus increasing their success at post-secondary institutions.

I have a vested interest in the results of the study as a former Operations and Administrative Officer/Facilities Manager at the U of S, and would like to be able to help international graduate

students succeed. I have spoken with a number of international graduate students and have a sense how difficult it may be to be an international student at times.

### **Assumptions**

I have made four assumptions about international graduate students:

1. That what international graduate students need to succeed is unique and how they learn may be unique.
2. That Canadian institutions may not be fully prepared to accommodate international graduate students in the way that is supportive and inclusive for international graduate students.
3. That international students may benefit from certain types of learning spaces to succeed.
4. That the post-secondary institution wants to support international graduate students' success.

### **Organization of the Thesis**

The purpose of chapter one is a brief summary of my proposed study. Chapter two is a literature review of existing research. Chapter three details methodology and methods. Chapter four is presentation of data and chapter five is discussion and implications of research findings.

### **Summary**

This chapter presents a justification for studying international graduate student perceptions of both formal and informal learning spaces. The topic is to study perceptions that international graduate students have of learning spaces and to see if those spaces create the know

influencers of student success. Research on learning spaces as a student support for both domestic and international students has been limited. This chapter has also identified the statement and background of the problem. The research questions were posed and the delimitations and limitations were presented. It has also introduced the methodology and methods being used as well as assumptions that were made.

### **Extenuating Circumstances**

This proposal was in its final stages of being developed prior to COVID-19 that surfaced in western Canada in February/March of 2020. The initial design was to engage in observation of the ways in which international students used formal and informal learning spaces on campus followed by interviews and focus groups. Social distancing and isolation presented a significant challenge for me carrying out the research as planned since university campuses have been closed. This pandemic necessitated a shift to the research and interview questions as well as the methodology. At the same time, the pandemic and social distancing that has occurred presents an opportunity to engage with international students about learning spaces at a time when those spaces are no longer available to them. This presented unique insights as international students had understandings about the importance of those learning spaces that developed from their absence. The study focussed on perceptions of the learning spaces as the international graduate students reflect on what is truly important to them about space during this global crisis when these same learning spaces are no longer available.

## Chapter 2: Review of Relevant Literature

This chapter will outline the literature with respect to research conducted of learning spaces and student perceptions. While research on the factors for success for international graduate students is a relatively recent phenomenon, theoretical frameworks on student development, student learning, student engagement and success have existed for years. Research on international graduate students' requirements for engagement and success, however, has received less attention. International graduate students have not commonly been studied in terms of how learning spaces may affect their success. The issues of learning spaces, as well as the importance of community, social interaction, engagement, satisfaction, belonging, and agency had been addressed for students but little empirical research has been done on international graduate students' success and even less on how international graduate students may be affected by their campus environment, which includes formal and informal spaces and classroom design. Learning spaces and classroom redesign for undergraduates and elementary aged students is discussed by Brooks,(2011); Byers et al.,(2014); Han et al.,(2018); Kolb and Kolb, (2005); Perks et al.,(2016); Van Horne et al.,(2018). Yang and Noels,(2013) was the only Canadian study included in the literature review for international graduate students and Hu and Kuh, (2003) was the only Canadian study included for undergraduate students.

Research by Han et al., (2018); Kuh, (2016); Moreison et al.,(2018); Sawir et al.,(2008) Warwick and Cox, (2012) and Wood et al.,(2012), indicated if institutions that enroll international students have student supports in place that create engagement, vis-a-vis social interaction, belonging, agency, satisfaction, and policies, these students have more of an opportunity to succeed. These supports are currently in the form of services, programs and

policies and should be found in learning spaces and classroom design. This chapter will review the literature and research surrounding strategies for international student success and the importance of learning spaces and classroom design. While literature and research involving students and learning spaces and places exists, the majority of the research focuses on undergraduate students (Brooks, 2011; Han et al., 2018, Kolb & Kolb, 2005). Previous research does reveal, however, that classroom design, and providing appropriate learning spaces does affect undergraduate student success (Brooks, 2011; Huh & Kuh, 2003; Kolb & Kolb, 2005; Perks et al., 2016; Wood et al., 2012). For international graduate students, this success is defined as the level of student engagement, student satisfaction, student social interaction and formation of self as the primary indicators (Byers et al., 2014; Han et al., 2018; Hu & Kuh, 2003). This chapter includes a summary of the literature and research regarding student success in terms of engagement achieved by sense of community, social interaction, satisfaction and agency and by having support of the policies of the institution in general. This is followed by questioning if learning spaces and classroom design can provide the influences that international students' need to achieve success. Conceptual framework and probable barriers to international student success are also discussed.

To be successful in post-secondary institutions, according to theorists and research on the subject, international students need to be engaged by having opportunities for social interaction, developing community, being satisfied, and having a sense of belonging and a sense of agency (Abel, 2012; Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2010; Han et al., 2010; Jameison, 2010; Kuh, 2016; Marginson, 2014; Oblinger, 2005; Tinto, 2012). In addition to student supports that try to create those conditions for international graduate students, it is also necessary to create conditions that can contribute to that success for these students within

campus environments and classroom design within those classrooms. I will focus on learning spaces and classroom design for international graduate students and if these can be student supports that can help international graduate students be engaged and succeed. Research by Diallo and Maizonniaux (2016), Oblinger (2005), Temple (2008) and Wood et al., (2012) indicated factors for international graduate student success. These factors include developing effective learning strategies, the importance of space design and value of studying learning spaces.

The review of the literature on success for international graduate students in post-secondary institutions is limited as most theoretical frameworks and research focus on undergraduate and K-12 students rather than graduate students (Brooks, 2011; Kolb & Kolb, 2005; Van Horne et al., 2018). Research on international students in Canadian institutions is even more limited, with only two examples of Canadian institutions. (Hu & Kuh, 2003; Perks et al., 2016). I will focus on international graduate students, informal and formal learning spaces, classroom design and the theoretical framework of self-formation, learning theory and student development for student engagement and success. In particular, how learning spaces could incorporate the theories of students' success and how learning spaces and classroom design could be part of a process to self-formation for international graduate students by fostering engagement, social interaction, satisfaction, belonging, agency and community.

Of the literature reviewed on the topic of success for international students in post-secondary institutions, the majority of studies focused primarily on undergraduate students. some on K- 12, and while some discussed graduate students, almost none focused exclusively on international graduate students (Sawir et al., 2008; Morieson et al., 2018; Wood et al., 2012;



Yang & Noels, 2013;). My interests are in learning spaces and classroom design and how those influences can help international students achieve engagement and success. Articles and research reviewed for this thesis focused on student engagement, social interaction, and community as well as literature on campus environment, learning spaces and classroom design

There is a noted gap in the literature on whether learning spaces can promote engagement and thus student success for international graduate students in Canadian institutions. Of the literature reviewed, there was little mention of how learning spaces and classroom design impacted international graduate student success. The literature did speak to the importance of social interaction, engagement, classroom design and learning spaces but there were very few empirical studies and not usually in the context of international graduate students in Canadian post-secondary institutions. The literature includes the theoretical framework of student success from Abel (2012), Carney Strange and Banning (2015), Carney Strange and Hardy Cox (2010), Han et al.. (2010), Jameison (2010), Kuh (2016), Oblinger (2005), and Tinto (2012). These authors, articles and studies refer to theories on student engagement, classroom design, satisfaction, interaction, learning spaces, and the importance of institutional policies. Byers et al.'s (2014) and Hu and Kuh's (2014) study support the theories of Kuh (2016) and Marginson (2014) by discussing community, agency, and self-formation. More research needs to be done on how to address the specific needs of international graduate students, incorporating the known factors of student success, and whether learning spaces for international students can be viewed in the process of self-formation and ultimately success.

This chapter will begin with reporting results from student surveys from post-secondary institutions and discussing international graduate student supports. The concepts of learning,

student development and self-formation are introduced to help explain why and how space, learning spaces and design relates to student success and learning. The drivers of student success and learning are discussed as well how policy can support student success and learning. Barriers to international student success and learning are introduced to express how learning spaces can alleviate these barriers. The conceptual framework concludes the chapter to provide context for how international success and learning, influencers and learning spaces and policy are interconnected.

### **Surveying International Graduate Students in Post-Secondary Institutions**

Hu and Kuh (2003) noted “campuses are now much more diverse in terms of student race and ethnicity, country of origin, and political and religious experience and belief” (p. 20). Recent statistics from Statistics Canada stated that enrolments of international students rose by 11.7% in 2016/2017. However, research into how international graduate students perceive their learning spaces is not prevalent, nor does it seem international graduate students’ perceptions of learning spaces have been recognized by the institutional surveys. In the National Student Survey Environment (NSSE) and the Campus Climate Survey (CUS), while some of the questions focus on satisfaction, community, engagement, questions about learning spaces are not included and the results do not include graduate students in either survey. The CUS included international students but not international graduate students. The Canadian Graduate and Professional Student Survey (CGPSS), which included visible minorities but not necessarily international students, indicated the top university resource and student life categories were the library facilities, indicating that learning spaces are extremely important to graduate students.

## **International Graduate Student Supports**

Developing student supports to increase international graduate student success is based on current theories of learning, student development and self-formation. Student success influencers that create engagement, such as community, social interaction, belonging, satisfaction, and agency (Han et al., 2018; Hu and Kuh, 2003; Marginson, 2014; Moreison et al., 2018; Oblinger, 2005; Painter et al., 2012; Sawir et al., 2008). Student supports provide international graduate students with the tools spaces these influencers, and encourage them to achieve success.

## **Learning Theory**

Kolb and Kolb's (2005) situated and experiential learning theory conceived learning as a transaction between the person and the social environment. "Learning spaces then are not necessarily physical spaces but constructs of the person's experiences in the social environments. Learning spaces extend beyond the classroom and teacher, they include socialization into a wider community that involves membership, identity formation" (Kolb & Kolb, 2005, p. 200)

The experiential learning theory emphasizes that "learning is not one universal process but a map of learning territories, a frame of reference within which many different ways of learning can flourish and interrelate" (Kolb & Kolb 2005, p.205).

Oblinger (2005) formulated that creating these opportunities for critical thinking can be outside the classroom as well, and suspected that space outside the classroom would create the same conditions for learning. Oblinger (2005) noted that "space enable learners to get to know each other and engage in dialogue, work on group projects, interact in a variety of ways, such as collaborative or cooperative learning, present their work publicly, teach others or give feedback"

(p.1). Similar to Abel (2002), though not as focused towards international students, and Freire's practice of pedagogy as freedom, Oblinger (2005) believed "learning space enables learners to work together to address real-world problems, to interact with people and information outside the classroom.; debate, research, inquire and solve problems; engage in simulations, virtual field trips and role play, rather than tell about a topic, engaging them in active learning and collaborations typically results in greater mastery and transferability (i.e. academic success) (p. 15, parentheses added).

Oblinger (2005) also noted that new kinds of learning spaces must create new patterns of social and intellectual interaction, much like the study done by Hu and Kuh (2003), which involved 53 thousand undergraduate students at American colleges and universities which concluded that interactions with others increases student learning outcomes. Oblinger (2005) argued in this way, the entire campus could become an "interactive learning device" (p. 15). This concept of learning spaces creating interactions is an important concept for international graduate student learning and success.

## **Student Development**

Kuh's theory of student development and student success is focused on what can be done to help the student achieve success at a post-secondary institution. Kuh (2016) believed students need to be engaged, satisfied, have a sense of community and interact socially, in order to succeed. As a result, post-secondary institutions developed student supports that encouraged these factors (Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2016; Hu & Kuh, 2003, and Tinto, 2012).

Subsequent student development theorists believed that student success came not from external factors but from within, noting there should be a more internal focus that allows the student to feel empowered, in control of their destiny, and not needing to conform (Marginson, 2014). In essence, to be able to succeed at post-secondary institutions.

### **Self Formation**

The self-formation theory of Simon Marginson also focusses on student success and how it can be achieved. Marginson's (2014) theory of self-formation evolves the notion of what international students need and what an institution can do to support their success. Learning spaces and classroom design could be perceived as a student support service that increases community, satisfaction, engagement and in turn, success for international graduate students.

According to Marginson (2014), "self-formation means that instead of the students being seen as weak they are understood as typically a strong agent piloting the course of her/his life" (p.12). The influencers of engagement which enable success in international students, are community, social interaction, satisfaction, belonging and agency, and can develop from self-formation. "Self-formation is touched in all the institutions, professional environments, public places, activity groups and private settings...by cross-cultural encounters, material economics, policy and regulations and other relations of power" (Marginson, 2014, p.14). Marginson (2014) challenges the notion that international education is not foreign students "adjusting" to the local requirements but that "international education as self-formation entails significant transformations and disequilibrium (p.8). Marginson (2014) further stated "the adjustment paradigm too readily slots into the sense of cultural superiority" (p.8). Appropriate learning

spaces can be essential to the success of international graduate student, as a process for self-formation (Strickland, 2016).

### **International Graduate Students in the Campus Learning Environment**

According to Carney Strange and Hardy Cox (2016) there are “rapidly evolving student enrolments, reflecting more and more the new normative pattern of an increasingly diverse society” (p. xi). Because of this, culturally supportive classroom design and learning spaces in post-secondary institutions have to be accessible and available. Carney Strange and Hardy Cox (2016) added, “students who encounter extraordinary, physical, social, psychological and environmental hurdles to their success are further at risk in the absence of affirmative programs that anticipate and support their needs” (p.5). Therefore, it is necessary to have appropriate student supports available and accessible for international students for this reason. International student support should understand the needs, cultural backgrounds and history of those they are supporting.

Carney Strange and Hardy Cox (2015) recommended that students' well-being must be supported by all aspects of the college or university community including academic policies and practices, physical and social environments, access to healthy food and recreational facilities, work and volunteer opportunities for every post-secondary student. McGrath, as cited in Carney Strange and Hardy Cox (2015) noted

In order to effect social change and ensure the establishment of equity among students from all background and experiences it is critical to work within the existing systems and structures of post-secondary education. Characteristics common to the internal services of successful institutions are a) a commitment

to promoting various aspects of any given group's identity b) efforts to minimize institutional and attitudinal barriers for students from the respective diverse populations and c) programs to provide ongoing support and intervention for students as they work toward achieving their academic goals.

(p. 160)

As there is an increasing diversity in the student populations at post-secondary institutions the learning environments should adapt to and reflect this diversity as well. Tinto's (2002) student success theory supports Marginson's (2014) theoretical framework that "the more connected a student feels to the college environment, the more likely he or she is to achieve his or her educational goal" (p. 6). Brooks,(2011); Han et al.,(2018); Hu and Kuh,(2003); Obinger, (2015); Painter et al.,(2012); Temple,(2008), and Wood et al.,(2012), recognized the importance of learning spaces and the positive impact learning spaces and classroom design can have on learning. Their design principles for informal and formal learning spaces are strikingly similar to the design principles of campus environment and learning spaces. Hu and Kuh (2003) suggested "students are more likely to engage in mixed race conversation outside of class about what they are learning, world events, and current issues which to a degree reflects the goals of any institution's general education programs" (p. 331).

### **Sense of Place – Spaces for International Graduate Students at Post-Secondary Institutions**

Obinger's (2005) definition of place is "place derives from thought, feeling, meaning and understanding and is inseparable from the process through which individuals create their own identity" (p.16). Unwin (2003), as cited in Jameison (2009), suggested "ultimately, place is a mechanism by which individuals make sense of the world and their own place in it" (p. 24).

Painter et al., (2012), in a publication of the Society for College and University Planning (SCUP), indicated there were three types of learning spaces design in a campus environment. These include formal spaces such as traditional classrooms, laboratories, lecture halls, active learning classrooms as well as informal spaces such as libraries, study group places, information commons, IT commons and other gathering areas and campus as a whole which includes the building, layout and natural setting. Informal learning spaces can also be found among social gathering spaces, which include areas on campus that can accommodate large groups of individuals interacting informally for academic, social and personal purposes. Places such as food service areas, student unions, and outdoor patios are examples of such places.

### **Formal Learning Spaces**

Temple (2008) stated that there are seven types of learning spaces can be identified in higher learning classrooms: spaces for teaching and learning, simulated environments, immersive environments, peer-to-peer environments, clusters (learning centres), individual work, (quiet areas), and external work (outside areas). Oblinger (2005) suggested the notion of classroom has expanded and evolved; the space need no longer by defined by ‘the class’ but by ‘learning’... “learning spaces convey an image of the institutions philosophy” (p. 14). Space can either enable or inhibit different styles of teaching as well as learning. Oblinger (2005) acknowledged the challenges of facilities and classroom design remaining relevant in an ever-changing world noting “stakes are high to risk settling for an inadequate design” (p. 15) This can easily happen as “a building is designed to last 50-100 years, curriculum and programs, courses may change every 10 and technology changes every year” (p. 15).



## **Informal Learning Spaces**

Informal learning is defined as course-related activity undertaken individually and collaboratively on campus that occurs outside the classroom and does not directly involve the classroom teacher (Jameison, 2009). Activities such as course reading, class preparation, assignments, and project activity all involve social interaction and peer to peer engagement (p.19). Oblinger (2014) also noted that ‘learning is social’ (p.2). Jameison (2009), while not referring specifically to international graduate students, articulated the need for informal learning space for students and noted that learning is social oriented. Jameison’s (2009) concept of learning, is to “discover, reflect, form communities and take greater responsibility for their own learning” and to “investigative, collaborative and problem-solving ways outside the classroom” (p. 24).

Painter et al., (2012) noted, in an Australian study by Matthews in 2009, students’ use of informal learning spaces increased engagement, peer to peer interaction and collaboration. This study however, was not focused on international students. Painter et al. concluded in the SCUP report that corridors, open spaces, the so-called incidental social learning spaces can provide students with an outlet to develop social networks with peers that can lead to greater engagement in active and collaborative learning that facilitates the sharing of knowledge to meet academic challenge, much like the philosophy of Marginson (2014).

Wood et al.. (2012) indicated “there is a growing belief that learning spaces should be flexible and adaptable because of the change in student population and changing beliefs about learning processes and approaches” (p. 51). Brooks (2010) conducted a review of current research on learning spaces – studies compared computer science students and teacher and student behaviors.

They concluded that activities influenced behaviors in a single class in a single semester but did not focus on international students. Brooks (2010) found that students study in a wide variety of places including the library, coffee shops and computer labs.

Temple (2008) noted “as learning is a social activity, campus designs are needed to create welcoming, informal spaces for people to meet and talk, and perhaps to work in small groups” (p. 236). Temple (2008) noted “greater sensitivity to their interactions seems likely to be worthwhile; it seems possible that relatively small improvements may be amply rewarded in learning benefits” (p.238). Temple (2008) believed, now like others, that “campus and university building design needs to give more consideration to the social underpinnings of learning, providing welcoming and flexible spaces, including informal meetings spaces should be seen as part of the support to learning through developing the wider learning landscape” (p.238).

Temple’s (2008) article concluded however, with asking if the increase in outcomes would be sustained. Interestingly, his findings, unlike other studies, indicate weak links between space and design, as well as learning outcomes. This may mean that space is one of the many factors that impact the success of students. Temple’s (2008) research however, did not involve international graduate students. His research also reflected a change in student attitude versus learning outcomes.

### **Classroom Design**

Research indicates classroom design has an impact on student engagement. Brook’s (2011) study of the impact of classroom design on learning on undergraduate first year students in an American post-secondary institution concluded that space alone does have a positive impact on student learning. Her study, while not focused on international students, compared two classes

which were similar in course content using two different physical classroom spaces, increased both the positive perception of their learning as well as their grades on the standardized test. Brooks (2011) indicated the “benefits to teaching and learning practices and outcomes outweigh the short-term costs by promoting constructivist form of active learning, encouraging pedagogical innovation, improving conceptual, theoretical and applied forms of learning and increasing overall levels of student engagement” (p.720).

Perks et al.(2016) understood that one cannot update classroom design without updating the pedagogy as well. The authors studied the perception of undergraduate students and instructors at a Canadian post-secondary institution to a change in classroom design. Perks et al. (2016) indicated that the changes to classroom design had a positive impact on the perceptions of students and instructors but because his study was limited to one opportunity he questioned if the improvement in perception was sustainable or if the positive impact was merely because it was a new space. His article noted that as the nature of teaching and learning evolves, so must the learning spaces,specifically, the connection between classroom design, pedagogy and learning. Perks et al.. (2016) highlighted the importance of taking a more humanist approach in the classroom regardless of the design. Perks et al. (2016) approach “involved a more democratic relationship between student and teacher - in which students are far more active in their learnings and in the construction of content and knowledge” (p. 54). There are even fewer studies involving international students. Perks et al.. (2016) concluded “classroom design has little effect if pedagogy remains stagnant” (p. 55). It is also important to note, as the Perks el al. (2016) study showed classroom redesign without a collaborative learning approach (versus lecture) was less likely to positively impact students.

Monohan (2002), as cited in Byers et al., (2014) described the “ability of the cultural, psychological, and behavioural attributes of the physical spaces to shape both teaching and learning” (p. 3). The traditional “forward facing, one-way delivery classroom exemplifies the traditional view that students are passive absorbers of knowledge and information” (Chander (2009), as cited in Byers et al., 2014, p. 3). Byers et al.’s (2014) research of student perception and level of engagements examined if changes in learning spaces had an effect on learning. Byers et al.. (2014), compared learning outcomes experiences and engagement in traditional classrooms versus New Generation Learning Spaces (NGLS). Their results showed a significant change in the class’s attitudes, in student learning experiences and student engagement. A thematic analysis of the results showed that teachers were positively impacted by the space and the teachers perceived the students as being more engaged. The results also indicated there was improved student academic performance pointing to a link between NGLS’s and improved learning outcomes. While empirical studies are lacking, this study showed a positive link between engagement and learning experiences in classrooms among school-aged children. Studies involving learning experiences in classrooms are even more limited in regards to international graduate students.

### **Influencers of International Student Success**

Research indicates the factors of engagement - belonging, community/social interaction, satisfaction, and agency, increase student success. [(Abel, 2016); Carney Strange and Banning (2015), Han et al.. (2018), Hu and Kuh (2003), Jameison (2009), Kolb and Kolb (2004); Moreison et al.. (2018), Painter et al.. (2012), Sawir et al.. (2008) and Sturner (1972)].The question is whether, and how, formal and informal learning spaces can promote these factors in

students. Can learning spaces and classroom design create influencers to success and do international students perceive learning spaces as part of their path to success? Han et al., 2018; Hu and Kuh, 2003; Moreison et al., 2018, Painter et al., 2012; Sawir et al., 2008, indicated the primary factors of success for international students, are engagement, social interaction, community, satisfaction, and agency. Equally important is constructing foundational documents, in particular, a mission, vision values statement that support these factors. Creating opportunities for these factors for international graduate students has a positive impact on their engagement and thus their success.

### ***Engagement***

Kuh (2016) stated that engagement is the “time and energy undergraduates put forth in educational purposeful activities combined with the policies, programs and practices institutions employ to induce students to put forth such effort” (p. 43). Kuh (2016) indicated “engagement is related to satisfaction and a host of other learning and personal development outcomes” and “student satisfaction is greatest when they participate in educationally purposeful activities and these social interactions build community”(p. 49). According to Carney Strange and Banning (2015), to support student engagement, institutions must offer spaces that are functional, sociopetal, flexible, esthetic, reflective, and regenerative. Carney Strange and Banning (2015) noted that “as places of active learning, colleges and universities contribute to designs that are supportive of student engagement and the experience of the community” (p.5).

Abel (2016), one of the few to refer to specifically to international students, stated “academic success is based on a student’s ability to work in small group tutoring, and study groups, social groups, professors who present common experiences,

establishing personal connections, seek out classes that teach games and simulations – this creates alternate reality and an equal footing for grad students”(p. 31).

In a study of international students attending a Canadian post-secondary institution, Yang and Noels (2013) examined the motivation of international students to study at Canadian post-secondary institutions. They concluded, “international students should aim to have flexibility and to cultivate resilience in the intrapersonal domain in order to deal with the interactive aspect of daily life in Canada” (Yang & Noels, 2013,p. 322). Jamieson (2009) indicated “learning is a social process requiring active engagement with others in meaningful experiences” (p.18). While the study was not limited to international graduate students, Jameison’s (2009) study reflects Marginson’s theory of self-formation and Kuh’s philosophy of engagement. Oblinger (2005) also noted that “learning is social” (p.2).

Carney Strange and Hardy Cox (2016), Kolb and Kolb (2004) and Sturner (1972), have developed principles that increase the learning process and opportunities for engagement and that enhance experiential learning in the physical environment. Sturner (1972), in a paper that reflected on the importance of physical campus and spaces to learning, stated “the curriculum, the faculty, the characteristics of students, the co-curricular events, the calendar, the rules and regulations, the architecture, shape the environment in which interacting students and faculty search for understanding, identity and communal involvements” (p. 98) and “understanding and identity, involvement and communal analysis and action, should have a basis in a rich and varied interaction of persons and things” (p.100). Sturner (1972) argued that “each specific institution should shape an environment that manifests the accomplishments, the aspirations and the other unique aspect of the lives of its inhabitants” (p. 100). Sturner (1972), and Kolb and Kolb (2005) identified principles for learning space design that encourages engagement. The main principles

that are applicable to learning environments and spaces are: 1) the university is a total environment; 2) the design and construction should complement and strengthen the mission of the university; and 3) the physical environments should not only mirror and support the learning process but should reflect the distinct values and aspirations of those who live and use a university (Sturmer, 1972).

### ***Community and Social Interaction***

Tinto (2012) noted “involvement in the classroom, leads to ‘social affiliation’ and emotional support” (p 5). The social aspect is a key factor, as is community, when providing student support for international graduate students. Kuh (2016) identified when students “become part of a community and perceive there are others like them at the institution, these human connections contribute to a sense of social acceptance and personal efficacy” and when students “sense their campus is meeting their academic needs through study and academic skills programs and opportunities for social interaction they are more satisfied and tend to participate in various educationally purposeful activities” (p. 51). Purposeful educational activities in the case of international graduate students are ones that should develop a sense of confidence, engagement, social interaction, community, and sense of self. These purposeful educational activities can be created within learning spaces, both formal and informal.

Temple (2008), in an article that examined the research/literature done on space and teaching and learning, noted the Robbins Report of the Committee on Higher Education from 1963 reported “as community space, institutions of higher education are not merely places of instruction. They are communities” (p. 193). Sturmer (1972), Jameison (2009) and Carney Strange and Banning

(2015) all purported that community, the ability to build community and the experience of community was paramount.

Hu and Kuh (2003) stated “interactional diversity experiences have a positive outcome for student learning” (p.323). Carney Strange and Banning (2015) noted that “educational environments are most powerful when they offer students these fundamental conditions: a feeling of inclusion and sense of security, engaging mechanisms for involvements, and the experiences of community” (p.xiii).

Learning spaces can be part of the high impact learning opportunities that have a positive effect (Kuh, 2016). This is why learning spaces that allow for interaction and communication are important to international graduate students.

### *Satisfaction*

Satisfaction is another influencer to student engagement. Han et al.’s (2018) study of 425 students at five post-secondary institutions, both graduate and undergraduate, identified “the physical classroom environment is imperative in the process of generating student satisfaction with the course” (p. 122). Many other important factors determine student satisfaction “such as student teacher relationship quality, attitudes, communication, self-efficacy and faculty preparedness” (p. 122). Neither Carney Strange and Hardy Cox (2015) nor Han et al.,(2018), are referring to international graduate students in particular, however, they were identifying a gap of research on learning spaces and classroom design for international graduate students.

“Atmospherics in the college classroom are undisputedly important as one of the critical aspects of quality education, therefore, classroom physical environments would play a vital role in the



formation of college students' satisfactory assessment with the courses they are taking" (Han et al., 2018, p. 114). Han et al., (2018) recognized the criticality of the physical environment and its impact and argued "higher educational practitioners should make every endeavor to improve the performance of the physical classroom environment by investing available resources "(p. 121). Han et al.'s (2018) study identified that the physical classroom environment is imperative in the process of generating student satisfaction with the course. While Han et al.'s (2018) study did not involve international graduate students, his theory on student satisfaction echoes the theories of Tinto (2012) and Kuh (2016).

Wood et al.'s (2012) study acknowledged that satisfaction for international students was impacted by a classroom that had been redesigned. The authors noted "the process of refurbishing itself sends a clear cultural message that the university values learning of students by creating a modern, flexible learning spaces in which they can work" (p.60).

### ***Belonging***

Belonging is another influencer on student engagement. Van Horne et al., (2018) in a quantitative study, based on Astin's (1993) Input, Environment, Output Framework (IEO) involved over four thousand international undergraduate students across nine institutions. The authors found, in a campus climate survey, Student Engagement in the Research University (SERU), international students were less satisfied with belonging and social integration than their domestic counterparts. Glass, as cited in Van Horne et al. (2018), found "learning and development for international students were strongly associated with forms of curricular and co-curricular involvement that emphasize collaboration, teamwork and dialogue among students from different backgrounds" (p. 353). Astin (1993) suggested student outcomes are a function of the

relationship between three constructs that the students bring with them to college. The 'environment' includes academic programs, policies, faculty, supports programs, bureaucracy, facilities and roommates. The study concluded that the "nature and quality of interaction among students and their peers cannot be overlooked as a highly significant factor in international student sense of belonging" (p. 365). While the focus of this study was on classrooms, the concept of creating learning spaces to increase a sense of belonging in the same way is interesting.

### *Agency*

Agency is another influencer on student engagement. Marginson (2014) stated the international students' role of agency is apparent, "their situation requires them to change in dynamic fashion... they acquire new attributes very quickly in their studies, institutional dealing and day to day lives" [and this ambition] "leads to the acquisition of English language proficiency, academic capabilities and some loyal friends" (p.13). All of these attitudes and attributes are critical to the success of international graduate students and should be seen as an equally important student support. Marginson (2014) believed that solutions lie in strengthening agency and noted "expanding space in which students are free from constraint and coercion and enhancing resources are ways to facilitate and strengthen agency" (p.18) "Therefore, programs should be designed to augment communicative competence and free from authoritarian administration or discriminatory practice" (p 18). Formal and informal spaces create opportunities for social interaction, and the potential to create community and the possibility to create agency. The concept of students being actively involved in their learning has influenced current student development theorists such as Abel,(2002); Tinto,(2012); Felten,(2013); Diallo

and Maizonniaux,(2016), and Kuh,(2016). Few, however, have recognized international students. Diallo and Maizonniaux (2016) noted “international students bring with them to the school a diverse set of motivations and prior knowledge that significantly affect how and what they learn” (p. 202). Studies conducted by Brooks (2010), Perks et al., (2016) and Byers et al., (2014) confirm the importance of learning space.

### **Policy and Foundational Documents**

The majority of the literature that includes studies and theories of Diallo and Maizonniaux (2016), Han et al.. (2018), Kuh (2016), Oblinger (2005), Temple (2008), and Wood et al.. (2012), indicated that providing appropriate learning spaces and appropriate pedagogy which leads to student success, is dependent on having institutional documents and policies that support student success. Carney Strange and Banning (2010) noted “most campuses have embedded in their mission statements and institutional commitment to increase enrolments of diverse students in response to a changing multicultural society” [and] “to improve the quality of the educational experience for all students and while espoused, they must also be enacted in concrete ways to support the goal of inclusion” (p.152).

Kuh (2016) stated “post-secondary institutions must enact a variety of policies, programs and practices to engage students more fully in educationally purposeful activities in order to help them succeed and enrich their learning” (p.55). These “educationally purposeful activities” should be embedded in the institutional foundational documents of the post-secondary institutions to help international graduate students be engaged, achieve self-formation and thus, success. The USask mission, vision, values statement states it will be a welcoming place for students, educators and researchers from around the world (Univeristy of Saskatchewan, 2015).

In order to be a welcoming place for students, the institution has to create a campus learning environment that includes all students, and recognizes their need for engagement and success.

### **Barriers to International Student Success**

While influencers such as social interaction, belonging, community, agency and satisfaction can create a sense of engagement for international graduate students, there are known barriers. These barriers however, can be overcome with various types of learning spaces.

#### ***Language, Cultural Barriers and Social Isolation***

As noted by McGrath in Hardy Cox and Carney Strange (2016):

in order to effect social change and ensure the establishment of equity among students from all background and experiences it is critical to work within the existing systems and structures of post-secondary education. Characteristics common to the internal services of successful institutions are a) a commitment to promoting various aspects of any given group's identity b) efforts to minimize institutional and attitudinal barriers for students from the respective diverse populations and c) programs to provide ongoing support and intervention for students as they work toward achieving their academic goals.

(p. 138)

Rees and Porter (1998) as referenced by Lord and Dawson (n.d), assert that the “provision of education to international students has become an increasingly important source of income. As universities actively seek to increase the number of international students the services they need and require should increase as well” (p.2). Baron and Strout-Dapaz (2001), as cited in Lord and Dawson (n.d) claim that “there is no doubt that international students enrich the

learning process through sharing cultural norms and life experiences, differing communications styles and distinct learning styles. But in doing so their needs have to be met in creative and innovative ways” (p.2).

Mazzarol et al.(1997), as cited in Lord and Dawson (n.d), identified six factors that influence student choice when choosing an international post-secondary institution, one of which is social links or having friends in the country already, showing the importance of social interaction . Lord and Dawson (n.d) also noted that one of the challenges was not being able to integrate in to the social life. For example,events or activities as cultural celebrations were alienating because their ‘celebrations’ were not understood.

Loi et al.. (2013) noted that international students are more vulnerable to stress due to language and cultural barriers, social isolation, financial hardships and difficulty finding jobs due to immigration status and that women are at higher risk for stress than men (p. 61). Loi et al., (2013), indicated The World Health Organization endorses a health promoting university framework (HPU) which is a comprehensive and holistic approach to health promotion in the university setting designed to focus on equity and sustainability. The main objective is to create healthy supportive and sustainable working, social and physical environments achieved through commitment and communication among staff, students, faculty and senior administration.

Campuses are increasingly becoming more diverse as international students attend, a trend that is only increasing (Browne, et al., 2015; Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2010). This group of students requires unique services and the challenge is how to help these students succeed. Yan and Cardinal (2013) suggested, “international students have become and are becoming an important and growing sub group all across western

universities and the universities have a responsibility to prepare students for academic success but also life success, including optimizing their own personal health and well-being.” (p. 395).

McGrath (2008) as cited in Hardy Cox and Strange (2010), stated “colleges and universities have begun to carve out programs and mechanisms that provide direct service to students from under-represented backgrounds and diverse experiences” (p. 138). Yan and Cardinal (2013) indicated that “universities should also seek out avenues to reach out to international students and deliver information to them using innovative approaches” (p. 394). The most important piece to policy implementation is “having the support of key stakeholders in making changes in policies and providing sufficient funding is critical for program shifts” (Loi et al., 2013, p. 66). To assist with international students’ success, Loi et al.. (2013) recommends a coordinated approach that involves students, faculty, and other key stakeholders.

### ***Loneliness***

Sawir et al., (2008) noted one of the biggest barriers for international graduate students is loneliness. Besides personal loneliness, and social loneliness, this research has identified a more prevalent kind of loneliness for international graduate students, that of cultural loneliness. Cultural loneliness is “the absence of preferred cultural or linguistic environment” (p.148). Sawir et al., (2008) noted that loneliness may be more prevalent in international students because many come from “collectivist cultures”, which place high value on close and supportive networks often constituted by extended family. Loyalty is important as are stable social relationships, particularly during unpleasant events. Baloglu, as cited in Sawir et al., (2008) noted that friendships were the most preferred source of help for international students and that friendship networks provide the most important support systems (p.156). The Australian study, while

focused on 200 international students from more than 30 different nations and nine Australian institutions, noted the implications for university services was “friendly classrooms, competent administration and sensitive student services are more significant for international students than for domestic students” (p. 170). The research also concluded that the institution should “provide mechanisms that trigger networking and forming relations” (p. 170). Appropriate learning spaces could promote these mechanisms and international students may feel they have more supports than the programs and services and policies already provided by the post-secondary institutions.

Sawir et al., (2008) argued that by asking the international student to adjust it “assumes that the educational environments are unchangeable and in doing so, negates the rights of the international students themselves and their potential to contribute” (p.171). Learning spaces that promote social connection and friendships can assist in preventing cultural loneliness.

### **Conceptual Framework**

International graduate students’ success comes from being engaged in their learning, their classroom and both informal and formal learning spaces. This engagement is measured and influenced by their levels of community, social interaction, satisfaction, belonging and agency. I believe these influencers to international graduate student success can be created in the entire campus environment but in formal and informal learning spaces in particular. These experiences and influences that effect the student are embedded within the physical and material context.

**Figure 1**

*The Interconnectedness of Influencers and International Graduate Student Success/Learning*

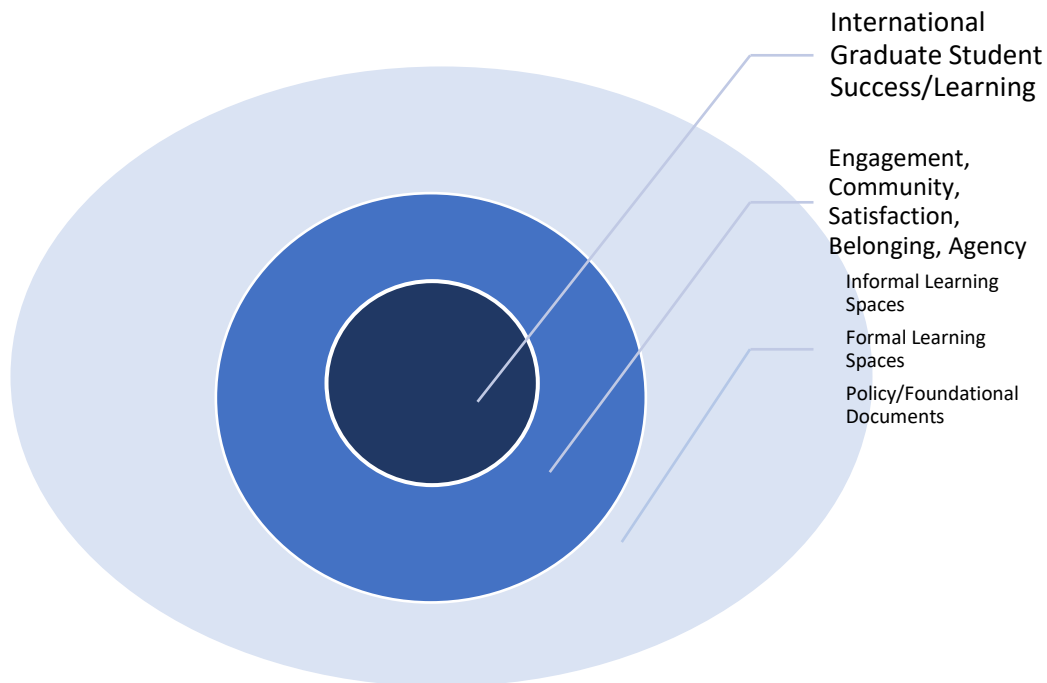


Figure 1 shows the interconnectedness of the influencers on international graduate student success. These influencers are impacted, either positively or negatively, by the informal and formal learning spaces.

Kolb and Kolb's (2005) study developed nine concepts that outline the importance of creating learning spaces for the enhancement of experiential learners and their experiences. Of these concepts, those that refer to learning spaces and pedagogy are, to begin learning with the learner's experiences of the subject matter, create a hospitable space for learning, make space for conversational learning and make space for learners to take charge of their own learning. These concepts also would create community, social interaction, engagement and assist with self-formation and thus success.



All of these influences and experiences reflect the conceptual framework that the more connected a student feels to the college environment, the more likely he or she is to achieve his or her educational goal (Tinto, 2012). Sturner (1972) indicated the physical environment “should provide a person with dignity by being able to identify with the environment. Each specific institution should shape an environment that manifests the accomplishments, the aspirations and the other unique aspect of the lives of its inhabitants” (p. 100). The design principles of designing learning spaces around people, supporting multiple types of learning activities, enabling connections inside and outside, making space flexible, accommodating IT, designing for comfort safety and functionality, and reflecting institutional values” (Oblinger, 2005, p.17), reflect Sturner (1972) and Kolb and Kolb’s (2005) principles and are strikingly similar.

### **Summary**

Hardy Cox and Carney Strange (2010) suggested that student support for international students which address all of the issues and challenges international students may face is an essential piece for the academic success of a student. Multiple researchers (Brooks et al. (2011), Byers et al.,(2014), Han et al.,(2018)Moreison et al.,(2018), Sawir et al.,(2008), Van Horne et al.,(2018) and Wood et al., (2012), confirm this as well. Supports for international graduate students is an essential piece for a healthy, successful institution. The literature shows that in order for international graduate students to be successful they need to be engaged via influencers that provide community, social interaction, belonging, satisfaction, agency and by having institutional policies in place to support learning spaces and classroom design intended specifically for international graduate students.

### **Chapter 3: Methodology and Method**

The research purpose of this study was to identify the perceptions of international graduate students of various types of learning spaces, and to explore their perceptions of both formal and informal learning spaces. The purpose was also to establish whether learning spaces, both formal and informal, can enhance student engagement and success via influencers such as social interaction, community, satisfaction, belonging and agency for international graduate students. An increase in the number of international graduate students attending Canadian post-secondary institutions has required that these institutions provide student support for these students so they can be engaged and find success. There has been limited research however, examining whether learning spaces could be included as one of these support programs and services. The purpose of chapter three is to outline the methodology and method. Included in this chapter are the details regarding sample population, trustworthiness, credibility, transferability and confirmability. This research will answer the following research questions:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?
  - b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?

3) What can institutions do to provide learning spaces for international graduate students that international graduate students value and may promote their engagement and success?

### **Purpose of the Study**

The purpose of this study was to identify the perceptions of international graduate students of various types of learning spaces, and to explore if their needs are being met in both formal and informal learning spaces. The purpose was also to establish if learning spaces can enhance student engagement for international students. I examined international students' perceptions of learning spaces to establish if international graduate students believed learning spaces can provide what is required for their engagement and success.

Research into international graduate students and learning spaces is limited [(Abel, 2012; Carney Strange & Banning, 2015; Carney Strange & Hardy Cox, 2010; Han et al., 2010; Jameison, 2010; Kuh, 2016; Oblinger, 2005; Tinto, 2012)]. Several authors have indicated students benefit from both student supports and services and that learning spaces have an impact on student engagement and success. Previous research that has examined learning spaces has been limited to K-12 or undergraduates in the post-secondary realm. The focus has been on various other forms of student supports or the research has focused on either K-12 students or undergraduate students [(Brooks, 2011; Byers et al., 2014; Diallo et al., 2016; Han et al., 2018; Perks et al., 2016; Van Horne et al., 2018)]. The results brought clarity to the research questions and to how these concepts are understood by previous researchers studying international students [(Abel, 2012; Han et al., 2018; Moreison et al., 2018; Sawir et al., 2008; Yang & Noels, 2013; Wood et al., 2012)].

## **Methodology and Methods**

This proposal was in its final stages of being developed prior to COVID-19 that surfaced in western Canada in February/March of 2020. The initial design was to engage in observation of the ways in which international students used formal and informal learning spaces on campus followed by interviews and focus groups. Social distancing and isolation presented a significant challenge for me carrying out the research as planned since university campuses have been closed. This pandemic necessitated a shift to the research and interview questions as well as the methodology. At the same time, the pandemic and social distancing that occurred presented an opportunity to engage with international students about learning spaces at a time when those spaces are no longer available to them. This context presented unique insights as international students may have had understandings about the importance of those learning spaces that develops from their absence. The study shifted to focus on perceptions of the learning spaces as the international graduate students reflected on what was truly important to them about the built environment during this global crisis when these same learning spaces were no longer available.

The original methodology was an exploratory ethnographic approach and the original methods were observation and one-on-one face-to-face interviews. As observation was no longer possible, the study became a reflective perspective of international graduate students. It was an opportunity to discuss, in both the interviews and focus groups, the importance of formal and informal learning spaces and classroom design in depth. I believe this change to the methodology and methods used strengthened the study, although a potential weakness was that the lack of community that I believed to be extremely important could not be recreated in a virtual environment.

## Methodology

The study was a qualitative, bi-instrument research study that involved online one-on-one semi-structured interviews and semi-structured online focus groups in an exploratory interpretive case study approach. The methodology according to Crotty (1998) is “the strategy, plan of action, process or design lying behind the choice and use of particular methods” (p. 3). This strategy is in keeping with majority of the researchers discussed in Chapter Two who used a qualitative methodology for their studies. Han et al. (2018) conducted an ethnographic study, while Brooks (2011), Kolb and Kolb (2005), and Perks et al. (2016) conducted case studies.

Brannen (2006) indicated that the best practice for an individual choosing a paradigm and method is to “be well advised to consider what kind of knowledge they seek to generate” (p. 7). The knowledge I was seeking to generate was how international graduate students perceived different types of learning spaces and whether learning spaces in post-secondary institutions are supporting international graduate students in ways they need to in order to succeed. Vaismoradi, Turunen and Bondas (2013) reported “qualitative approaches seek to arrive at an understanding of a particular phenomenon from the perspective of those who experience it” (p. 398).

According to Crotty (1998, 2011), paradigm is a worldview or framework through which knowledge is filtered, ontology is a philosophical belief system about the nature of the social world and epistemology is a philosophical belief system about how research proceeds and what counts as knowledge. I subscribe to the interpretivist/constructivist paradigm as the interpretivist researcher relies on “the participants view of the situation being studied” (Cresswell, 2002, p. 8). My ontological belief about reality is relativism. I believe there are multiple versions of reality that are shaped by context, and as such, truth changes and evolves, and that knowledge gained

can be transferred. My philosophy is an emic perspective of studying the research participants' perceptions and understanding of their social reality. I believe being a "non-traditional" student myself, positioned me well to understand the participants' perspectives more intimately than an objective observer. The research questions followed this approach and required a smaller sample size and thematic analysis. The interpretivist /constructivist paradigm aligns the participants' views of the situation being studied (Cresswell, 2002). The type of research methods I am naturally drawn to are influenced by these pragmatic, interpretivist and constructivist paradigms. More specifically, symbolic interactionism as described by Denzin (1978) who noted in Crotty (2011), "directs the investigator to take to the best of his ability, the standpoint of those being studied" (p.99)

### **Method of the Study**

This study falls in to a qualitative research design. The research method that was employed was a case study approach incorporating participant online one-on-one semi-structured interviews and focus groups. International graduate students at USask represented the participants for this study. The context in which the participants operated included participating in an on-line focus group discussing their reflections of different types of learning spaces and responding to questions during an on-line one-on-one semi-structured interview. The instruments I used to answer my research questions were online one-on-one interviews and on-line focus groups, as those align with the research paradigm of constructivist/interpretive worldview as they seek to gain explanatory knowledge.

The research questions that were relevant and appropriate for this method, which is the qualitative method of and interviews and focus groups, elicited thoughts and feelings,

perceptions, and experiences of international graduate students. For example, questions asked using this method included how do international students perceive learning spaces, how is student success for international graduate students enhanced by learning spaces; what learning spaces feel more comfortable, how are learning spaces supported on campus, are learning spaces an institutional priority, do international graduate students feel more confident in certain learning spaces, and do they interact more. Brannen (2006) stated “the kinds of questions we pose leads to the choice of method ...thus choice of method is in part linked to the nature of the research questions” (p.11). Other factors that influence the method chosen are, as Brannen (2006) stated , “available resources and feasibility” (p.10). Skills and strengths may also define the method chosen (Brannen, 2006). Qualitative methods are “concerned with experiences, feelings and attitudes, as opposed to precise measurement and statistical analysis” (Ryan et al., 2007, p. 738). This is important, as I sought to understand the international graduate students’ perspectives of various types of learning spaces.

The advantages of using this qualitative method are that it is flexible, less difficult method to learn, and it is accessible to researchers with little or no experience. The results can be accessible to public; researchers can summarize key themes in data, highlight similarities and differences across the data set, generate unanticipated insights, allow for social and psychological interpretations of data, and the results can be useful for producing qualitative analyses suited to informing policy development (Braun, 2006). It also is a useful method when using participants as collaborators. Additionally, the majority of the studies cited in this study used methods such as interviews, focus groups, observations, questionnaires and diaries to answer the “how” and “why” questions, as to enhance the student experience and to inform policy.

## **Research Activities/ Instruments**

Phase One consisted of semi-structured online one-on-one interviews. Questions were both fixed and open-ended about how the participants perceive the spaces they have been in and promoted discussion about what they missed and why. Interviews were conducted one-on-one, online and were electronically recorded. These semi-structured online one-on-one interviews lasted approximately one hour. Similar questions were asked of each participant. I followed a discussion guide found in Appendix A. This semi structured interview was important because “only through dialogue can one become aware of the perceptions, feelings and attitudes of others and interpret their meanings and intent” (Crotty, 2011, p. 75).

Phase Two consisted of online focus groups. A retrospective discussion of various learning spaces on campus occurred during on-line small group sessions. I followed a discussion guide found in Appendix B. Use of both of these instruments validated my theories compared to the participants’ perceptions.

In terms of how the international graduate students perceived the learning spaces, ten or more questions relating to behaviour, opinions, feelings, knowledge and senses were asked, in addition to having collected the standard background demographics, such as age, program and year of study. Interview questions and focus group questions can be found in Appendix A and Appendix B.

## **Participant Solicitation and Selection Criteria Process**

Participants were solicited via purposive or homogenous sampling through meeting the criteria of being an international graduate student, preferably at the University of Saskatchewan,



College of Education. I limited my study to international graduate students and in the end, the participants were from various colleges at USask.

I recruited 8 students to achieve some breadth and depth to the variety of perceptions. The selection of participants was guided by who met the criteria set out for the study. The participants participated by agreeing to discuss their perceptions of learning spaces, and agreeing to participate in semi -structured on-line interviews and on-line focus groups. Participants were asked to share their perceptions of the learning spaces and whether they feel that those learning spaces create community, social interactions, satisfaction, belonging and agency. They were also asked whether they see the particular learning spaces being a benefit to their success. The participant recruitment was achieved by using communications channels such as PAWS announcements and bulletins, email distribution, display screen, social media, posters and face to face requests. The recruitment approaches that worked best were the PAWS communication channel announcements and bulletins and email distribution.

### **Trustworthiness**

An additional concern in a qualitative study is that is rigour has to be achieved and in qualitative studies, “rigour is based on credibility, dependability, confirmability, and transferability” (Ryan et al., 2007, p. 741). Vaismoradia, et al., (2013) indicated a practical way to achieve rigour is to maintain a personal research diary, which I maintained throughout the study.

I demonstrated trustworthiness by “the reader being able to audit the actions and development of the researcher “(Ryan et al., 2007, p.742). As such, I showed rigour in documentation by showing there is a correlation between the steps in the research process and the study in question. I showed procedural rigour by using appropriate data collection techniques that reduce bias and

misinterpretation. I showed ethical rigour by showing how confidentiality was assured and the rights of participants were protected.

### ***Credibility***

Credibility was enhanced by consulting with the participants and allowing them to read and discuss the research findings in the focus group (Ryan, et al., p.743).

### ***Triangulation***

This was accomplished by collecting data from two different instruments –semi-structured interviews and a focus group as well as my own reflections.

### ***Member Checking***

This was accomplished by checking with the participants and asking if the report of the findings presented to the group was accurate. I recorded what the participants said in either written form or by electronic record and asked the participants to verify the transcripts.

### ***Transferability***

Transferability was enhanced when the results are meaningful to the individuals not involved in the research study. Preferably those involved in the post-secondary context. For example, I discussed the results with an international graduate student who was not a participant in the study.

### ***Confirmability***

I demonstrated how conclusions and interpretations have been reached by documenting a detailed research diary, a rich observation guide and the participants' responses. Ryan et al., (2007)

stated, “confirmability is usually established when credibility, transferability and dependability are achieved. (p. 743) Thus credibility was achieved by confirming with the participants that their perceptions were recorded accurately, that detailed, rich descriptions of observations were made and by being able to transfer the findings to other non-traditional learners,

Vaismoradi et al., (2013) stated that “one of the best ways of judging the quality of the findings is where new insights into the studies phenomenon have been provided” [and] “the study should have increased the understanding of particular phenomena or informed practical actions” (p. 403). This orientation to research is appealing because it is useful, practical and necessary. It is my hope that research into learning spaces and international students’ perceptions leads to an increased understanding. I am naturally inclined to be practical and pragmatic so issues such as available time, money and other resources would be extremely important to me. The major characteristics of qualitative research as defined by Johnson and Onwuegbuzie (2004) that included “induction, discovery, exploration, theory/hypothesis generations, the researcher is primary “instrument” of data collection and qualitative analysis” (p. 18) were appealing to me. The other aspects of qualitative methodology coming from the bottom up, to informing local policy, all aligned with my research context.

### **Study Pilot Process**

I piloted the questions with a colleague and an international graduate student who did not participate in the project. I ensured that the questions I asked the interview are understood. I required one person to test the questions to see if I was making myself clear and if definitions of words were needed and that they are precise. If they are not, I needed to express the questions in a different way and perhaps provide definitions if needed. The purpose of the pilot is to ensure

that my questions are good questions. The number of participants in the pilot was designed to be relatively low. I asked individuals who had the same interest as my participants. I piloted the interview guides as well to ensure standard procedures were followed.

### **Data Collection**

Data was collected by recording, in detail, discussions of one-on-one on-line interviews and on-line focus groups of the perceptions of international graduate students of different types of learning spaces. Discussions will include how the students are used the space, what activities the students did in the spaces, and the perceptions of and retrospections of the importance of the space. There will be three or four locations of different types of learning spaces being discussed. Data was also collected by online interviews and focus groups with international graduate students. There were 8 participants. The participants participated in one-on-one online interviews and online focus groups for approximately one hour each to discuss their perceptions of learning spaces.

### **Data Analysis Techniques**

Data was coded according to themes using techniques described in Salafina's *Manual for Coding*, which involved categories, codes and subcodes. I looked for the themes of engagement, success community, satisfaction, belonging and agency. The data analysis was aligned with the conceptual framework of student engagement and success. I analyzed the data with supervision from my supervisor.

The data analysis approach that I used was thematic analysis. Thematic analysis is an independent qualitative descriptive approach and is described by Braun and Clark (2006) as “a method for identifying analyzing and reporting patterns (themes) within data” (p 79). Brannen

(2005) stated “thematic analysis provides a flexible, useful research tool, which can potentially provide a rich, detailed, yet complex account of data” (p.5), and is a “method for identifying, analysis, and reporting patterns (themes) within data” (p.6). According to Braun and Clarke (2006), a theme “captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set” (p. 90). A theme could also be data captured from one individual that is extremely profound (Newton, P., personal communication).

Vaismoradi et al., (2013) described the six phases of analysis for a qualitative study which include: familiarizing yourself with the data; transcribing data; generating initial codes; collating data; searching for themes; reviewing themes; defining and naming themes; producing the scholarly report. Holloway and Wheeler (2002), as cited in Ryan et al., (2007) noted that the data analysis process needs to be “described in enough details to enable the reader to judge whether the final outcome is rooted in the data generated” (p.74). Ryan et al., (2007), also stated that member checking (verifying with participants so that what you have recorded is correct) is important. Research findings were member checked for credibility and trustworthiness of data.

### **Data Storage Considerations**

Data will be stored in a labeled box, held in secure storage in the College of Education. Data will be stored for a period of seven years, after the period of time has expired, the data will be confidentially shredded. Any electronically stored data will be erased after the same time period using approved USask software.

## **Ethical Considerations**

The precautions that will be taken to protect the participants is that their anonymity will be retained by not being identified in the research study by name nor will the specific college be identified. The participants will be given a brief overview of the research project and will provided details of the project and risks (if any) and benefits of participating in the project. The project will be submitted to the USaskResearch Ethics Board – Human Behavioural for review. Participants will be compensated by a gift card provided for both the online interview and focus groups.

In regards to ethical considerations for the exploratory interpretive retrospective case study approach, Parahoo, as noted in Ryan et al., 2007, “anonymity is not possible so researcher must assure participants that their identities will not be revealed to the reader and raw data collected will not be released to a third party” (p.741). Ryan et al., (2007) also stated “participants should always have the right to give informed consent, they should be fully aware of purpose of study and what information is sought, how information will be used and the implications for them as contributors to research and they can withdraw at any time” (p.741).

## **Summary**

The purpose of this chapter was to establish the methodology and method – a bi - instrument interpretive retrospective case study. The chapter helps to contextualize the rationale for both the methodology and method chosen. I chose to do an interpretive retrospective case study because other researchers have used this approach and it corresponds to my personal paradigm.

I believe that participant perceptions are an important source of insight into how international students view their learning spaces and how post-secondary institutions can better support international graduate students. Therefore, this study relied upon in-depth robust reports of participant perceptions of learning spaces, and levels of engagement via such influencers as satisfaction, community, belonging and agency and in turn, success.

This chapter also presented the purpose of the study, the conceptual framework and the data collection, which included the data analysis technique and data storage considerations, as well as ethical considerations.

## Chapter 4: Presentation of Data

The research purpose of this study was to identify the perceptions of international graduate students of various types of learning spaces, and to explore their perceptions of both formal and informal learning spaces. The purpose was also to establish whether learning spaces, both formal and informal, can enhance student engagement and success via influencers such as social interaction, community, satisfaction, belonging and agency for international graduate students.

This study falls into the category of qualitative research design. The research methodology and method was employed was a bi-instrument interpretivist case study. International graduate students at the USask were the participants for this study. The participants agreed to answer questions about learning spaces during a one-on-one semi-structured online interview and then were asked to participate in an online focus group to validate the my initial perceptions, to offer any more input into learning spaces that may have been missed in the one-on-one interviews and to engage with other international graduate students.

Data collection was completed in the Summer of 2021. Certificate of Approval from the University of Saskatchewan Behavioural Ethics Research Board (Beh-REB) was received on May 26, 2021 and the one-on-one interview were conducted in June and July and the focus group was conducted in August. A re-approval certificate was received from the Beh-REB, on May 18, 2022 and again on May 15, 2023.

The reason for this methodology, triggered by public health measures mandated by COVID-19, was to allow for a familiar, comfortable setting for participants as well as an opportunity for the research participants to meet each other and interact. Initially, pre-COVID-



19, the study was to be conducted via participant observation in the learning spaces followed by a one-on-one interview to ask questions to validate the perceptions of what I observed. If the opportunity arose to do observations in the future for a future study I would do that as well.

Direct quotes were used but pseudonyms were used if requested by participant.

There were eight participants involved in the research study, which involved one-on-one interviews as well as the option to participate in a focus group. All 8 of the interview participants participated in the focus group. The eight international grad students were from five different countries. Six of the international graduate students were Master's students and two were Doctoral students. 7 of the 8 international graduate students had not yet convocated, while one had recently convocated. Neither age nor gender was asked as part of the study. The majority of the participants were first year students and many of them had not been on campus, as they had begun their studies during the pandemic, where institutional classes were offered online only from March 2020 to August 2021. In September of 2021, there was still limited access to campus, although some labs were face to face, the majority of the classes were still being offered remotely. This not only changed the methodology used but it provided a challenge in the participant's ability to answer learning space questions specific to the institution. However, examples and recollections of previous learning spaces used during their undergrad were considered in that case, for those who had not been on campus.

The interview guide and focus group guide aligned with the research questions:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?

- b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?
- 3) What can institutions do to provide learning spaces for international graduate students that international graduate students value and may promote their engagement and success?

### **One-On-One Interviews**

The one-on-one interview questions followed an interview guide and were semi-structured in nature; however, there was flexibility enough to allow for me to follow where the conversation went. The interview guide was comprised of 7 parts and the same order was followed in each one-on-one interview. The intent was to elicit graduate students' perceptions of learning spaces; more specifically if they believed learning spaces were a student support that could contribute to their success; and if so, why. The parts of the interview guide were demographic information, learning spaces, factors of success, support services, policy/foundational documents, pandemic changes and barriers.

The one-on-one interviews were conducted via an online meeting platform and were each approximately one hour in length. The one-on-one interviews were held with me being in Saskatoon, and the research participants in various cities. Time differences were accounted for, with all but two participants being in Saskatoon at the time of one-on-one interviews.

Table 1 below summarizes the demographics of the international graduate students who participated in the one-on-one interviews.

**Table 1** *One-on-One Interview Research Participants*

<b>Name</b>	<b>Country of Origin</b>	<b>Program of Study</b>	<b>Program</b>	<b>Year in Program</b>
Aparna	India	Pharmacy	Master's	1
Doug	United States	Kinesiology	Doctoral	6
Ahmad	Iran	Biomedical Engineering	Master's	1
Azedah	Iran	Public Health	Master's	Complete
Bea	China	Educational Administration	Master's	2
Macha/Pujitha	India	Computer Science	Master's	1
Subarna	Nepal	Plant Science	Doctoral	1
Elias	Iran	Science	Master's	1

### **Focus Group**

The intent of the focus group being conducted after one-on-one interviews was to validate or confirm some of the themes raised in the one-on-one interviews as well as give me the opportunity to ask additional questions that arose from the one-on-one interviews. The ability to seek clarification from anything that was said in the one-on-one interviews as well as ensuring their perspectives were captured correctly or being another opportunity to capture perspectives that were not captured previously were other reasons for the purpose of the focus group.

The focus group was conducted via an online meeting platform and was approximately one hour in length. The focus group was held with the researcher in Saskatoon, and the research participants were in various cities. Time differences were accounted for, with all but one of the participants being in Saskatoon at the time of focus group. One participant who could not participate in the focus group at the scheduled time was interviewed again individually with the purpose being the same as the focus group.

The focus group was comprised of the eight international graduate students who had participated in the one-on-one interviews as all eight of the participants agreed to participate in the focus group. This methodology was chosen, as previously indicated, due to health measures implemented at the time but if the opportunity arose to do observations in a future study, I would do that as well. I would also have liked to ask the participants some follow up questions, when they are back on campus. The participants perhaps could have been selected from students who had been on campus, however, I did not want to limit the participant pool in any way.

It should be noted one participant, Doug, was not able to join the focus group at the scheduled time, however, this participant did have another conversation with me in which the focus group conversation and interview responses were discussed, and the participant was given the opportunity to agree or disagree, verify or correct, with statements and summations I was making.

Table 2 below summarizes the demographics of the international graduate students who participated in the focus group.

**Table 2** *Focus Group Research Participants*

<b>Name</b>	<b>Country of Origin</b>	<b>Program of Study</b>	<b>Program</b>	<b>Year in Program</b>
Aparna	India	Pharmacy	Master's	1
Doug	United States	Kinesiology	Doctoral	6
Ahmad	Iran	Biomedical Engineering	Master's	1
Azedah	Iran	Public Health	Master's	Complete
Bea	China	Educational Administration	Master's	2
Macha/Pujitha	India	Computer Science	Master's	1
Subarna	Nepal	Plant Science	Doctoral	1
Elias	Iran	Science	Master's	1

## Student Profiles

Aparna is a first year Master of Science in Pharmacy student from India. She came to the institution after contacting professors in her area of interest at different universities and was selected by her current supervisor. Aparna said of this of her decision to study at USask, “So first we have to like search for a supervisor, which in just our interest. And yeah, by contacting professors, I was selected by one supervisor in the University of Saskatchewan. So I joined here.” Aparna began her studies remotely early in the pandemic, in September 2020 and came to Saskatoon in January of 202. Aparna has had no in person classes; however, there is a lab on campus that can be booked, which she uses. “Yes, yeah. I was start, like, when I planned to study abroad, I thought I should experience how it will be there. Because I know there is a lot of differences between, like in our country and here. So I thought I would experience that. But yeah, I don’t have any classes, like in person classes. I attended all the classes virtually. But yeah, right now like I’m going to my lab.”

Doug is a sixth year Kinesiology student from the United States who is currently residing in Ohio, due to COVID-19 restrictions at the time. Doug was introduced to his supervisor at a conference, (whom he had cited in in Master’s thesis) and reached out to him to express his interest in working with this individual. He was accepted as a student after not finding a supervisor in his area of interest in the United States. “And when I was looking, I couldn’t find anybody in the United States that was doing anything like that. And there was nobody other than the UK or Australia, really, that was doing a lot of the work that we’re doing. And my supervisor, I was introduced to him at a conference, and we spoke, and then I reached out. He was a person that I had cited a bunch when I did my Master's thesis, and I really liked his work, really

impressed by him. I got accepted to the school, and then I got the dean scholarship also, so that kind of helped pave the way also, you know.” Doug was also drawn to the campus because of a scholarship he received which helped. Doug noted “funding is a very big deal, especially when you’re coming from the states, right. You know, the amount of student debt is pretty rough, so you know, so the first three years were paid for and then after that, it became more challenging for funding sources, just because it’s so limited to international students here”. He also indicated that Canada sounded like an adventure “.... Yeah, sounds like an adventure, let’s go see what Canada’s like.” So I kind of showed up sight unseen to Saskatoon in the middle of winter, so it was a bit of a shock coming from – I’m from Texas. So it was a bit of a culture – not culture shock, well, culture shock too, a little bit. Not so much”. He has completed the majority of his degree on campus, however has not been on campus since March of 2020 and plans to return in January 2021 at the earliest. As of January 2022, Doug was still in Texas.

Ahmad is a first year Biomedical Engineering student from Iran who is currently residing in Saskatoon. He is pursuing a second Master’s degree and indicated that he believes Canada has better educational opportunities than Iran. “Originally, I am from Iran. I came to Saskatchewan because it has far better universities than Iran. Even the worst university in Canada has a better rank than Iran, so that’s one of the reasons.” He began his studies in January of 2021 and has never been to campus. And while he has never been to campus he is looking forward to it “ I don’t know how the university looks like, so. I hear it’s beautiful.”

Azedah has just recently completed her Master’s degree in Public Health in the summer of 2021. Azedah is from Iran but resided in Saskatoon at the time of the one-on-one-interview and focus group. Soon after the focus group was complete in the summer of 2021, she moved to

Vancouver. Azedah was accepted in fall of 2019 and completed her degree in the winter term of 2020, so has spent over one year on campus. While it was not her first choice, Azedah came to the university because of the fair tuition and affordable cost of living. “I also chose to come to USask because first – actually, I wanted to go to United States, because my family members there. But because my Visa got rejected, I chose to come to Canada. So, in Canada I did apply to a few universities, but USask had a very fair tuition rate. And this is, this is why – and also, I have heard that the living expenses in Saskatchewan are very much affordable than other, like provinces, like in Vancouver or Toronto. So this is why I really liked to be accepted at University of Saskatchewan.” Azedah has been on campus as she began her studies in the fall of 2019 and she said, “Yes. Actually, my best times of life were those times that I was going to university on campus before COVID-19. Those were the best experiences of my life.”

Bea (a pseudonym) is a second year Master’s of Education student from China who currently lives in Saskatoon. She has been on campus but not attended any classes on campus as they have been delivered online. She came to Canada, after she had had been living in Australia on a working holiday, because she wanted to explore the world and Canada was an English speaking country that was more affordable than other countries, ie United States, New Zealand, the United Kingdom or Australia. When asked, why she came to Canada, she responded, “why I came into Canada actually, also because of my experience in Australia as well. I wanted to explore – actually, back then when I started my trip and my journey in Australia, I couldn’t, I didn’t have that kind of mindset. Because, “Oh, I don’t have the money so I couldn’t go for studies.” So in that case, I had that kind of opportunity to do working holiday so I can work and make money, and also travel, and also experience the English-speaking country as I wanted. Because I studied English in my Bachelor degree, and that was my first time living in an

English-speaking country. So Canada is the second.” Bea also indicated another reason she chose to study in Canada, beside the affordability, was the possibility to work in the country after graduation, ‘and then I started to decide “Okay, I’m going to study in Canada.” Why Canada? Is because Canada, the tuition fee in Canada is cheaper compared to Australia, and U.K., and New Zealand, those countries, and the states. It’s cheaper for international students, even though it’s still more expensive than domestic . But comparatively, it’s cheaper. And the other thing is they offer three-year work permit after graduation, and I think that would be a good opportunity for my career experience as well”. Bea also mentioned that she may like to pursue her PhD while in Canada, ‘and now I’ve developed my desire to get a PhD as well sometime in the future, but that’s definitely on my list. And I think, yeah. For me, this is the – I really enjoy my Master's degree here. I’m really learning things. I’m not just coming here for degree and then just get a job, or go home, or stay here just get a job – that's end of it, for me. Of course, get a career is a part of it. But meanwhile, the most important thing is I’m really learning and improving myself. And that’s the thing I’m really enjoying.”. Of her experiences in Australia and eventually her decision to come to school in Canada, she says it gave her more confidence, “I think, it definitely gave me the confidence. And more confidence, as well, because before, my whole world – my only world was China. I never got out. Even though I experienced that, I always watched American movies or series, and I watched TV, I watches series, documentaries. But it’s different from what you really experience by yourself”.

Macha/Pujitha is a first year Master of Computer Science student from India, who is currently residing in India. She indicated she is adventurous and wanted to come to a Canadian institution as an adventure. When asked if it has been difficult to study computer science remotely, she agreed it has, but “it’s really quite fun, it hasn’t been so bad. I guess we just have to



adjust to the bad situation, to the fact that the pandemic happened”. Macha began her studies in September 2020 and has done all her classes remotely and has never been to campus. She was planning to be on campus for the fall term however that has been delayed. Macha arrived in Saskatoon in the summer of 2021

Subarna is a doctoral student in his first year. He is studying Plant Science in the College of Agriculture and Bioresources. His previous education was completed in Iran. When asked what brought him to the University of Saskatchewan, he indicated it was the reputation of the institution, “I am from Nepal and basically in the world of Plant Science research which USask is known for their driving this university”. Subarna began his studies in the Spring/Summer term of 2021.

Elias is a first year Master of Science student from Iran who is currently residing in Saskatoon. He came to Saskatoon from Iran because his friends recommended that the supervisors in the program offer good support to students. “I’m attending Electrical Engineering Power Assistance, and I’m a first-year student for a Master of Science program. And I come from Iran, and both of my friends told me that the environment is really [inaudible 00:06:29] the people who are living here [inaudible 00:06:] and the support that the supervisors provide for the students”. Elias began his studies during the pandemic with his first semester being January 2021 and has never been to campus.

### **Initial thoughts of the international graduate students that were interviewed**

The international graduate students who participated were independent and confident. All had agency, were competent and eager to learn. The majority of the participants felt that studying abroad was an adventure, with the reasonable cost of tuition (relative) and lower cost of

living being important as well. The majority were open to new experiences and wanted to expand their horizons. Most wanted to experience other cultures as well. Through both the interview and focus group, it seemed that these international students who chose to study abroad were more adventurous, extroverted people.

The majority of the participants are current University of Saskatchewan graduate students. One participant recently had graduated with a Master's degree in Public Health. There were two doctoral students and six master's students; one from the United States, two from India, three from Iran, one from China and one from Nepal. The areas of research included Kinesiology, Pharmacy, Agriculture and Bioresources, Biomedical Engineering, Computer Science, Science, Public Health and Educational Administration. Only two of the participants had been on campus before the pandemic forced campus closures across Canada.

## **Interview Guides**

Although they are similar in nature, there were two interview guides that were used. The first interview guide was used for the one-on-one online interviews and the second interview guide was used for the online focus group validation. The interview guide for the one-on-one interview was slightly more structured than the second interview guide; however, the interview guide for the one-on-one interviews was still semi-structured. The second interview guide was an organic extension and affirmation of the first interview guide used in the one-on-one online interviews.

### ***One-on-One***

The one-on-one interview guide asked each of the eight participants, as much as possible, the same questions, in the same category of questions, in the same order. The interview guide

was broken down into seven broad categories, with a number of questions in each category. Definitions of terminology and explanations/clarifications or examples, were given as needed to each participant. The categories and the questions listed in each category are below. The interview guide can be found in Appendix A.

### ***Focus Group***

The same guide was used in the focus group, however, not all questions were used and if they were, the questions were more pointed, based on information gathered from the participants in the one-on-one interviews. The purpose of the focus group was an opportunity for the participants to clarify or confirm anything that had been said previously in the one-on-one interview, as well as to allow the researcher to confirm the data was captured in a way that was amenable to the participants. One topic that was not originally included was the theme of barriers to international graduate student success. While this is an important consideration, only the barriers that relate to learning spaces are included. The interview guide can be found in Appendix B.

### **Emerging Themes**

In analyzing data compiled from both the one-on-one interviews as well as the focus groups, various themes began to emerge. These themes have been categorized in ten main themes each which speaks to their importance and how these emerging ideas have a positive impact on international graduate student success, focusing on their academic success – Community with subthemes of Belonging, Engagement, Virtual Community; Outdoor Space; Mental Health; Safety/Security with subthemes of Physical, Psychological and Financial; Supervisor Relationships and Office/Department Space. In addition, the international graduate

students discussed Cultural Expectations and Learning Spaces (formal, informal, home, virtual) as well as how the COVID-19/Pandemic impacted the sense of belonging and community, the definition of learning spaces in an online learning environment and the financial challenges that impacted their learning and spaces during the pandemic. Also discussed were topics that were top of mind for all of the research participants and this included barriers for international graduate students in Canada, which included cultural and financial barrier. Figure 2 summarizes these six main themes.

**Figure 2**  
*Emerging Themes*



### ***Community***

Aparna expressed need for everyone in the “community” of the learners to be involved, And then it should be like also from the community, like all the different people. Like our instructors, supervisors – they should be like, like a regular meetings, we should be in

contact. Or even if we're taking class, we should be able to contact them if we have doubt by email or in person, anything. So I think, like all these things are very much needed for a person to be successful so that they can work. Without all these things, they lack somewhat other things so they that they cannot work, or else they cannot work. Like having the good workspace doesn't mean we can work. So I think like all these things, external things are also very important". (06/10/21)

Macha also noted the importance of community and its ability to narrow the focus on what is important, "We need to be part of a community. ....I really believe in, you know, signing up to different communities and getting to know about it rather than struggling on my own. (06/02/21),

Suba also spoke to community including others in the community, specifically the general public. He spoke of how the general public can be the future learners and engaging with them is a way of building community. For example, as an agrologist, he gives tours of his plots to the public. (07/27/21)

Elias expressed the need for community and interaction

Yeah, all the factors you mentioned are really important for the academic success. Engagement, satisfaction, belonging – and also interaction. So yeah, of course without them, interacting with yourself all the time and not feeling that you're a part of the community. So even the environment, you know, my colleagues and my classmates – we have created a social group on WhatsApp, and we interact about different things, and I like it, the interaction and belonging. He concluded saying, "Yeah, definitely it's important to me. I think it's about being involved in the community. (06/08/21)

*Belonging.* When asked about a sense of belonging, Doug mentioned that he feels the institution is not set up for creating a sense of belonging and felt there really was not a culture for it, as compared to institutions in the United States. For me, sense of belonging kind of borders on like, almost imposter syndrome type of thing. Because you just don't feel like you fit in with all these other smart people you know. Everybody's better, and they don't want to share with you because, you know, you're an idiot and they're way smarter. But, I mean, it's taken me a while to figure it out – it's not that. It's they're having the exact same imposter syndrome. And they don't want to face you because they're, you know, feeling very insecure. And, you know, the other American friends that I have up in Saskatoon have always – they've all experienced almost the same thing, where there's just not a social interaction aspect. They have to go outside of the school for that. Whereas in the US, the school kind of provides that for you. It's really, you know, a social melting pot of sorts. (07/28/21)

Ahmad also felt he didn't have strong beliefs about feeling welcome and a sense of belonging, other than by the community of researchers, but that perhaps appropriate space would assist with a sense of belonging, saying,

welcomed and belonged...To myself, not that much. I don't care if I belong or not. If I like something, I go do it. I don't care what other people think. So not that much. But if I have that sense of belonging, I don't know, inside an office, inside somewhere – because I haven't had that, I don't know what that means for me. But I'm guessing yeah, it should help me a little bit if I have that sense of belonging. (07/27/21)

Ahmad did feel though that social interactions were very important.

I think that social interactions are very important because if you can't interact with others and talk with each other about the certain ideas, your field of vision will be widened and then you can do a lot more than what you alone can achieve, so yes. It can lead to a more successful career and education. (07/27/21)

Bea agreed that belonging was important and that certain spaces can create that sense of belonging,

I know previously, that was the Graduate Students' Association (GSA). Basically, the GSA would have some kind of once a week, kind of open, some kind of activity. I don't really remember. So we'd have wine and cheese night, and all of the grad students can go if you want to. Those kind of things and that can definitely create a sense of belonging. But it would be good to have that kind of – because that's for all grad students. It would be also good for our own college to have a space as well because we are all in the same discipline, and we can create more networking. Also for the, for our masters course-based program we have so many students who are full time teachers. And in that case, to be honest, after the class, you don't really see each other again. But if we could have that kind of space, you know, people could really – I mean, for us, international students, we would want to know what is going on here in Canada, in Saskatchewan. And they could know from perspective from our countries, we can interconnect, right. But right now, we don't have that kind of space. (07/27/21),

Bea also mentioned that another informal learning space, Gwenna Moss (*officially known as the Gwenna Moss Centre for Teaching and Learning*) had given her a sense of belonging

I did the CGPS courses from Gwenna Moss, and that kind of helped me build up that sense of belonging because I could engage with a bunch of grad students virtually, and that makes me feel I am still, you know, I'm a student engaging with people. For my second year, I'm mostly just doing my own research. I don't take courses anymore, so I don't have that kind of feeling, you know. But course-based students, I can't speak for them, but I can feel them. You know, they're taking courses, but for some young students, they just – that's kind of the end of it. By the end of class, they just dismiss and then there's no other deeper connection with it. And I think that's why we probably need that kind of, either physical or virtual space. I don't think so unless you really look for something. But it's kind of, it's not always there. It's just like, for example, I take a workshop, I feel okay, I'm a part of the university. I take a course, okay, I'm interacting with my colleagues. But other than that, it's really dependent on ourselves, right.

(07/27/21)

Bea felt that her sense of belonging came from her reaching out, versus the institution providing learning spaces to create a sense of belonging, “And for my case, I do feel a sense of belonging, because it's not because the university, or the college, or the department offers me, like strongly. It's because I reached out” (07/27/21).

Doug, however, had a different perspective,

for me, sense of belonging kind of borders on like, almost imposter syndrome type of thing. Because you just don't feel like you fit in with all these other smart people you know. Everybody's better, and they don't want to share with you because, you know, you're an idiot and they're way smarter. But, I mean, it's taken me a while to figure it out



– it's not that. It's they're having the exact same imposter syndrome. And they don't want to face you because they're, you know, feeling very insecure. And, you know, the other American friends that I have up in Saskatoon have always – they've all experienced almost the same thing, where there's just not a social interaction aspect. They have to go outside of the school for that. Whereas in the US, the school kind of provides that for you. It's really, you know, a social melting pot of sorts. (07/28/21),

Elias agreed that all the influencers being discussed, belonging, community, social interaction, were important to international graduate student success,

Yeah, all the factors you mentioned are really important for the academic success.

Engagement, satisfaction, belonging – and also interaction. So yeah, of course without them, interacting with yourself all the time and not feeling that you're a part of the community. So even the environment, you know, my colleagues and my classmates – we have created a social group on WhatsApp, and we interact about different things, and I like it, the interaction and belonging. And you said about the satisfaction – of course. Whenever, for example, I usually send a weekly report to my supervisor. So whenever I get feedback, it really helps me to be more focused, to be energized. I go, Okay, I'm doing this really well. (07/27/21)

Azedah added that social interaction specifically allowed her to make friends and improve her English, “yes, make more friends and improve my English”. (07/27/21) and Suba also agreed saying, “Yeah one is the social, so I had mentioned earlier and you repeated like social interaction is the biggest part of the education” (07/27/21).

**Engagement.** Bea also mentioned that international graduate students want the information, or the activities, or the learning spaces to make them feel the local culture, the local norms, everything. They're here to learn, not because they still want to keep everything from their own country. And also, I hope the local students can be open minded too. Yes, you work here and you need your local connections. But meanwhile, talking to and engaging, networking with international students – you never know, they'll probably give you another different perspective and they probably will bring you a funny story, an interesting story experience you could share at class with those students. (07/27/21)

**Virtual Community.** Ahmad noted that community can be outside the classroom, either virtually or physically outside of classroom walls. Ahmad agreed with Aparna that community is made up of a number of people and that you can define community in a number of different ways. He noted a community can consist of fellow students but also faculty and staff, if I'm being totally honest, even if you find a community that you are searching on and you are doing your research online, those people – because you will see some people who are studying in the top universities in the world, that their research and stuff like that, then you see those people, I think they can push you forward more and more. Because in my idea, it doesn't need to be inside a classroom. When you have a goal and you want to do something, that sense of agency that you mentioned. If you have that inside yourself, if you want to be someone who is useful in society, it doesn't need to be inside a classroom. (06/04/21)

Macha also spoke about the virtual community and how it can have a positive impact as it opens up possibilities of knowledge,

I'm new to the university. I don't have a great circle yet. If I have a question, I will just ask in my circle. Probably the friends in my circle, they'll go and ask their friends. So the circle is still limited. But if I had something that's internal to, something like Facebook that's internal to our university, I'm going to post it and it's going to reach a lot of people. A much greater community than just my friends in my circle. So, if not my friends, someone out there will know what I'm looking for, So, I should be able to meet and connect to people when I feel something, when I feel that I'm missing out on something. And that should be done, I mean, I don't have to struggle to reach a platform that would help me to reach people, would be a really good place to start off with. I'm not really sure if we have something like that at our university, I guess. (06/02/21)

She also had strong ideas about creating a virtual community via institutional channels and socials, whether it be PAWS, Instagram or Facebook.

I mean, yeah, we do have Instagram pages with, you know, Computer Science of USask, and probably your department at the school of USask. But I'm not sure if we have that great following there, and if somebody finds – if I ask them to post it on their page, I'm not really sure it's going to reach the maximum amount of people that I intend for it to reach. I have a lot of channels, probably there are channels on Facebook, there are channels on Instagram. But the one platform which is used by every single person in the university would be a really good place. (06/02/21)

Suba believed virtual is easier if you have grown up in a virtual environment,

If I was grown up in a society where this virtual was part of education, then I would have been rather positive like no that's fine but I was grown up totally in face to face

communication and I am not used to. I think the other thing that the student like me cannot be as responsible as in the face to face integrative classes. (7/27/21)

He also believed that virtual learning was not as effective as face to face learning because of the interaction between the instructor as well as with other students.

That's the biggest priority in my sense because student have, I believe the teaching-learning process is a two way process and it should be like, I remember every of my teachers who gave us two points, "Okay come on let's tell what you think about this." And we were responsible in the class when one student tell and we have the different idea, at the same time we raise our hands and share our idea right? And for me, I don't know, people tell me that I'm really locked into the virtual new world or the time demands. But in my sense, I believe we are just continuing at the minimal breadth of something like that. Its not like open, because I believe we are totally out of the social interaction and the collaborative study. know the teaching learning process in depth, they want to cure the curiosity in the student and want to have teaching in a way that one student is comparable by the vision of the other one. And the first year I believe, if you look at the message you can't hear what the teacher is telling at the same time. So they have the facility but I believe that's comparing a robot to a human. (7/27/21)

### ***Outdoor Space***

Many of the participants indicated that outdoor spaces were important to their experience for various reasons. In discussions with international graduate students about informal learning spaces, the researcher did not originally consider outdoor learning spaces as an option for informal learning spaces; however, a majority of the students interviewed mentioned the

importance of outdoor space to them. Some participants mentioned the importance of outdoor spaces for their mental health, or simply just a change of scenery. And while not without risks, such as a laptop running out of power or noisy distractions for example, the benefits outweighed these risks. Participants agreed that outdoor learning spaces were important to their learning and should be considered a learning space.

There are however challenges in creating outdoor learning spaces at a post-secondary institution, particularly during the winter. Doug noted, however, that the climate in western Canada, the majority of the year, can present challenges to being outdoors,

I would say for me personally, being outside with my computer, or just a paper – it would be my favorite. Very limiting in Saskatoon, right. I don't want to sit outside in the winter and I'm outside as much as possible in, you know, late spring and summer and early fall whenever the weather's decent. You know, anywhere with sunshine would kind of be my thing. A park, any, you know, whenever – most of the time I was there, I lived at a place right next to a park that had a great bench. I could go over there, and I could sit on that bench, or they had a picnic table too if I wanted to take my laptop and do some writing. And yeah, just had the quiet. I could listen to music if I wanted to. Sometimes they would have like a softball game going on. So there's, I liked to have minor distractions. It just – I don't know. Just listen to the bird chirp – if I want to take a break and listen to the birds singing, or watch the baseball game, you know, a beer league softball game for a few minutes. Watch that and watch people for a minute – I always enjoyed that. And then refocus, and then get back to work. (06/9/21)

He also indicated, “I do quite well working outside, and I can, you know, just kind of listen to the white noise of the crickets or whatever, you know, insects and things like that. And I’m pretty good at ....staying focused”. And

being outdoor spaces aren’t historically thought of as learning spaces but rather recreation I think it’s just, it’s an individualized thing, but. yah, being outdoors, I think a lot of people like to separate the two in their head, you know. Indoors is where you’d be learning, outdoors is for recreation. (07/28/2021)

The participants also noted they while they would consider an outdoor learning space important, a primary benefit was for their mental health. Ahmad noted,

it can be a learning space under different circumstances and what you want to learn. And also, for me, if you’re outdoors, if for example the campus had outdoor areas, okay. for me, if you’re outdoors, if for example the campus had outdoor areas, okay. Sitting always in an office and reading stuff online, it might get suffocating after some time. You can also sit outside – I know the birds are chirping, a lot of things are going around. But you can read through some stuff and not go deep into the material, but you can read through some stuff, get the whole idea. And then afterwards, if you don’t understand anything, you can then go into an office or some indoor space to learn more. But from my point of view, yes. Definitely, the outdoor space can also be a very good and also educational learning space. (07/27/21)

When asked if outdoor spaces could be considered either a formal or informal learning space, Suba indicated the outdoor environment where he conducts his research, could be considered an informal learning space, “I love learning and I believe it should be informal where

we go to the farm, grow the plants, and learn from those areas. Especially outside of the classroom. So I especially love the informal teaching spaces” (06/11/21).

Elias agreed that a learning space could be outdoors,

it shouldn't be just the formal place and maybe like library, or dedicated- For example, I can maybe go to the park, and discuss a thing with my friend. So an open environment, open, like, environment. For example, the weather might or maybe there might be a lot of noise around you. But if it's a place that you can focus and interact with the people around you, and not be around a lot of noise it can be more helpful and beneficial.

(06/04/21)

### ***Mental Health***

When asked about finding community in learning spaces , one participant in particular mentioned the importance of both formal and informal learning spaces and the positive impact they have on those that are struggling with mental health issues by creating a community in a place where all felt welcomed. She mentioned those type of spaces supported the influencers to academic success by increasing engagement, community building, belonging and satisfaction. She also concluded that the informal learning spaces that was created initially by the space by the student wellness centre had become an extremely important space for promoting and sustaining her mental health. The space adjacent to the student wellness centre had become an informal learnings space by creating a sense of community.

Azedah noted another informal space was important to her as a means to support her mental health by creating a sense of community and belonging

actually, there is another space at the university. It was at the Peer Health, if you know that place, yes. And sometimes, I mean, like before COVID-19, I did go there every day. Yeah, I did go there every day. Most of the times, they had like cookies there. Me and many other students, like most of the students who went there were students who were like a little bit lonely, or they had some problems. So we went there every day, and we did open our laptops there and started working until like three or four – until the Peer Health closed. That was also a very good place for me to make friends. And also, there were, they put some chairs and tables for groups. Like, sometimes I told my friends “Let’s go there to study.” And we went there as well, and we also had cookies there, sometimes apples. The Peer Health area is exactly under the Wellness center. It’s on the first floor. And in there, they do like English students in many activities like being a peer listener, or like working in the dog therapy programs – if you’ve seen, yes. So they do encourage students for these activities. And also, like – actually, we didn’t do very much. But, it was that. And also, they did like, because they created this space for students to gather together. (06/03/21)

When asked if the support services provided on campus supported their learning, and promoted engagement and community and academic success, participants noted the importance those services were to their mental health. Azedah noted,

yes, they definitely, they definitely support us. They do, like, all of them improve our mental health. They make us more, they encourage more to study well and better understand our studies. And also, they, not only do that they – when they make us more connected to other students, like at the USSU they had many programs that I did take



part. Or like at GSA, or like at the Gordon Oakes, there was also many programs. They did improve our English as well. So not only our mental health, they improved our English as well. So I think they are all, all of them are supporting. (06/03/21)

### ***Safety and Security***

When discussing the importance of safe learning spaces, the graduate students reacted with different understandings of the meaning of safe and safety. Interestingly, my original meaning and intent was physical safety, however it became clear that the participants were including not only physical safety but psychological /emotional safety and noted the importance of that as well, and how important that was in a learning space. Interestingly, the male international graduate students, however, did not consider physical safety as something one could be concerned about. All the participants, however, were in agreement that the feeling of safety and security was important within both the safety within the physical and virtual space. Specifically, the sense of feeling secure enough to be themselves and to speak their minds. Another graduate student understood the discussion about safety to include financial security as well.

***Physical.*** Azedah mentioned the Peer Health area space as a physical space that felt safe in the comfortable, community sense.

I think it first came, appeared as a place for students being volunteered to promote the health of U of S. But then it turned into a place where students felt safe there, and creating a lot of, making a lot of friends and connections there, and a very happy place. Whenever someone is hungry, they come over there, grab an apple, talk to someone. See

if there's a chair and a table over there, go there for a little bit, study if they want with their friends. (07/27/21)

Bea agreed that the learning spaces should be safe and secure in both the physical and emotional/psychological sense

Yes. For that, I would say a strong yes as well. So a really safe campus or safe learning spaces really, really important. Because, especially for like, my research is on sexual violence prevention on campus. In this case, based on my research and also the reality as well, it's a big factor. It is a huge factor for especially female student, or LGBTQ+ groups. Sometimes maybe, I mean, it happens to male students, but male students, they probably don't feel that strongly. But as a female myself, I feel it's super, super important. And like for example, before like, I got harassed by someone in the university library – I never wanted to go back, you know. And that case, it shouldn't be like that. It's a public learning space for students and now I can't, I just don't feel comfortable to go back again. So that definitely influenced my academic life, you know, because I couldn't really use that space anymore. The university wise, it's really, really important to guarantee the physical safe spaces for all students, no matter international or domestic, whatever. It's really, really important. I really want to emphasize that. (07/27/21)

Azedah noted that she has not felt unsafe on campus and asked “I'm just wondering like, how can a learning space not be safe? I mean, for me, it might not be important because I've never experienced anything like, I've never experienced that feeling to be unsafe there” (07/27/21).

Bea responded,

Because it's a public space not just students can access. Anybody can access. That's one, and the other thing is there are some people among students, they just have, you know – I don't know how to describe that kind of behavior because I don't want to be disrespectful. But like, my perpetrator was a student and also was a university employee. So in that case, do you see? It's, if you don't have that experience, I was like, well, before that, like Oh, you know, it's safe. It's in the university, But it just happened. It's too late, because you don't – for me, it's a minor issue. But what if, you know, some people have major issues on that, and that could really disrupt their study? So in that case, I think what, I mean, I would emphasize more on prevention rather than on response. If something already happened, it's too late. But what we want to do is to prevent. In this case, in that way we can only guarantee the safe learning spaces, instead of “okay, it happens”, and you just deal with it. But, you know, there are still some students being harmed. (07/27/21)

Doug indicated that he has always felt safe in the learning spaces on campus, as well as in the city

Well, okay. So I guess my answer would probably just be that yeah, they are. I've just never felt like that was an issue for me. Like I don't know, I've never been – especially in Saskatoon, I've never been anywhere where I was afraid to be, you know. A white male, so, you know. I'm sure if I ran, maybe, I'm sure if I ran into that, I would definitely say yes, that's an important factor, that should be an important factor. (07/28/2021)

***Psychological/Emotional.*** Another participant also mentioned, when discussing safety of learning spaces on campus, that being comfortable to speak up in class, was also important.

Macha expressed

So let's say if you're in a group of people in a learning space and one person is leading. And if I, you know, have an opinion about something and if I tell it out loud and the person ignores it, I might not want to go there. I'm like "Okay, he doesn't want to listen to me. Its fine, I don't want to go there." Like I said, everybody's opinion needs to be heard. That is also a different perspective for that. (07/27/21)

***Financial.*** One participant recognized that the definition of safety could include not just physical, emotional/psychological safety but also financial security. Ahmad indicated,

Yeah. I think a safe learning environment that you are talking about, we have to define the meaning of safe. Because it can be a very broader definition. For example, being safe, am I going to have this position next semester because of financial situation? So that's also feeling safe. So that, being safe, if we're just talking about being safe, it can be a very general word that can cover everything. it can cover financial situation, mental situation. If we are just saying being safe, it can cover everything. Yeah, if I feel safe, I can do whatever I want, so. It's a little bit broad for me, to say being safe. Yeah, if we are saying being safe in a broader meaning, yes. Sure. If I feel safe, I can do a lot more stuff, I can do a lot more research, I can study better. I don't have to worry about anything, not money, not my future, because I am safe. (07/27/21)

### ***Supervisor Relationships***

Throughout both the interview and focus group, the majority of the participants indicated or agreed that supervisor relationships are important to the success of the student. Some noted information should be given on how to create and maintain that relationship. Participants also

noted the importance of communicating with their supervisor. One participant shared as well, that expectation of what the relationship could be like was not always the reality. I viewed the importance of this supervisor relationship to international graduate students to support learning spaces could enhance that relationship by recognizing the informal learning spaces the student and supervisor could communicate and connect. The learning space is a conduit to enhance that relationship, which enhances the student experience and ultimately, international graduate student success.

Doug relayed his experience,

this is how it was in my head. I would come up here and, you know, me and my lab mates would get together with my supervisor, perhaps at his house, for drinks and to talk science, that type of thing. And that's never happened. My supervisors got a large family, and he's very good at keeping the two separate and I very much respect that. He's got a very good work-life balance, and that's been something that I've had to learn from him. That was kind of my expectation..... Whatever I did get there, it was, you know, the PhD at the USaskis kind of – you're only required to take one class and you spend the rest of the time doing self-guided learning, basically. (06/09/21)

He also spoke about the importance of communicating often and early with his supervisor.

One of the issues that I've dealt with is, you know, my supervisor, at first – it was hard to kind of find our stride. I didn't know, "Okay, what am I allowed to go out on a limb and do without getting his permission first?" Right, "How much autonomy do I actually have?" And there's been a lot of times where he's gotten pretty upset with me, because I've kind of stepped out of what I thought was within my bounds, but it obviously was

not. So we had a lot of discussions. Eventually – after I took that leave of absence – I came back, and we sat down and had a good long discussion, and we filled out like an agreement form, you know. Like, “These are the expectations of you. What are your expectations of me?” And once we sat down and kind of had that heart to heart, you know, of not so much mentor-mentee, but how do we both get the best out of this for both of our good, right? And you know, we were able to iron that out a lot. (06/09/21)

Doug concluded that “supervisor student communication has been, just, probably one of the biggest keys for me, I would say.”(06/09/21)

Elias also indicated that learning spaces were also useful in communicating with his supervisor, And also, you talked about these formal spaces, like classrooms. I have found them also really useful, because you have the chance to interact with the supervisor, with the instructor and with the students. It can be really more helpful while we’re discussing the questions we have with the people around you. Whenever, for example, I usually send a weekly report to my supervisor. So whenever I get feedback, it really helps me to be more focused, to be energized. I go, “Okay, I’m doing this really well.” (06/04/21)

Elias also expressed that communication with one’s supervisor provides emotional support,

So, whenever, especially if you get a stuck somewhere while you’re doing your research.

So you expect maybe your supervisor, or especially your supervisor to get that support.

So if you get that support, so maybe you feel more comfortable so you can find a way.

But when you are heavily under pressure, it can make it really hard to focus. (07/27/21)

Bea agreed that the relationship with one's supervisor provided learning opportunities and comfort,

So it's like supervisor relationship with us. And I personally have a great supervisor, and I appreciate that a lot because if I need a pep talk, or I need response from her, and she's always there. And that gives me a lot of, you know, motivation. And I'm so grateful for that, because I know if I didn't have a supportive supervisor, my work could be a lot more difficult. And that is the great thing as well, for some part we couldn't really control over. But also, we can be a part of controllable on that, because, you know, it's a dynamic. It's not just based on you or based on your supervisor. So maybe, I don't know, some kind of tips or training or, you know, for people who would need that would be great. You know both supervisor-wise and also for grad student-wise, you know. If there's those kind of learning programs to connect. (07/27/21)

Doug agreed, when asked if open, honest, authentic communication with ones supervisor was important, "Yeah, strongly agree with that also. It's very important." (07/28/2021)

When speaking of supervisor/graduate student relationships and the importance of that relationship influencing student success, and if the institution could do more to protect that relationship Doug indicated,

You know, I don't think that it's something the institution could do. I don't know how you train people to be good supervisors – I think its experience. And they're gonna, you know, a lot of that's gonna bleed over from how they were supervised. It boils down to picking the right supervisor, and that's something that falls more towards the student, I think. Because a lot of students don't really research who they're gonna go work with.

They just find an opportunity and before they kind of get into it, they just jump on it because it's an opportunity. (07/28/2021)

Bea agreed saying,

I just want to add on. It is not only the supervisor's point of responsibility – it's also from our point of view how we, I mean, how we communicate better with the supervisor. You are not really like, completely counting on your supervisor or being demanding, but also you're not being too distant, something like that. There's a balance over there. So that's something, like as a grad student, we should improve, learn, and you know, some kind of abilities we should obtain about that. (07/27/21)

Elias (07/27/21) stressed the importance of getting feedback from one's supervisor as well as other students,

that's especially for international students who are studying here maybe for first year, so it can be more challenging for them. So maybe, the way they get the feedback from the supervisor, it really effects the way they work. It is substantially important. And also maybe if in the group, there are some other students who have a better knowledge about the area you're working in. So that can also be helpful. I know for example, in my group for my supervisor, there is no post other student and there is just one PhD student. So that PhD student is also working on a totally different thing, so it makes it really hard for us to precede sometimes. And also you don't get maybe that technical support a lot from the supervisor. So in this situation, it can be really challenging. (07/27/21)



Physical and virtual learning environments allowed for the interactions the international graduate students found important to promoting their student-supervisor relationship.

### *Department Offices*

More than one participant indicated their own academic department had some ability and responsibility to, in essence, create a learning space that offered student and academic support. Participants indicated that academic department offices, and their staff, provided the student supports needed for their academic success. More specifically, one participant indicated how the staff in the department office can be a large part of creating a sense of belonging and security, as well as noting the importance of what the department support had added to her learning. I had not originally considered the department space a learning space and the concept of an academic department office, being considered a type of learning space was a revelation and viewed important. The positive impact of the department support person also was expressed.

Bea indicated that the department office itself was an important space to her so important to her learning as it created a sense of belonging, although she also pointed out that she also had agency to create that sense of belonging,

I do feel a sense of belonging, because it's not because the university, or the college, or the department offers me, like strongly. It's because I reached out. I worked my ass out to get that sense of being. And there's another thing I want to mention, is, you know, we have other – like the ones I use in our department is [the departmental administrative support]. I mean, [the departmental administrative support] is the- I mean she's the supporting for grad students at our department, right? I know there are some other supports for undergrads as well, right. Like career wise, academic wise. But for my, you

know, from my experience, [the departmental administrative support] was so helpful. I mean, that part of the service. Also specific, [the departmental administrative support] herself is so helpful. I felt so welcomed even before I came here. I think that is a great, great thing for us to have. Before I came here, before even I applied. So I had lots of questions, right, and then I just emailed that email address which is in charge by [the departmental administrative support]., in charge of, by [the departmental administrative support]. and she just answered that really well organized and make you feel so welcomed. And that really boosted my confidence of this program. I literally talked to my friends, you know. I could imagine how supported I could be if I studied there in that department. Because I could imagine, like my needs and my questions can be answered right away and with real answers. Not, sometimes you know, some administrators could like, refer you to other people. Which is fine, but sometimes you just feel that kind of, you know, “Am I ever gonna be answered?” But for you, she just, she has all of the answers. Even if she doesn’t, she will get it back to you. And that is a great support, I think. I don’t know if it counts in learning spaces, but it’s definitely really, you know, positive for my learning here. (06/02/21)

Elias agreed that a department providing a quiet learning space would be appreciated,

I mean, it’s probably better if the university got some department that they provide these places. I think that it’s more helpful, because you don’t need to be worried about a lot of things if it’s a place that you can focus and interact with the people around you, and not be around a lot of noise So it can be more helpful and beneficial. (06/04/21)

## **COVID-19 Impacts on International Graduate Students and their Learning Spaces**

In March 2020, as with most other students around the globe, international graduate students learning was interrupted by COVID-19 and the ensuing pandemic. The impact of this was felt in their learning and their sense of belonging, community. All the participants were impacted, whether it was not being able to come to Canada to begin their studies, or not being able to conduct experiments in the labs, to not being able to access in person mental health benefits. This impacted their learning, their learning spaces as well as their social life and mental health. All of the participants agreed that the travel restrictions and closures of universities had an impact on their learning spaces and students could not attend in person classes or even travel to the universities where they had been accepted. Some of the participants had only experienced USask from a distance. The interviews and focus groups occurred one year into the pandemic and some were not in Canada and had not been to any learning spaces on campus. However, all participants noted what types of learning spaces became more important to them during the pandemic and how learning spaces could be improved. Some participants indicated that their home learning space was sometimes better than the virtual learning space created by their instructor. The themes of community and belonging and effective virtual learning spaces became just as important, if not more, during the pandemic. Participants also mentioned that they missed physically interacting with their fellow students.

### ***Belonging and Community***

One participant mentioned that belonging and community was more important during COVID-19 than ever but not being on campus hindered that. Not being able to be on campus also had an impact on the level of activity for a participant.

Azedah mentioned that she used be actively engaged on campus , ”Actually, before COVID-19, I was a very active student, and I did take part in all the events at university” (06/03/21).

Bea, when asked about what she misses the most about not being on campus, she mentioned belonging,

what I miss the most is the sense of belonging, being on campus. Because physically on campus makes me feel a sense of belonging. And I definitely miss the atmosphere with people and you know, in the community. That's' what I miss the most. (07/27/21)

During her one-on-one interview, Bea also indicated she experienced belonging during COVID-19 by engaging in online classes, although she acknowledged not everyone was as proactive.

Again, I think this is really my personal experience. Like I did the College of Graduate and Post Doctoral Studies (CGPS) courses from Gwenna Moss, and that kind of helped me build up that sense of belonging because I could engage with a bunch of grad students virtually, and that makes me feel I am still, you know, I'm a student engaging with people. I don't think so unless you really look for something. But it's kind of, it's not always there. It's just like, for example, I take a workshop, I feel “okay, I'm a part of the university.” I take a course, “okay, I'm interacting with my colleagues.” But other than that, it's really dependent on ourselves, right. (06/02/21)

Azedah felt international graduate students sense of belonging and community were negatively impacted by not having learning spaces to gather.

And in, in the learning spaces, because, I mean – we also not only create connections with other classmates and friends. I think, because we're, for many of us which have like,

COVID-19 can, I mean – we do suffer from being alone, us international students. We don't have anyone. Due to the COVID-19 restrictions, we cannot find people around the buildings. They have a special place to have lunch, to chat – all these things. But those are not occupied, like those are not in use. (06/03/21)

Doug was also impacted by the pandemic and it surprised him,

Yeah, so before COVID-19, I think I didn't really have a proper scale to gauge that on, you know. I would probably, before, if we had this same conversation pre-COVID-19, I would've said, "Eh, it's not that big of a deal." But then a year of isolation, and you're like, "Wow, I really need to be around my colleagues and my cohort. You know, how are they doing? How is their thesis coming along?" All of that interaction. Where it really goes to more of a – it really becomes more of a social aspect for me, and that was really a big driver. COVID-19 was not easy for anybody, right. But it was definitely, made it challenging. And you know, the timelines changed. I would've finished a year ago probably, but now it's a whole other year until I finish, so. And you know, lost a lot of contacts. Colleagues, I guess, but not so much friendships. The people that I was friends with before, I'm still friends with. But the ones that we may have been building rapport with, you know, the newer students – we lost out on that opportunity to build any sort of friendship or relationship at all. After about the first year or two, most of that cohort of master's students graduated. A few of them stayed on as PhDs, but most of them left. And since then, even before the pandemic, there was, there's not a big social aspect involved in that. People weren't in there, you know, talking about problems they were dealing with within the college, or you know, just administrative issues. "How do I handle this, how

do I-”, you know. Not just science, but how to deal with navigating academia in general. And so we’d lost a lot of that. And just the culture of the college changed quite a bit, and it’s been very different. And then obviously, COVID-19 hit, and everything’s been online. (06/09/21)

Macha/Pujitha indicated there is a difference on how she interacted online versus face to face,

It is very important because if I’m going to do everything online, there is no – if we don’t have that in person touch or interactions and stuff, There’s not going to be much difference between that and this. But there being a difference because I’m doing it online”. Because I’ve never really experienced it, I’m not sure if I have a negative impact on it. But surely, I am missing out on a lot of things. The one thing I was looking for when I signed up for a course in another country is I wanted to get to know different cultures, meet people from different parts of the world. And I did not get that, like I am almost six months into the course but I barely know any people. So I am, I did not get what I was looking for. Maybe once I fly to Canada, I might get it. But I did not get that yet. I can’t just randomly mail a person saying, “Can we talk?” (06/02/21)

### ***Learning Spaces***

Azedah spoke of the connection and collaboration that was missing because of the inability to convene,

in the learning spaces, because, I mean – we also not only create connections with other classmates and friends. I think, because we’re, for many of us which have like, COVID-19 can, I mean – we do suffer from being alone, us international students. We don’t have

anyone. So having to go to university and see other students – this is very good for our mental health. We can collaborate very much directly. And also, like, because it's not like speaking just in one or two sentences in an email. It's like, "Can you repeat it again? Can you say it again?" And we understand everything very, very much clearer in person, in those learning spaces. It is very, very important. Very important. (06/03/21)

Doug, again an outlier, said about learning spaces,

I think, for me, being on campus isn't really enjoyable. It's something I do as a job. And there's not a learning space that I have found that was enjoyable enough for me to be excited to get up and go to school to seek out that learning space. It's like, "Well, you know, I can get this same work done from home." I think all of my thoughts have been tainted with the last year of COVID-19 too, and how my learning space was basically my bedroom. And with COVID-19, you know, in the height of COVID-19, it was very challenging. (06/09/21)

Aparna mentioned missing the informal learning spaces.

Everything is like closed now. Like we don't have access to common areas, and yeah. because I cannot meet new people. And then I cannot even like – even though I know them, I cannot just talk to them. I just say hi and then just move on. Yeah, it's just like that. So I miss that kind of environment where I can sit, and then have some valuable conversations with them. So yeah, that, so the common spaces are closed. I think it will be lifted soon, but yeah. In this pandemic situation, nobody can do that. But yeah, these are the things that I'm struggling with right now. (06/10/21)

Azedah indicated that the closure of the informal learning space of the wellness center had a negative impact,

Yes, I want that face-to-face. Especially those that, with counsellors. I think appointments, telephone appointments with counsellors are, I mean, horrible. It's not, it's not effective at all, having telephone appointments. I think those kind of things, they could be – at least the wellness center could be like in-person for students, but they don't offer that at all. I do want it in-person. But they are also completely virtually. I think they could do like, some part of it in-person. They could plan somethings, they could give opportunities for instructors so that they plan something, like group by group with social distancing at university. But they didn't offer anything at all, and everything was virtually. Which is extremely hard for us, especially for us international students who don't know – I mean, I think it will be very dreadful for those who are just come, start virtually from the beginning. For us, at least it was a little bit better. But for the others, I don't think they will learn very much. (06/03/21)

### ***Virtual Learning Spaces***

One participant noted that the themes of belonging and community were hard to replicate or achieve in an online learning space. Some also disliked the virtual learning spaces, as experienced during COVID-19. Some participants also shared how students learned in the face to face environment was not able to be recreated online. For example, those lessons that were delivered in a laboratory environment. Aprana noted,

So I think that is missing in the virtual environment – the group studying. So, in person classes it will be more interactive. Even though we are saying, like in virtually we should



like talk, it's just like a force. Like we have to do that. They cannot work together, they are not even – like even if you're in classes and you are meeting regularly, there is no bond between friends and there is no sharing of thoughts, ideas. Like with virtual learning space, it will be the same like everywhere. It's good we are learning what we are supposed to. But I think the connection is missing between people. And also between students – there is no interaction. Even if we look back, there is nothing memorable moments to cherish. It's just the knowledge we have taken. (06/10/21)

She again mentioned how she was impacted the lack of connection due to COVID-19,

Like I previously mentioned, I cannot experience it by taking in person classes. Like with virtual learning space, it will be the same like everywhere. It's good we are learning what we are supposed to. But I think the connection is missing between people. And also between students – there is no interaction. They cannot work together, they are not even – like even if you're in classes and you are meeting regularly, there is no bond between friends and there is no sharing of thoughts, ideas. So I think it's just like, we are studying and then it's gone. We are studying and then it's gone. There's nothing to remember. Okay, I did this class, and we made these friends, and we discussed all these things. Even if we look back, there is nothing memorable moments to cherish. It's just the knowledge we have taken. And that knowledge we can study anyway, studying together with them, along with them, is different. Our thinking changes, our thought process – everything has some influence by them. So I think that is missing in the virtual environment – the group studying. So, in person classes it will be more interactive. Even though we are saying, like in virtually we should like talk, it's just like a force. Like we have to do that. In

person classes it will be more natural. People tend to ask questions.. So I think like that part makes people restricted. And I think like now, the people have that kind of mentality. And nowadays, people are becoming more comfortable with the virtual environment because they want to stay out of reality. Yeah, we can like do more than that. I think that's not good. (06/10/21)

Suba agreed indicating he felt the virtual learning spaces did not create a better environment than his home living space for learning, highlighting the need for effective virtual learning spaces,

Yeah, what I can tell in this regard is that for me, especially I don't like the virtual form of teaching spaces because it seems like always incomplete to me. from their home and they may feel good but in my case I am not very welcoming and pleasant to this virtual learning spaces because last year for this break out room or something. But when I feel like oh I used to go similarly in the environment is totally different like we will be in the conference environment or teaching environment when we are face to face. Actually I could not go to the main question but what I think that the virtually should be ended as soon as possible and there are the health and the public health concern, public issue that we should not undermine but the basic thing is that we have to ensure that we get the real learning experience as quick as possible. Because when you feel like living from home, I don't know the percentage, or the studies show the percentage of efficiency but in my opinion I am not as efficient in learning in the spaces compared to my own home.

(07/27/21)

He concluded, “ I am one where I believe that education is a lively process and there is no life in the education, that’s what I feel” (07/27/21).

Aprana noted that virtual learning spaces during COVID-19 were not memorable, as there was no connection created virtually,

So I think that is missing in the virtual environment – the group studying. So, in person classes it will be more interactive. Even though we are saying, like in virtually we should like talk, it’s just like a force. Like we have to do that. They cannot work together, they are not even – like even if you're in classes and you are meeting regularly, there is no bond between friends and there is no sharing of thoughts, ideas. Like with virtual learning space, it will be the same like everywhere. It’s good we are learning what we are supposed to. But I think the connection is missing. In like, in person classes it will be more natural. People tend to ask questions.. So I think like that part makes people restricted. Like with virtual learning space, it will be the same like everywhere. It’s good we are learning what we are supposed to. But I think the connection is missing between people. And also between students – there is no interaction. Even if we look back, there is nothing memorable moments to cherish. It’s just the knowledge we have taken.

(06/10/21)

Ahmad was negatively impacted by not being able to be in a laboratory.

So for me, an ideal situation would be where I can do a lot of research, a lot of experiments. And right now, I cannot do any of them because of COVID-19. But even after that, I know there are a lot of rules and restrictions to follow. Because I can only work in some, a specific lab that is supervised by my supervisors. Other than that, I have

to get a lot of stuff done and even at the end, I can only sit there while another person does everything, so not a very good idea. (06/04/21)

Suba also discussed the challenge of virtual learning,

If I was grown up in a society where this virtual was part of education, then I would have been rather positive like no that's fine but I was grown up totally in face to face communication and I am not used to. I think the other thing that the student like me cannot be as responsible as in the face to face integrative classes....what I can tell in this regard is that for me, especially I don't like the virtual form of teaching spaces because it seems like always incomplete to me. I think that the virtually should be ended as soon as possible and there are the health and the public health concern, public issue that we should not undermine but the basic thing is that we have to ensure that we get the real learning experience as quick as possible. (06/11/21)

He continued,

From their home and they may feel good but in my case I am not very welcoming and pleasant to this virtual learning spaces because last year for this break out room or something. But when I feel like oh I used to go similarly in the environment is totally different like we will be in the conference environment or teaching environment when we are face to face.. Because when you feel like living from home, I don't know the percentage or the studies show the percentage of efficiency but in my opinion I am not as efficient in learning in the spaces compared to my own home. (06/11/21)

Suba concluded,

And for me, I don't know, people tell me that I'm really locked into the virtual new world or the time demands. But in my sense, I believe we are just continuing at the minimal breadth of something like that. Its not like open, because I believe we are totally out of the social interaction and the collaborative study. know the teaching learning process in depth, they want to cure the curiosity in the student and want to have teaching in a way that one student is comparable by the vision of the other one. (06/11/21)

### **Financial Perspectives of International Graduate Students' During the Pandemic**

Besides the impact of COVID-19 on participants' sense of belonging and community, participants were challenged with finding new learning spaces and finding new spaces to socialize and learn. Majority of the participants were learning virtually which was met with some success or not at all, and some homes/bedrooms became both formal and informal learning spaces, again, with some success, or none. The majority of the participants felt they were negatively impacted by not being on campus and virtual learning spaces; however, most acknowledged they understood and tried to make the best of it. It was also noted that the cost of online classes in online learning spaces should have been less than in person classes, and were disappointed or surprised to see that was not the case. It was also felt that there was a shift between how they were supported pre-pandemic and post-pandemic.

Ahmad expressed some frustration with the institution with paying the same tuition during COVID-19 when he can't access his study space, in this case, it was a laboratory.

Right now I'm getting less stuff. Okay, right now, I'm studying at home. I'm not using anything on campus, but I'm paying the same tuition that people paid last year. So no, I don't have access to my professors, even. They only send me videos online. Okay, and

the videos are from the last year they recorded it. Okay, so why am I paying so much more money for something that I am – I can see other videos of other professors for free online on YouTube. .... In this year, for COVID-19, no, the university's just taking money for something that we are not using, in my perspective. But I also understand them, so even though no one is using the campus, they have to maintain it. They have to maintain the classes, so. They're, the money is spent somewhere. But again, from the perspective of a student, I am not using anything. Why should I pay for that? So, if we see them from their perspective, it makes sense. But from our perspective, no. .... But other than that, so, I don't - from the perspective of a student, no, it doesn't make sense that they are taking this much money. But from the perspective of the university, I also understand yes, they have to – even though no one is inside the laboratory, they have to maintain it, they have to clean it. They've got expense, so. Yeah. I understand what they are saying, but from my perspective, I don't care. I don't want to pay more. (06/04/21)

Ahmad continued,

....I'm just saying what my problems are right now, no they do not provide me with the laboratory, they do not do that – but that's wrong. That's not the correct way to say no, there are – and I accept that, because I know that they are, there are some restrictions. They are doing their best, that's what I can say. They are doing their best. And I believe that they are doing their best because, well, if they don't, they wouldn't get a whole lot of students the next year, so. They are doing their best. In the meeting they said "Okay, we are doing it. And even if, for example, every student participates and says 'no, don't do

it', we are doing it." I was a little bit bothered by that, but the rest, I understand everything. I know that they are trying their best. (06/04/21)

Azedah expressed that she felt the institution didn't support international graduates students' learning during COVID-19, the same way they did before COVID-19.

I think they're making learning for us a priority. However, after COVID-19, I don't see it very much. But before COVID-19, I did feel it completely that learning for international graduate students is a priority. I feel like, even like for wellness center, they didn't open, I mean they didn't open that as well. And everything is by telephone and by, like, virtual as well. And they don't actually give us very much, like – having telephone appointments are not very much help. (06/03/21)

Ahmad concluded

In this year, for COVID-19, the university's just taking money for something that we are not using, in my perspective. But I also understand them, so even though no one is using the campus, they have to maintain it. .... Right now I'm getting less stuff. Okay, right now, I'm studying at home. I'm not using anything on campus, but I'm paying the same tuition that people paid last year. (06/04/21)

### **Barriers for International Graduate Students in Relation to Learning Spaces**

Although not included in the initial research questions, I understood from previous research that barriers such as culture, language and isolation, which included loneliness, had an impact on academic success students. (Sawir, et al., 2008). Again, because of COVID-19, I believe the barriers were felt more predominantly because of the already isolating situation,

caused by restrictions due to COVID-19. The topic of barriers arose organically, particularly in relation to the COVID-19 impacts, so some of that discussion is included here, particularly the discussion that indirectly impacted learning spaces. The participants indicated there were two main barriers to success as an international graduate student and the majority of the participants felt the main barriers were cultural/language differences; but the most common barrier reported amongst the participants was financial and most agreed or strongly agreed, that it was the biggest barrier. However, as noted earlier, the importance of financial security also came up when discussing safety on campus, which was interesting.

### *Cultural*

The barrier created by culture and language could be alleviated by creating learning spaces that assist international graduate students with a space to congregate; to be able to develop a sense of community and belonging. The majority of the students did not indicate that language was a barrier, however a culture shock was experienced by most of the participants.

Azedah noted that international graduate students want to be involved with domestic students to get their experience and perspective and that this will provide comfort to the international graduate student

I think, I think the biggest part is – I mean, I don't know. But when we international students enter Canada, we are not exactly very, I mean, we don't know very much about – there are many things that we don't know, but is very easy for domestic students. Like, it was, like giving presentations in – everything will be very new for us. So I think that most Canadian domestic students will not have very much interest to be in groups with us international students, because they think we will cause them to be behind in their work



and they will lose their group marks because of us. I do feel that too. I feel like international students want to be in groups with the domestic students because this will help them more. And also, international students don't want to be in groups with international students. I think, like, at the beginning, everyone was like speak to everyone that – yeah, international students, they just arrive to Canada, they have to do their own shopping, they have to do everything by themselves. They have to cook for themselves, and they do have, they, I mean - they are very much busier than the domestic students, so please don't put pressure on them. I mean, try to support them, not that, not saying that they don't want to work. They do want to work, but it's just, I mean – you should also orient them. We should be oriented at the beginning to how to work. And I don't think, like, and I think, like – so, the orientation at the beginning for the students from the instructors would be the best. So that they do understand our situations and our conditions. And like, don't think that we're not very good students. They should believe, yeah, we were the top students from our universities in our countries. It is a new language, and everything, our conditions are very hard – it doesn't mean that we're not good students and we might cause the groups to fall down and to lose their marks. I think these should be oriented. (06/03/21)

Bea felt perhaps that her situation as an international student was different than many international graduate students as she has spent time in Australia, prior to coming to Canada for post-secondary education,

Language and cultural will be, cultural shocks could be for most of the students. For me, I don't feel that much because, as I said, my Australia experience really helped me with

the culture shock, to be honest. I feel not that obvious to me, but of course it's still there, and it's still, I'm still an international student. Thinking about this, I think the biggest barrier for my success will be how, you know – I probably wouldn't have the perfect words to express this. I'll try. So, like I'm international student, but I also want to further develop here in Canada. But I see, you know, the gap between international status and Canadian expectations or Canadian requirements. I wouldn't say it's racism, but at least there is kind of a gap over there. I feel this is the biggest barrier for me. Like right now, I'm like international and Canadian background. And we're kind of like, you know, not go against each other, but I think the ideal ways, like we meld with each other like this. We accept, we support each other. I think Canada is doing great. But meanwhile, you know, still there are, you know, there are still things. I don't have specific examples for that yet, but that's kind of my feeling. And if I'm talking to really open-minded people, I feel okay, like I'm, I am accepted by them. But if I'm talking to close-minded people or narrow-minded people, I feel "Wow, they just, they're, they just want to go after what they want to be." Like okay, they just want to hang out with their own people, or they want to hire their own people. And they don't want to open for international perspectives, or international status, and that kind of thing. Yeah. Sorry, it's not very concluded, but that's kind of my feeling. And this is like my barrier, biggest barrier for me. And I believe, over years, I can improve. This barrier will get smaller and smaller. That's definitely the goal for that as well, right. I don't want to enlarge the barrier, but I definitely want to minimize the barrier. But for now, this is what I'm feeling. And also, it's my fear as well. It's my fear. If I want to develop my career here, and that's the fear that I might – yeah. (06/02/21).

Macha/Pujitha did not believe there was a language barrier for her,

I'm not sure if we have a language barrier in Canada because everybody speaks English. Probably if I was in a European university or probably a German university, I wouldn't gotten to talk to a lot of people because I don't know German, right. But English has always been my second language in school and stuff, so I'm pretty comfortable. Maybe if I was in that Quebec province where people speak in French, maybe there would have been a language barrier there. But in Saskatoon, I'm not sure if there's a language barrier. Or probably, if a person who doesn't know English that well, or – I'm from India, and almost everybody in India speaks English. So we are pretty comfortable with English. We aren't that fluent like you guys, but still, we are decent. (06/02/21)

However, she indicated a language barrier may an issue for some international graduate students

Yeah. So maybe if people, they're from a country where they don't speak English like we do, they might find it challenging to interact. Or probably, like they might not understand what profs assign to them, because you guys tend to speak very fast, right. They not get around your accent. So that would be a barrier for the person who doesn't particularly speak English or watch English programs. So, regarding the culture, or cultural... I love interacting, in fact, I can't - let's say if I'm given an opportunity to stay with an Indian and if I'm given an opportunity to stay with a person who's from a different country, I will go with the person who's in a different country because I really love exploring. I really don't believe that there is going to be a barrier, at least for a person like me. (06/02/21)

Azedah mentioned the importance of mingling with domestic students and having spaces available to do so,

One of them that is in my mind is that there is something that in classes, the Canadian students always separate from international students. It's always – yeah. Always international students together, and Canadian students always together. I think if they-- integrate together, it will be very much more helpful for the international students. Because there are many things that we didn't, we don't get and we will need to hear it from our peers because of our English barriers, or something like that. But we need, we need to hear it from our classmates. And, I mean, if we become friends with the Canadian students, we will feel more welcome. (06/03/21)

However, she did add that loneliness was more of a barrier than finances, underlying the need for formal and informal learning spaces that combat this by creating learning spaces that create a sense of belonging and community,

I've heard, like, from most international students that the, that financial difficulties is the biggest barrier. But for, like for me, like loneliness and having minimal support caused me the most anxiety and the most, I mean, depression that, which did not allow me to study very well. (07/27/21)

Macha/Pujitha shared that because of her situation of still being in her home country and town, she did not feel lonely or isolated because she was around her parents and local friends,

I am in my hometown with my parents, and I have my childhood friends and everybody around. So I'm not being isolated, but yeah. During the pandemic, because of the cases in

India that we have, we're not allowed to go out. So we still use all those social sites like WhatsApp, video calls, and all of that. So I am not really lonely. But, if I were to be in Canada in this situation where there is a lockdown and everything happened, I'm pretty sure I would have been very lonely there because I would have barely known any people there. And I'm gonna have to stick to my roommates, or probably the person next door, or my houseowners. I would be lonely, I guess, if I was in Canada in this situation. I won't feel lonely. In fact, I prefer situations like that. Another thing is if I get comfortable in a place, I like to move to a different place. I, seeking for new opportunities. That's what I, back when I was working. I basically moved from two to three different localities in that city where I was working for. But I got comfortable, I know everybody around. I want to go talk to different people. So I like doing that. (06/02/21)

Suba. didn't believe there were cultural barriers, "Yeah, mostly I love the environment here. It seems like most of the immigrant friendly environment" (06/11/21).

Elias felt that one of the barriers was the tendency to stay with those whose culture is familiar,

But maybe there are some other issues like when you come to a new environment Because so you are attracting different people who are not familiar with this culture. So, if you are familiar with this culture, I'm trying to familiarize people with different societies and different beliefs – that sounds really healthy. Another challenge for international students would be trying to maybe people from your original country, from your homeland. I think this can be really not a good idea. I always thought maybe interacting with more people from different countries to learn about them, and maybe

sometimes provide each other support. But finally, we end up being with just ourselves, with just the people, students from our country. (06/04/21)

### *Financial*

While I believe the focus on finance related discussion was more present because of COVID-19, due to the uniqueness of online only classes and traditional tuition structure, a number of participants strongly indicated that lack of scholarship opportunities was the largest barrier. This lack of scholarships' availability impacts the recruitment of international graduate students which in turn impacts the institution's mission, vision values of being an inclusive institution that provides learning opportunities for all students. The financial connection to learning spaces is that it acknowledges investment is needed to support international graduate students by creating inclusive learning spaces that enable what international graduate students need to succeed. Participants noted that lack of financial stability impacts their mental health, which impacts their success.

Doug mentioned

funding is needed to rent a space, and during COVID-19-, this space became a learning space, so if there is no funding for international graduate students, they would not have a learning space. The first year I was here, I don't know what was going on, but the first year I was here, I was able to still take out loans from the US. And I didn't need to take out much. I took out, you know, like a thousand dollars, something like that. Just to kind of get situated and settled into a place and all that. (07/28/2021)

He also indicated financial uncertainty affected his mental health,

So I took a term off, and back to Texas for, you know, I think three or four months, I guess. Then went back, and when I went back, then they had decided that they were gonna waive graduate tuition at that point in our college. But then that was rescinded a year later. So there's a constant changing of what I'm having to pay and the funding I'm getting. So it's, you know, every term I'm having to rebalance, re-budget everything. So that's always a stressor that's involved with everything. (FG 07/28/2021)

Ahmad noted that in order for his research to be done it required funding, so lack of funding had a direct impact on his learning,

I'm worried a bit about financial situation. That could lead to some, for example, if I want to do some research in some specific area, I just, I maybe completely forget about it because I don't have time or the financial security that I want to research them. So I might just say "Okay, let's forget about it. No one cares that I do that, let's forget about it." Because in reality, there are, research is very expensive. When you want to do research, there is a lot of money that you have to spend to maybe get some good results. So, research is very expensive, and in, from the perspective of a professor in university and other stuff, they need to, they need a lot of money. And from me, an international student, if I don't have that financial security, I might, for example, forget about a lot of different aspects and say "Okay, these parts, it may take a lot of time. I don't have money to stay at the university for longer than this period of time. Let's forget about it, do my research, and get out." So that might cause some trouble. And I understand that, that it's no one's fault, it's just how life is. (INT 06/04/21)

## Synthesis

The purpose of the research was to understand international graduate students' perceptions of learning spaces and how learning spaces can be factors or influences to student success, the definition of success was defined as primarily academic success. While that was the case, and the influencers of engagement, community, social interaction, belonging do have a positive impact on international graduates' student's academic success, the unexpected understanding was that these same influencers had an impact on international graduate students' non academic success, which is, equally important. The impacts of social interaction, belonging, engagement were noted as having a positive impact on international graduates students general sense of being. However, these impacts may have been felt greater due to the period the research was being conducted. Data was collected during the summer of 2021, in the middle years of the pandemic.

The importance of space for informal learning spaces became more prominent as the international graduate student participants did not have formal learning spaces, due to the campus being shut down. The importance of virtual learning spaces and virtual community became a theme that may have not be as prominently discussed if it had not been for the pandemic. The majority of the participants had not been to campus, with only a few having been on campus at all. These informal learning spaces were noted to be places the international graduate students could learn outside of the formal classroom. Learning spaces came from unexpected places; places such as the department office, the supervisor's office, the student wellness office, all were noted as being a place where non-academic success was occurring.



The pandemic seemed to amplify the importance of some of these themes. Primarily, the importance of belonging, community and social interaction to international graduate students while other themes of agency, self-formation and classroom design became less so. Interestingly, the pandemic seemed to have created new themes of the importance and impact of virtual and outdoor learning spaces, the importance of safety and security in learning spaces, the importance and impact of the supervisor/faculty relationship and spaces to foster that relationship as well as the importance of the department office/department staff to international graduate students. It also identified that the non-academic needs of international graduate students were not being fulfilled by current spaces and facilities or the virtual environment. The interviews and focus group both highlighted the importance of providing spaces where the communal spaces could be present. The strongest themes of belonging, community, social interaction, and safety should be provided within the context of facilities, in a way that has not been considered before. The research highlighted the need for spaces need to be designed for both social interaction with other international graduate students but also for cross – cultural interaction. The research also indicated the need for consideration of these themes, (belonging, social interaction, community) when designing physical and virtual spaces for learning. Conditions for these influences should be facilitated as part of a future design process. International graduate students should also be a the forefront in when developing new policies.

The research questions focused on if formal and informal learning spaces contributed to international graduate students' success by identifying their perceptions and importance of learning spaces. The data confirms these are important but perhaps not in the way it was originally assumed. Learning spaces need to be much more than places of academic learning and success but rather learning and success in the areas of promoting social interaction, belonging

and community which in turn lead to success. In addition, the data also suggested that safety and security were important in learning spaces. This research revealed that institutions need to look at how to create spaces that create a sense of place for international graduate students by creating spaces that allow for the influencers of student success/learning to thrive, with the primary influencers being belonging, community, safety and social interaction, both real and virtual.

## **Conclusion**

The one-on-one interviews allowed me to first gather qualitative data about international graduate student perceptions of learning spaces. The following focus group allowed for verification and clarification of those perceptions. All eight participants in the one-on-one interviews agreed to participate in the focus group, which allowed for a familiarity between researcher and participants. It did become clear, that while international graduate student is a category given for students who are not domestic, international graduate students are not a homogenous group. Each international graduate student has their own history and set of expectations, and there may be a case for distinguishing between international graduate students from the US and other countries. However, because of the many similarities, I was able to capture common themes emerging from the research questions. Each student had different experiences in high school and post-secondary and had different experiences with their own unique path to an education in Canada, however commonalities were identified during the coding process as well. Conducting the research made it more evident that international graduate students are not homogenous, and their experience and perceptions of learning spaces can be very different from other international graduate students.

Findings, implication to theory, future research recommendations arising from research and current international graduate students' initiatives have been compiled and are presented in Chapter five.

## Chapter 5: Summary of Findings

This study falls into the category of qualitative research design. The research methodology and method that were employed, in the end, was a bi-instrument exploratory reflective or retrospective case study. The approach was amended, prior to the interviews and focus groups, due to restrictions in place due to COVID-19 that did not allow for observation. The interpretivist methodology became a retrospective or even reflective methodology. International graduate students at the USask were the participants for this study. The participants agreed to answer questions about learning spaces during one-on-one semi-structured online interviews and then were asked to participate in an online focus group to validate my initial perceptions to offer any more input into learning spaces that may have been missed in the one-on-one interviews, and to engage with other international graduate students. Notably, there was a change in the research design and the reason for this methodology change was triggered by public health measures mandated by COVID-19 and to allow for a familiar setting for participants as well as an opportunity for the research participants to meet and interact. Initially, pre-COVID-19, the study was to be conducted via participant observation in the learning spaces followed by a one-on-one interview to ask questions to validate the perceptions of what I observed. The bi-instrument approach of face-to-face one-on-one interviews and observation was revised to virtual one-on-one interviews and a focus group. I believe an observational, interpretivist method of study for future studies would be beneficial, as this would add additional dimensions to the existing data I had previously collected during the one-on-one interviews. If the opportunity arose to do observations for a future study I would do that as well.

There were eight participants involved in the research study, which involved one-on-one interviews as well as the option to participate in a focus group. All eight of the research participants participated in the focus group. The eight international grad students were from five different countries. Six of the international graduate students were Master's students and two were Doctoral students. Seven of the eight international graduate students had not yet convocated, while one had recently convocated. Neither age nor gender was asked as part of the study. The majority of the participants were first year students and many of them had not been on campus, as they had begun their studies during the pandemic where classes were offered online only from March 2020 to August 2021. In September of 2021, there was still limited access to campus. Although some labs were face to face, the majority of the classes were still being offered remotely.

The interview guide and focus group guides aligned with the research questions:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?
  - b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?
- 3) What can institutions do to provide learning spaces for international graduate students that international graduate students value and may promote their engagement and success?

The following information provides answers to the study's research questions as themes emerged from the data collection and analysis. There were six main themes which speak to the

importance of each and how these emerging things have a positive impact on international graduate student success, focusing on their academic success – Community with subthemes of Belonging, Engagement, Virtual Community; Outdoor Space; Mental Health; Safety/Security with subthemes of Physical, Psychological and Financial; Supervisor Relationships and Office/Department Space. Also impacting international graduate students' academic success were the understanding of Cultural Expectations and Learning Spaces (formal, informal, home, virtual), how the COVID-19/Pandemic negatively impacted the sense of belonging and community, the definition of learning spaces in an online learning environment and the financial challenges that impacted their learning and spaces during the pandemic. Barriers to international student academic success related to cultural and financial barriers primarily.

### **Formal and Informal Learning Spaces**

International Graduate students' perceptions of formal and informal learning spaces were somewhat consistent with each other. The participants agreed that formal and informal learning spaces exist within classrooms, a lab, a field or other outdoor spaces. However it seemed that one of the most important learning spaces were those that were not obvious at the beginning of the research. Spaces such as those in which students congregated for a different purpose, but in that congregation, created a sense of community, belonging and well being.

The outdoors was also seen as an important learning space, whether it be a formal experiential learning space such as an agricultural field or an informal space such as a nearby park that gave participants the opportunity to congregate, study, explore, communicate and have fun.

Another type of learning space that became important during COVID-19 was the virtual space. The importance of creating a virtual community was highlighted by the majority of the participants.

### **Learning Spaces as Academic Supports**

Learning spaces were considered by international graduate students as an academic support, in that the majority of them relayed that learning spaces, both formal and informal, provided a sense of community, belonging, satisfaction, agency, well being and those influencers all had an impact on their academic success. Learning spaces that created those feelings could be viewed as an academic supports, although further research on that is needed as that did not become the primary focus of this research at this time.

### **Learning Spaces and Academic Engagement**

Participants agreed that learning spaces impacted academic engagement. However, the ways in which it does were surprising. The participants mentioned academic engagement was enhanced when there were safe/secure (both physical and emotional/psychological) learning space. Interestingly, participants referred to spaces that I had not previously considered learning spaces such as the department office and peer health centre. The department office was an important learning space that is not typically considered a learning space. These two types of learning spaces impacted academic engagement in a way that was positive for international graduate students by allowing them to learn in a comfortable and comforting environment.

## **Post Research Reflections**

### ***Participant Recruitment***

I utilized the institutional internal web portal and the role-based communications tool for targeted audiences, the Personal Access to Web Services, (PAWS) for recruitment which advertised the need for international graduate students as participants. The recruitment was not limited to a particular college or level (Master's and PhD). This provided a diverse experience and perspective and confirmed that international graduate students cannot be seen as a homogenous group as their stories and perceptions were varied; however they all did share the some common thoughts. PAWS also provides a consistent content delivery tool for official role-based communication to targeted audiences (e.g., all students, all employees, college-based groups, etc.).

### ***Reflections on Method and Methodology***

The original proposal included a bi-instrument method. The first was observation of international graduate students in certain learning environments and the second a one-on-one interview; however, the pandemic changed the method to become one-on-one interviews and a virtual focus group. I believe the focus group was a very good option, as it brought the group of varied research participants together in an online forum, which was engaging and provided much insight to me that may not have been possible otherwise. The focus group was a group of seven as the eighth participant could not make the focus group date as scheduled. The eighth participant was interviewed the next day. The focus group also was important in confirming that human connection, in a real or virtual space, is, while not necessary, is good practice. The one-on-one interviews were approximately one hour and the focus group was approximately ninety



minutes in length. The purpose of the focus group, in place of the observation, was intended to confirm or validate that I had understood what the participants had said in their one-on-one interviews. The pandemic which restricted travel and caused closures of institutional buildings, presented a challenge due to the focus on actual physical space and their perceptions of and interactions with learning spaces. This closure dictated that method had to change, and the data had to be collected virtually, in both the one-on-one interviews as well as the focus group, instead of face-to-face interviews and observation. The methodology became a retrospective or reflective case study instead of an interpretive case study. The exploratory nature of the research did not change however. This pivot to virtual research, however, highlighted the importance of a virtual space, for both informal and formal learning, and virtual space that creates community/belonging/engagement/social interaction. A virtual presence is especially important for international graduate students. However, it was also noted that this virtual learning environment requires quality of instruction.

### *Assumptions*

The assumptions made by myself were confirmed in that what I assumed was desired by international graduate students, based on interaction with them in several graduate classes, was community. The research participants indicated that both formal and informal learning spaces were important to them for these reasons. As well, the newly created virtual environment of learning spaces due to COVID – 19 was equally important, both for online learning but for creating virtual communities for social interaction. However, it was noted that USask did not prioritize the quality of online learning environments for many of the international graduate students responded quality of online learning was “less than deliverable at times” and the virtual

community for social interaction was non-existent. Institutions should perhaps prioritize online learning practice and invest in making virtual connections opportunities

The study demonstrated how different each international graduate student is, as where they come from, their history, their gender, and personality has an impact on their experiences at a Canadian post-secondary institution. I did not believe they were one group; however, I was unprepared and naive about even framing international graduate students together as a group to study. While international students are thought of as one group, I believe it is important to consider how their needs might differ based on a variety of factors. A lot of their comments and thoughts were similar; however, respect must be given to the uniqueness of each student. The participant who identified as a male American graduate student seemed to have the most diverse voice of the eight research participants, and further research into American graduate students may be required.

I did not contemplate the importance of including the department office space as an informal learning space. This forward-facing, front-line space sets the tone for how the department and college is viewed by the international graduate students. This space, along with welcoming staff, was overlooked in my initial thinking. In post COVID-19 protocols, this space is more important than ever and should be invested in to promote community, engagement, social interaction, and belonging.

### ***Unchanged Perspective***

My perspective remains relatively unchanged in the goal to understand the unique needs of international graduate students. While not homogeneous, the simple fact that they are non-domestic students, creates challenges, and language and cultural barriers, may exacerbate the

challenges. Financial challenges, including a lack of scholarship opportunities, which were faced by many of the participants, caused the most stress. In the time since I collected my data, instability around the world has created more financial instability for international students. Institutions need to be better prepared of the financial realities of international graduate students who have been accepted to attend a Canadian institution. International graduate students have encountered frozen assets in their home countries, which presents a very new impact on Canadian institutions. This challenge impacts the mental health and well being of international graduates and reinforces the need to create learning spaces that provide a safe, stable learning environment to create community and a sense of belonging for those international graduate students experiencing upheaval.

Strickland (2014) noted “learning spaces have active agency in the development of citizens and society” and argues that “space plays an active role in shaping the way we operate within the world” (p #16). Strickland (2014) noted this is important in the context of higher education because if educational settings have active agency to influence interaction and behavior, learning spaces can enable certain types of behavior. If learning spaces support and enhance community, social interaction, engagement, and satisfaction this will support and enhance this type of behaviour, which international students are desiring.

Intrestingly, when the participants’ transcribed interviews were filtered in NVivo (software for qualitative data analysis), Figure 3 is visual representation that was the result of a word frequency count in the program. I thought the word cloud was an insightful image that captured the key themes and sub-themes of the interviews and conversations that I had with the participants. The results of this word count data analysis were individually shared with the



and the way spaces support international graduate students' experiences. My professional position has changed over the course of the research. While I now focus on finance instead of facilities, the concept of the importance of space in the experience of educational programs has become more cemented. The focus on ways to finance appropriate learning spaces continues to be a passion. The international graduate students who participated in this research underscored the importance of our resources (financial and physical) being directed at international graduate students and supporting their sense of belonging, community, social interaction, with space, (real and virtual ) being an important component of that.

### ***Personal Growth***

My kinship with international graduate students began when taking face to face classes where the majority were international. The kinship was two fold - I recognized that while I was a mature domestic student, and the international graduate students were relatively younger, often times, we were both non-traditional students, although our circumstances and experiences were different and what we seem to want out of the program may have been different, we were intertwined in a way. While I believe I saw their need for community and social interaction, (a need I did not have) I felt drawn to fellow graduate students, due to the uniqueness of not being simply traditional students. I wanted to find out how community, belonging, and social interactions could be created in learning spaces and how learning spaces could provide that for international graduate students. My kinship with international graduate students has grown, due to the methodology of one-on-one interviews and the focus group. I was able to connect with international graduate students more and see them for the independent and accomplished students that they are.

## **Contribution to Theory**

The entire campus learning spaces should be a place where international graduate students can develop agency, be engaged and satisfied, and create social interactions that foster a sense of community. The study determined these concepts of student engagement and success for international graduate students could be enhanced or expanded by supports such as learning spaces. Student engagement and success, which currently is achieved by programs and services, that engage, encourage social interaction, and provide agency, can also be achieved by the appropriate physical environment, which includes a primary focus on formal and informal learning spaces. Programs and services have been developed to encourage engagement, satisfaction, social interaction and community for students; however, these were mostly for domestic undergraduate students. With the growing population of international students, developing these supports for international students should become a priority for institutions as well.

## Figure 4

### *The Interconnectedness of Influencers and International Graduate Student Success/Learning*

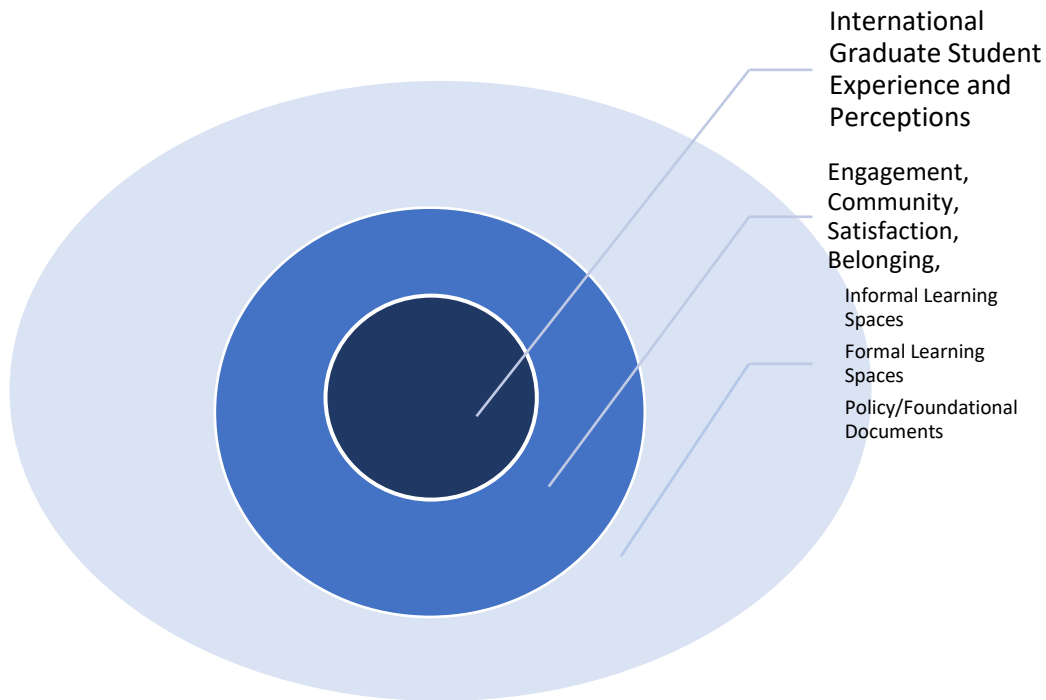


Figure 4 shows the interconnectedness of the influencers on international graduate student success. These influencers are impacted, either positively or negatively, by the informal and formal learning spaces. Figure 1, shown in a previous chapter, highlights the international graduate students' learning being the focus of the research. I would offer that while this remains valid, the primary focus should shift to the importance of their perceptions and experiences. With this primary focus on international graduate students, examining their perceptions of learning spaces provided insight into the importance of learning spaces on international graduate student success. This research confirms that Figure 4 is an optimal depiction of how to study international graduate students' academic success and learning spaces. The focus on the international graduate student experience should be the primary focus and should begin with the

international graduate students and their needs and how informal and formal learning spaces can support those needs. Previous conceptual frameworks have focused on the learning spaces first rather than focussing on the international graduate students' experiences and their perceptions of it. This conceptual framework also supports the idea of previous research that recognized the more connected a student feels to the college environment, the more likely he or she is to achieve his or her educational goal (Tinto, 2012) and Oblinger (2005) who notes the importance of "designing learning spaces around people, supporting multiple types of learning activities, enabling connections inside and outside, making space flexible, accommodating IT, designing for comfort safety and functionality, and reflecting institutional values" (p.17).

Post-secondary institutions can change and evolve, and are obligated to provide what international graduate students need to enhance their success. Post-secondary institutions have a responsibility to offer and provide programs, services, and appropriate learning spaces for international students. International graduate student success is crucial for the individuals as well as the institution. For the individual, international graduate student success enables them to become global citizens. For the institution, international graduate student success enables future international learners into the community, thereby broadening the general student experience which benefits all students.

COVID-19 not only impacted the methods used to obtain data, due to not being able to observe the students in learning spaces or meet face- to face, but also on the focus of the research. Initial research included self formation and agency as influencers to international graduate student success. However, those themes were not expressed in the data. However, this could be because international graduate students were not able to exist in learning spaces to be



studied. Perhaps more importantly, the themes that were present in the data confirm what was viewed as important to their success. The lack of discussion about the importance of classroom design for international graduate students was also perhaps caused by the lack of not actually being in the learning spaces. I believe that self-formation and agency were simply not as prevalent in this study due to the impacts of COVID-19. The pandemic emphasized what was important to the international graduate student participants and these were the themes of belonging, community and social interaction. The literature previously discussing the role of agency, self-formation and classroom design in regards to learning spaces and student success was not evident during COVID-19. This study therefore did not include discussions of self-formation, agency and classroom design as originally intended.

### **Recommendations Arising From Research**

The international graduate student support of the future should include creating learning spaces that promote engagement by creating community and social interaction, belonging, satisfaction and agency. This can be done by creating a campus-built environment that international graduate students respond positively to, and with. It is imperative the international graduate students' cultural perspective, history and identity is incorporated into the learning spaces on campus and in the teaching and learning environments. This incorporation is important because international graduate students desire a sense of community, belonging, social interaction and safety in their formal and informal learning spaces. International graduate students are different than domestic graduate students and international undergraduate students in that their situation is fundamentally different than those groups. International graduate students are a smaller group so have less opportunities to interact with other students, unless intentional

spaces and situations are created. In addition, the nature of a graduate degree, with its focus on independent research, does not allow international graduate students the option of interacting with their classmates in either formal or informal learning spaces as often as other groups noted above. In addition, international graduate students tend to be away from their family and friends, when they study in a Canadian post-secondary institution, and this may amplify the differences as well. Faculty and resources should be aligned to ensure that evolving support meet emerging needs. The foundational documents, such as the learning charter or learning, teaching and student experience plan (Learning Charter, 2010,2018) should support this as well, and be very clear about the strategies in place to support international graduate students via formal and informal learning spaces. The mission, vision, values statements of post-secondary institutions need to show commitment to building diverse institutions and offering appropriate international student support in the forms of practical services, learning spaces, and influencing engagement by satisfaction, belonging, agency and community for international graduate students. (Byers et al., 2014, Marginson, 2014; Strickland, 2016; Sturner, 1972, Tinto, 2012;)

The implementation of these practices and documents would increase international graduate student success. Abel (2002) stated that academic student success is “a confluence of factors – language proficiency, learning strategies, classroom dynamics, equally important is the educational assistance provided by study groups and peer tutoring as well as carefully choosing instructors” (p.18). What is missing, however, is research of and focus on the impact of learning spaces on international graduate students at Canadian post-secondary institutions and if international graduate students perceive learning spaces to have a positive impact on their success.

The goal and purpose of my research of international graduate students and learning spaces would be to create principles for international graduate student success as well as to establish policy. I examined if learning spaces, as a type of student support for international graduate students, can provide the engagement through social interaction, community, agency and satisfaction. These influences have a positive impact on international graduate students' success in post-secondary institutions. (Abel, 2002; Brooks, 2011; Byers et al., 201, Han et al., 2018.;Hu & Kuh, 2003; Morieson et al., 2018.; Van Horne et al., 2018, Wood et al., 2012;). I also examined international graduate students' perceptions of their formal and informal learning spaces, of the classrooms, and their instruction. Researching this further would help ensure that institutions are doing what they can do to support international graduate student success for those students studying at their institutions.

### **Ideas for Future Research for International Graduate Students**

More research is needed on how international graduate students perceive and are affected and influenced by their learning spaces. Additionally, research is needed to determine if learning spaces can be student supports that encourage the international graduate students to be more successful by being engaged. Future research could also focus on how the influencer of agency can be found in informal and formal learning spaces. This was only briefly discussed and further research specific to international graduate students should be conducted. Future research could also examine how learning spaces advances self-formation and agency in international graduate students. The impacts of COVID-19 and the methods used to gather data in this study did not inherently lead to discussions of agency and self formation and the impact learning spaces had

on those influencers. The focus of the international graduate students was primarily on community, belonging and social interaction influencers.

Another potential research possibility would be to examine if American graduate students may be considered separate from other international graduate students when contemplating international graduate students and their perceptions. The voice of the American participant, who identified male, was often different than the others; however, the reasons for this may not be fully explained by him being from the US. This was just an observation by me but should be considered for future research on international graduate student research.

At USask, other non-traditional students have dedicated learning spaces whereas, international students have the International Student and Study Abroad Centre (ISSAC) and the Graduate Student Commons. This research questioned if learning spaces could be a support for creating community and social interaction as well, and these particular type spaces could be studied to see if these spaces offer the support that international graduates students desire and need for academic success. Future research could also include how international graduate students' perceptions of learning spaces are different than international undergraduate students.

The pandemic also highlighted the importance of quality virtual teaching and learning spaces and their importance to international graduate students. Further research might be conducted to examine the need to create virtual communities to support international graduate students.

Future research could also include how international graduate students interact with faculty and staff in learning spaces, as staff were noted as having a positive impact on international graduate students' learning experience. More research on international graduate students' perspectives

should be studied to examine how intentionally incorporating these perspectives into future learning space and classroom design can support student success.

### ***University of Saskatchewan Initiatives that Focus on International Graduate Student Success***

The Pilot Tuition Survey was a tuition consult pilot survey published in December 2021, asking students in the spring of 2021, where the university as whole or their colleges should invest to improve education quality, student experience or student support or divest resources, as they may be providing any valuable information on where students would like to see investment. A total of 669 out of 813 students provided completed responses which indicated that 13 percent were international, and 20 percent were in a graduate program (split equally between Master's and Doctoral). However, I have not seen the survey or the results, only this summary report on the findings. The highest number of results indicated that 22 percent indicated a desire for investment into facilities or infrastructure with the top subthemes involving public and private study rooms, better seating in classrooms and library settings, improvement to lab facilities, and the provision of free equipment. These results echoed the students interviewed for this research study; however, the report on findings are unclear as it was not indicated how many of those 22 percent were international graduate students. In addition, it was unclear if the students were speaking about tuition in particular or just in general, as the participants in this research study indicated, none of them wanted a tuition increase, to pay for learning spaces.

A second survey was published in November 2022, with results being similar to those found in the 2021 survey. The number of completed responses was slightly greater (2,889 out of 3600). 18 percent of the respondents were international students and of those, 22 percent were graduate students (13 percent Master's and nine percent doctoral). The areas of investment that

were important to students were the investments to facilities and infrastructure, and improvements to student wellness services. Although the survey did not indicate what percentage of international graduate students responded to specific questions, international students felt more strongly about those two areas than domestic students. In addition to reporting on specific investments, a sub theme that is relevant to this research was raised. In facilities and infrastructure, more leisure seating across campus, including outdoors; more services and programs, including expanding library hours and improving safety and security on campus; more assistance and support for international students; in student wellness, diversity and inclusion and more international student events and advocacy. All of these responses align with the data gathered in this research.

The future goal for this researcher is to ensure that institutions create situations and environments that provide international graduate students with space for self-formation and agency to develop while being engaged, satisfied, communally and socially interactive. International graduate student supports needs to go a step further and provide student supports in the learning environment and in the classroom. Another recommendation in terms of surveys, would be including a specific international graduate student survey that ask the same questions, similar to the undergraduate surveys, in terms of satisfaction, engagement, community and belonging.

The Institutional Fundraising campaign highlighting the importance of learning spaces was recently unveiled by University Relations at USask. One pillar was to “Design Visionary Spaces.” Create gathering places for people to collectively address the challenges of the future” (Campaign for USask, 2021). As part of a \$500 million campaign, reimagining learning spaces

became a priority for the institution. “Together we can reimagine the learning spaces for tomorrow’s student and make them a reality”(Campaign for USask, 2021). As such, research into learning spaces for international graduate students can provide direction on what international graduate students’ future needs are based on their current state perceptions of learning spaces.

One of the four pillars of the institutional blueprint strategy is “internationalizing learning experiences”. The action plan also states,

Internationalizing our learning experiences is about providing diverse international opportunities for students, both inside and outside the classroom. Through proactive support of colleges/schools, administrative units, student groups and individual students, the University of Saskatchewan opens the door for greater and equitable participation of students in educational experiences outside of Canada. We also enable increased intercultural understanding through inclusion of cross-cultural perspectives within the USask curriculum and high impact co-curricular activities that foster intercultural understanding and enhanced feelings of belonging. (University Plan 2025)

This acknowledgement of prioritizing internationalizing experiences is for domestic students who study aboard as well as those international students who come to study at the institution. Objectives 2.2 is to support the well being and success of our international students; however, creating learning spaces for international graduate students is not included in the actions, although enhancing the feeling of belonging has been indicated as important. This research supports the idea that creating learning spaces that create a sense of safe, supportive, healthy community, is important to international graduate student success.

## **Concluding Thoughts**

Mission, vision, value statements are essential for any post-secondary institution. A foundational document articulates the purpose of the institution and is used as a guide for establishing priorities, beliefs and commitments of the institution. These institutional strategies should directly and indirectly dictate support for international graduate students. The declarations in Mission, vision, value statements of an institution are part of a strategic plan that, in turn, determines if international graduate student supports are a priority. The mission, vision values, learning charters, international blueprints, as well as institutional policies should reflect the factors that create student success for all students, including international students. As such, foundational documents should include factors and opportunities that speak to the importance of engagement, satisfaction, community, and social interaction that is supported by the environment, learning spaces, classroom design and pedagogy.

The Mission, Vision, Value statements and objectives must include and identify international graduate students, in particular, so they see themselves as a priority and important to the institution. The statement must be inclusive to all students, not just traditional undergraduate students. The students in this research study did not identify with the mission, vision, and values and did not believe it was directed at them. The Learning Charter may also need to include the prioritizing of learning spaces, both formal and informal for international graduate students in particular. Research results in this study indicated that international graduate students want both formal and informal learning spaces and believe these have a positive impact on their academic success, via creating spaces for community, social interaction and belonging.



Equity, Diversity and Inclusion policies should include references in particular to international graduate students since “The university believes equity, diversity, inclusion, and a sense of belonging strengthen the community and enhance excellence, innovation, and creativity in all domains. (Equity, Diversity and Inclusion Policy, 2020, para.2)” The policies and principles also articulate the importance of fostering

a culture that embraces equity, diversity, inclusion, and belonging” and “acknowledge[s] and address[es] the biases, underlying beliefs and values, assumptions, and stereotypes that inhibit opportunity in work and learning environments. Provide environments that are free of discrimination and harassment, and inclusive of all individuals. College, units and the institution units are accountable to Provide physical and virtual environments that are accessible, including but not limited to the equipment and resources within them.

Create and sustain a welcoming environment in common spaces that reflects social and cultural diversity through signage, art, ceremonial spaces, language, and inclusive cultural practices and protocols. (Equity, Diversity and Inclusion Policy, 2020)

Policies like these, and their related documents have to include nomenclature about the importance of learning space in the process of building community to create a sense of belonging and safety is a priority is for international graduate students.

International graduate students must be included in all considerations for formal and informal learning spaces as their voices represent a growing number of students. Their perceptions need to be further researched to include future post-secondary learning environments, both physical and virtual.

This research indicates that formal and informal learning spaces (both physical and virtual) are needed to support influencers such as community, belonging, social interaction, safety. These influencers are key to international graduate students' academic success. This study enhances, supports and emphasizes the importance of learning spaces being a conduit for providing these influencers for international graduate students. Previous research done by Balogu, cited in Sawir, (2008) noted that friendships were the most preferred source of help and for international students and that friendship networks provide the most important support systems (p.156) and the institution should “provide mechanisms that trigger networking and forming relations” (p. 170). Informal and formal learning spaces that create these influencers can be implemented if the post-secondary institution acknowledges that international graduate student success and appropriate learning space for them, are a priority. This research, conducted during the pandemic, also indicates that outdoor space is important as both a formal and informal learning space and should be configured to enhance mental health. The theme of safety and security in the physical, emotional, psychological, and financial areas were highlighted during the pandemic as well. The importance of learning spaces available for cultivating relationships with the supervisor as well as the department staff was also emphasized.

Policies, and foundational documents and mission, vision, and value statements need to address international students specifically in order to include them in all facets of the institution. International graduate students need to feel their educational experience is a priority and just as important as the domestic undergraduate student experience.

Researching learning spaces and international graduate students' perceptions of it, has shown how important learning spaces of all types, informal, formal, physical, and virtual are to

international graduate students. Learning spaces that allow for connection, belonging, community and social interaction have been highlighted as important during this research project. Learning spaces that allow international graduate students to interact with their supervisor, faculty, and department support was also shown to have a positive impact. Influencers such as belonging, community, and social interaction have been found to have a positive impact on international graduate student success by also providing safety and mental health supports. By creating a sense of place and space for international graduates students on Canadian campuses and institutions, international graduate students will achieve greater success in their learning. The purpose of this study was to identify the perceptions of international graduate students of various types of learning spaces and to explore if their needs are being met in both formal and informal learning spaces. The purpose was also to establish if learning spaces can enhance student engagement for international students. I believe this research project has established, by examining international students' perceptions of learning spaces, that international graduate students believe learning spaces can provide what is required for their engagement and success and that the influencers of community, social interaction and, belonging had a direct impact on their success.

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## **Appendices**

### **Appendix A – One-On-One Interview Guide**

I am researching international graduate students' perceptions of various types of learning spaces and want to know your opinions, feelings and knowledge of learning spaces, and if you believe that learning spaces could enhance your engagement and help you achieve success at the University of Saskatchewan. I will do so both by observation and an interview, from the questions below, as well as any that may emerge from the observation.

#### **Research Questions:**

The following are research questions that will guide the study:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?
  - b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?
- 3) What can institutions do to provide learning spaces for international graduate students that international graduate students' value and may promote their engagement and success?

#### **Interview Questions:**

##### **PART A: DEMOGRAPHICS**

Tell me a little about yourself - program, year, and country of origin?

What brought you to this university?

## PART B: LEARNING SPACES

What are your expectations of learning spaces? What is the reality of learning spaces?

How important are learning spaces for international graduate students?

Do you prefer one learning space over another?

Give me an example of your ideal learning space has been your idea of an ideal learning space.

What makes it ideal? Is the physical space nice, relaxing, etc? Is it a welcoming and inviting environment? Is it a good place place to communicate? You feel like you belong?

What are you looking for in learning spaces. Why? Do those types of learning spaces exist on campus?

Can you define what a learning space is?

What is your favourite learning space on campus and why?

## PART C: INFLUENCERS

Where do you usually study, socialize or generally interact on campus?

Do you interact more in certain types of learning spaces?

Do you find community in specific learning spaces?

Should there be international student space ie. Like the Gordon Oakes red bear centre? Is ISSAC like that?

Do you think learning spaces are designed to promote engagement, community building, belonging, satisfaction? Is that important?

Do learning spaces help you succeed?

Are learning spaces welcoming?

Do you feel more confident or comfortable in certain learning spaces?

Do you believe different types of learning spaces allow you to be more engaged?

#### PART D: STUDENT SUPPORT SERVICES

Could learning spaces be considered a form of student support service?

What student support services for international students are you aware of?

Do you utilize support services?

Are you aware of services in place to support engagement, and community building for international/diverse/non-traditional students?

How can student supports promote engagement, success, and community for non-traditional/diverse/ international students?

#### PART E: POLICY

Do you think learning spaces are an institutional priority?

Are you aware of policies in place to support engagement, belonging, and community building for international/diverse/non-traditional students?

#### PART F: PANDEMIC CHANGES

What are international graduate students' perceptions of types of learning space(s) that are currently no longer accessible due to the nationwide lockdown of post-secondary institutions to inhibit the spread of COVID-19?

How important are learning spaces for international graduate students during this pandemic?

What do you miss the most about learning spaces now that the protocols are social and physical distancing?

Does not being able to be on campus have a negative impact?

What do you miss most about the types of learning spaces you used to frequent?

## **Appendix B – Focus Group Interview Guide**

I am researching international graduate students' perceptions of various types of learning spaces and want to know your opinions, feelings and knowledge of learning spaces, and if you believe that learning spaces could enhance your engagement and help you achieve success at the University of Saskatchewan. I will do so both by observation and an interview, from the questions below, as well as any that may emerge from the observation.

### **Research Questions:**

The following are research questions that will guide the study:

- 1) How do formal and informal learning spaces contribute to international student success?
  - a) What are international graduate students' perceptions of types of learning space(s)?
  - b) How important are learning spaces to international graduate students?
- 2) How can learning spaces be included as support like other programs and services offered to international graduate students at post-secondary institutions?
- 3) What can institutions do to provide learning spaces for international graduate students that international graduate students value and may promote their engagement and success?

### **Interview Questions:**

#### **PART A: DEMOGRAPHICS**

Tell me a little about yourself - program, year, and country of origin?

What brought you to this university?

#### **PART B: LEARNING SPACES**

What are your expectations of learning spaces? What is the reality of learning spaces?

How important are learning spaces for international graduate students?

Do you prefer one learning space over another?

Give me an example of your ideal learning space has been your idea of an ideal learning space.

What makes it ideal? Is the physical space nice, relaxing, etc? Is it a welcoming and inviting environment? Is it a good place place to communicate? You feel like you belong?

What are you looking for in learning spaces. Why? Do those types of learning spaces exist on campus?

Can you define what a learning space is?

What is your favourite learning space on campus and why?

## PART C: INFLUENCERS

Where do you usually study, socialize or generally interact on campus?

Do you interact more in certain types of learning spaces?

Do you find community in specific learning spaces?

Should there be international student space ie. Like the Gordon Oakes red bear centre? Is ISSAC like that?

Do you think learning spaces are designed to promote engagement, community building, belonging, satisfaction? Is that important?

Do learning spaces help you succeed?

Are learning spaces welcoming?

Do you feel more confident or comfortable in certain learning spaces?

Do you believe different types of learning spaces allow you to be more engaged?

#### PART D: STUDENT SUPPORT SERVICES

Could learning spaces be considered a form of student support service?

What student support services for international students are you aware of?

Do you utilize support services?

Are you aware of services in place to support engagement, and community building for international/diverse/non-traditional students?

How can student supports promote engagement, success, and community for non-traditional/diverse/ international students?

#### PART E: POLICY

Do you think learning spaces are an institutional priority?

Are you aware of policies in place to support engagement, belonging, and community building for international/diverse/non-traditional students?

#### PART F: PANDEMIC CHANGES

What are international graduate students' perceptions of types of learning space(s) that are currently no longer accessible due to the nationwide lockdown of post-secondary institutions to inhibit the spread of COVID-19?



How important are learning spaces for international graduate students during this pandemic?

What do you miss the most about learning spaces now that the protocols are social and physical distancing?

Does not being able to be on campus have a negative impact?

What do you miss most about the types of learning spaces you used to frequent?

## **Appendix C – Participant Recruitment Announcement**

I am a researcher from the College of Education, University of Saskatchewan, who is requesting international graduate students to be volunteers and take part in a study about International Students Perceptions of Learning Spaces, which objective is to understand the perception of post-secondary graduate students and capture students' perception about if learning spaces affect their success at the post-secondary institution. International graduate students from the University of Saskatchewan (U of S), regardless of college, are welcoming to participate.

As a participant in this study, you would be asked to do the following: agree to be observed in a variety of learning spaces and agree to answer ten to twelve questions in regards to learning spaces.

Your participation in this study will require approximately four hours of your time in total, with the activities mentioned above (observation and interviews) requiring approximately one hour of observation in two to three learning spaces and a one hour interview. Each of the activities will be completed at various learning spaces at the University of Saskatchewan and the College of Education, University of Saskatchewan.

Participants will receive a gift card at the end of the study.

## Appendix D – Participant Recruitment Poster

### Department of Educational Administration University of Saskatchewan



#### **PARTICIPANTS NEEDED FOR RESEARCH ON LEARNING SPACES**

We are looking for volunteers to take part in a study of international graduate students' perceptions of learning spaces.

As a participant in this study, you would be asked to: participate in an online interview and if you have a particular interest in this subject, a focus group as well.

Your participation would involve up to two sessions, each of which is approximately sixty to ninety minutes.

Participants will receive compensation in appreciation of their time in the form of a gift card.

For more information about this study, or to volunteer for this study, please contact:

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This study has been approved by the University of Saskatchewan Behavioural Research Ethics Board



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