Transport Disadvantages and their Adverse Social Consequences: A Case Study of SFU Commuter Students

by

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Abstract

This research examines the influence of the commute conditions on the campus involvement of undergraduate students at SFU. The intent of the research is to determine how student involvement can be hindered by transportation disadvantages and the different factors that lead to these transport disadvantages, which is defined as factors that leave areas with limited or no access to public transport by comparing the distribution of services to the location of individuals involved (Murray & Davis, 2001). The research identifies factors that affect student commutes that have influenced and shaped their involvement patterns on campus. Understanding these factors and the relationships between them will help post secondary institutions to have more targeted resources and programs for different students. Additionally, this research helps assist municipal and transportation planners to better understand the importance of affordable housing and transport infrastructure around education institutions.

Keywords: transport disadvantage, student involvement, housing crisis.

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Chapter 1.

Introduction

The introduction of TransLink's U-Pass program in 2003 transformed transit patterns for students in the Greater Vancouver area. While addressing transportation challenges, the U-Pass aimed to reduce single-occupant vehicle trips and parking demand on campuses. Simon Fraser University (SFU) students notably embraced transit, with 88% now relying on it regularly, indicative of the U-Pass program's success (SFU Student Services, 2015). However, the persistent housing affordability issue has pushed students further from SFU, leading to longer commutes. The commuter school identity of SFU and dependency on transit have driven concern over how the university can attain a sense of active student community, in view of the transportation obstacles faced by students; the Community Vibrancy Initiatives is the latest major effort to address this. This research delves into the nexus of these dynamics, examining how extended commutes, influenced by housing, impacts student involvement with SFU's Community Vibrancy Initiatives. The research offers insights into the interconnectedness of transportation, housing, and campus involvement.

1.1. TransLink U-Pass Program

In 2001, the University of British Columbia had a need to develop their endowment lands which was met with a requirement of reducing single-occupant vehicle trips to the campus (Lambert & Beaudoin, 2006). Simon Fraser University on the other hand in 2002 wanted to lower transit costs for students and to reduce demand for parking on campus; they also had development interests on parking lots which have subsequently been realized as the UniverCity development. These two concerns facilitated the conversation of establishing the Universal-pass (U-pass) program in the region. The U-pass program was introduced in September 2003, giving students access to bus, SeaBus and SkyTrain services within all zones in Metro Vancouver (Lambert & Beaudoin, 2006). It also included discounts on the West Coast Express. The objectives of this existing program are to lower travel cost, encourage a transit lifestyle, to reduce congestion and the negative environmental impacts of automobiles (TransLink, n.d.). It is targeted to university students (both full and part time).

This partnership is between the post-secondary institutions, their student societies, TransLink, and the Province of British Columbia. In 2019, the program agreement was extended for five years, with rates ranging from $41-46 monthly until the end of the agreement period (Ministry of Transportation and Infrastructure, 2020). This pricing is less than half of the existing price for a one zone adult monthly pass priced at $104.90. There are currently 10 participating public post-secondary institutions in the program with the program providing transit access for 140,000 students (Ministry of Transportation and Infrastructure, 2020).

In SFU the participating parties include Simon Fraser University, the Simon Fraser Student Society (SFSS), the Graduate Student Society (GSS), TransLink, and the Province of British Columbia. U-Pass was approved through SFSS and GSS referendum (SFU Student Services, n.d.-b). It is recorded that about 95 percent of students at SFU find reliable TransLink services to be very important and 88 percent regularly use public transit to class, compared to the national average of 57 percent (Simon Fraser Student Society, 2022). This shows that a significant percentage of students have adopted transit lifestyles as compared to when the program initially begun (34% transit mode share in 2003) (Lambert & Beaudoin, 2006).

Despite the aim of the u-pass being to make life more affordable, convenient, and increasing accessibility to the region for students, there are some factors that can make this untrue for many commuter students. The current housing affordability can be one such factor as it is observed to push individuals away to housing options with limited public transportation access (Combes et al., 2019). It is observed that SFU students have an average commute time of 95 minutes round trip which as compared to the 85.8 minutes national average on transit (SFU Student Services, 2015). This research explores transport disadvantaged commuter students at SFU to discover if and how these travel conditions impede on their social involvement on campus.

1.2. Housing at SFU

For several years Vancouver has been experiencing a housing affordability challenge across the region. Factors such as limited land availability, foreign investments and high demand have contributed to making Greater Vancouver one of the most expensive housing markets in Canada. The rising prices have also resulted in a pressure

build up on the rental market causing a challenge for residents such as people with lower and middle incomes and first-time homebuyers (Bond, 2022).

To address the housing issue in 2019/2020 the Simon Fraser University secured a $73 million loan from the provincial government to build campus accommodation for students (Ministry of Post-Secondary Education and Future Skills, 2023; SFU News, 2019; Simon Fraser Student Society, n.d.). This was to provide an addition of 1,971 beds for students. In 2023, 383 beds were added for students in the school's Burnaby campus. Although there are continuous efforts to increase the number of beds in the future there are students currently in need of housing now that must compete in the housing market. It is important to mention that the current cost of undergraduate residence fees ranges from $3,496- 4,200/ semester which does not include the $3,381 meal plan and other required charges (SFU Student Services, n.d.-a). For students living in four of the major residence buildings at SFU, they are required to be on the $3,381 meal plan. These students are expected to pay for this meal plan and accommodation fee ($3,496-$4,2000) up front at the beginning of the semester together with their tuition fees. Students who can afford on-campus accommodation are faced with some uncertainties of getting a spot on-campus (Bhatnagar, 2023). They must compete with other students for a spot in student housing requiring some to remain on long waitlists (Correia, 2017; Prasad & Matassa-Fung, 2022; Student Services, n.d.).

Evidence from across the region shows that post secondary students that do not find accommodation on campus are faced with low vacancy rates around their campuses (Derworiz, 2023). Some result in paying higher private rental market prices to live close to the universities, others find cheaper housing further from campus or in unsafe situations and some remain at home and commute from there to school (Canadian Broadcasting Corporation, 2022; Derworiz, 2023; Ding, 2024; Luymes, 2023; Skopeliti, 2023; Urbanation & Rentals.ca, 2024).

This research explores how these commutes to campus impact students' involvement on campus. Their involvement on campus will be assessed by examining how commuter students engage with the SFU Community Vibrancy Initiatives established at the Burnaby campus.

1.3.   The SFU Community Vibrancy Initiatives

In 2021 Simon Fraser University began planning and engaging stakeholders (students, staff, and faculty) to develop the SFU Burnaby Community Vibrancy Playbook as part of community vibrancy initiatives. This program was implemented to provide a lively and social atmosphere for students returning to the campus after remote learning caused by the Covid- 19 pandemic (Ancillary Services, 2021). The playbook is aimed at fostering a sense of belonging through activities and enhancement of the campus space to create more community connections through programming, activities, interventions and other initiatives (Ancillary Services, 2022). Some of these include fire pits, games at the SFU Convocation Mall and a campus community shuttle. The focus areas for these initiatives are the SFU Burnaby Campus, UniverCity and more generally the Burnaby Mountain. These activities are to enhance the campus and the community experience on the Burnaby Mountain. The goal is to implement the different vibrancy initiatives within the next 7- 10 years (Ancillary Services, 2022). The pillars for action for this intervention include:

- Reimagining the built environment

- Connecting to nature

- Food and retail

- Arts and culture

- Connecting community

Although the pillars have not fully been implemented the vibrancy planning committee continues to work towards implementation. Currently the implemented vibrancy initiatives targeted to reimagining the build environment includes the addition of more colour in the campus and creation of activations like the Street Fest in the Fall. There are other implementations like with arts and culture where there has been an introduction of more public art, and performances on campus. Additionally, creation of more spaces to gather in all seasons is creating more opportunities to connect the community.

A survey was commissioned by SFU Ancillary Services as an intercept survey during the Spring 2023 Spirit Day. The SFU Ancillary Services are responsible for facilitating the initiatives. This survey was to assess implemented actions and to bring awareness to the Community Vibrancy Playbook. The survey was conducted on a single day, at the Spirit Day, a community event held on campus with many activities to connect and celebrate SFU. The survey questions were made available via a QR code that participants scanned with their devices to access the questions. There were 14 questions in the questionnaire with a time of completion of approximately 5 minutes. The questions discussed participants' interaction with the vibrancy activities and initiatives, their sense of belonging on campus, their travel to campus and some demographic questions. 63 respondents participated in the survey. Respondents included SFU students, staff members and visitors. Responses suggested that the initiatives were well known with some being more popular than others. Some important aspects of the survey responses to this research are that about 78% of respondents accessed the campus through public transit and 68 percent of these student participants travel over 5 km each way to the campus. Additional information about the survey is given in my methodology section. The tables below show some of the responses from conducted survey. Table 1.1 shows the distribution of participants that lived at SFU and others that lived off campus.

Table 1.1.   Distribution of 2023 survey participants and their living arrangements

Living Arrangement	SFU undergraduate student	SFU graduate student	FIC student	Visiting research student	SFU staff	Total
In SFU Residences and Housing	11	0	2	0	1	14
Off the Mountain	36	10	0	1	1	48
Total	47	10	2	1	2	62

Note: This data was provided by SFU Ancillary Services

Additionally, when given a range of days they traveled to the SFU Burnaby campus in a week about 85% of respondents reported traveling to campus between 3-5 days per week. Concerning extracurricular involvement, respondents found the campus

more enjoyable with the initiatives and 60% of these students noted that they stay longer on campus to participate in these activities.

Student involvement theory indicates that the amount of physical and psychological energy a student devotes to the academic experience is significant in their development (Astin, 1984). The theory suggests that the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement. Student involvement is a behavioural component of student life which includes what a student does on campus rather than their thoughts and feelings. That is, the different activities they engage in and how often they are engaged. The tables below show the responses from undergraduate students on the impacts of involvement in the initiatives on their student experience. These are some of their answers to the survey questions. The survey inquired whether the respondent had the opportunity through participating in the Vibrancy initiatives to interact with new people they did not know prior to participating, whether they formed new friendships through their interaction, and if they stayed longer on campus to participate. Results from the survey are displayed in the tables below for better understanding.

Table 1.2.   Distribution of survey participants who have met new people through the Vibrancy Initiatives

Met New People	Car or carpool	Public transit: 5km	Public > 5km	Walking	Total
Yes	4	3	15	2	24
No/	1	1	17	1	20
Total	5	4	32	3	44

Table 1.3.   Distribution of survey participants who formed new friendships through the Vibrancy Initiatives

New Formed Friendship	Car or carpool	Public transit: ≤ 5km	Public transit: > 5km	Walking	Total
Yes	3	2	10	1	16
Uncertain	1	2	17	2	22
No	0	0	5	0	5
Total	4	4	32	3	43

From the two tables above, it is apparent that some students who traveled more than 5km to the campus by transit had met and formed friendships while interacting with these initiatives. However, 17 out of 32 of these students (Public transit: > 5km) were uncertain if they had formed new friendships through the initiatives. This research thence explores why commuter students are and are not forming these connections and the different factors that play a role in how they get involved and are impacted by the initiatives. I also explore the reasons why these commuter students stay longer on campus while participating in these activities as shown in the table below.

Table 1.4.   Distribution of survey participants who stay longer on campus because of the Vibrancy Initiatives

Stay on Longer	Car or carpool	Public transit: ≤ 5km	Public transit: > 5km	Walking	Total
Positive	3	3	21	2	29
Somehow Positive	2		11	1	14
Negative		1			1
Total	5	4	32	3	44

In this research I explored in depth the capacity of Simon Fraser University's Community Vibrancy Initiatives to increase involvement commuter students and investigate the transportation factors they compete with for the students' attention and 'finite" time as elaborated by Astin's student involvement theory (Astin, 1984).

1.4. Research Question

The purpose of this research project is rooted in a case study that examines the transport conditions of post-secondary commuter students that make them transport disadvantaged and less likely to be involved in campus activities. The research question attempts to understand challenges met by commuter students by asking, *how do transport disadvantages faced by commuter students in Simon Fraser University impact their social involvement on campus and how has the Community Vibrancy Initiatives created involvement opportunities for these students? In the process of the research a sub-question the research addresses include, what housing factors or conditions impact a students travel time?*

The answers to this research question are aimed at assisting administrators of post-secondary institutions and the facilitators of the Community Vibrancy Initiatives to better understand the factors that influence commuter students' involvement on campus. Additionally, this research question assists municipal planners and local leaders to better understand the impacts of the housing affordability crisis on students and the importance of increasing affordable housing supply around post-secondary institutions. The research also adds to the limited literature on quality of life and educational experiences of commuter students.

A study on social involvement of commuter students found that social interaction is inextricably connected to academic integration, provides socio-emotional support, and allows students to establish peers as friends and associates (Krause, 2007). This project explores the opportunities that the Community Vibrancy Initiatives create for commuters when they get involved. I identified a couple of quantitative research studies on the topic of university commuter students (Allen & Farber, 2018, 2019; Coutts et al., 2018; Labra et al., 2021) but had challenges identifying qualitative research on the topic, other than Krause (2007). Existing research suggests that while commuter students share many similarities with residential students, they are less likely to stay longer on campus and be involved with social activities outside of the classroom (Astin, 1984; Biddix, 2015; Bloomquist, 2014; Krause, 2007). This may carry educational and other lasting disadvantages for them, as participation in on-campus social activities are observed to increase opportunities to access resources and the job market, to create social networks, and to positively impact student grades and university retention rates (Krause, 2007; Tinto, 1999). The findings not only focus on insights on commuter students' social involvement on campus but also include the different factors that impact their living arrangements and their travel time to the campus. In this research I explore the connection between various factors that impact the student experience.

Chapter 2.   Conceptual Framework

2.1. Housing Affordability Crisis

Despite cities occupying 2 % of the earth's surface area, they host more than 50% of the world's population. By 2050 it is projected that 65% of the world's population will live in urban areas (United Nations, 2018). Housing however is a major challenge faced by cities. Housing has a long-lasting effect on the economy and plays a vital role in the increasing inequality in developed countries (Piketty, 2018). It is observed by UN Habitat that the housing affordability crisis being experienced no longer affects only large metropolitan areas or low-income households (UN Habitat, 2020, p. 24). Recently to own a home, an increasing number of households must save their annual incomes multiple times to afford a down payment for a home. On the other hand renters also spend large portions of their income on their house rents (UN Habitat, 2020, p. 104). This is understood using the median multiple, a price-to-income ratio that shows how affordable housing is relative to income levels (Cox, 2023). The demand shock caused by the Covid-19 pandemic resulted in a rapid decline of housing affordability globally. Despite the general stability observed in markets recently, the levels of housing prices are still higher than before the pandemic (Cox, 2023, p. 6). However, in the Vancouver area the price-to-income ratio remains exceptionally high at a 12.0 rating in comparison to other Canadian cities (8.8 average in Canadian house holds) (The Measure of a Plan, 2024; Whitzman, 2023, p. 16).

2.1.1. Causes of the Housing Affordability Crisis and its Impacts on Young Adults in Universities

The increase in the population of urban areas is listed to be a cause of increased housing costs (Combes et al., 2019; Duranton & Puga, 2019, p. 2). However, scholars have observed some other causes of the crisis, which include housing supply (Molloy et al., 2022); credit constraints, and interest rates on housing prices (Favara & Imbs, 2015). Income inequality has also led to the wealthy pricing out poor individuals in metropolitan areas (Zhang et al., 2016). An explanation for this is that as the income of wealthy households increases it leads to a higher equilibrium housing price, making it unaffordable for the lower income households. In addition to the causes of the housing

crisis, Duranton and Puga (2019; Martinez-Mazza, 2021) explain that, as the number of people in cities continues to increase, the housing prices at the edges of cities will increase. This is caused as a result of stricter planning regulations in place within the large cities that limit the entry of new residents into the city. Additionally, larger cities impose these strict regulations to avoid the lose of their higher productivity in urban costs (Duranton & Puga, 2019, p. 2). Cities that are more populated have higher house prices in their centre, these high prices can extend over a larger distance to their peripheries. According to Durant and Puga this is result larger cities have more stringent planning regulations which results in higher housing prices (Duranton & Puga, 2019, pp. 22–24).

The impacts of affordability crisis tend to affect the young population, as they are spending more on housing than earlier generations however experience a lower quality of life (Judge & Tomlinson, 2018). This has resulted in a higher percentage of the young population struggling to leave home, they are now staying at home longer than the older generations did (CreditKarma, 2022; Dragos, 2023; Judge & Tomlinson, 2018). In the US 50% of people between 18 and 19 years still lived at home in 2020 in comparison to 36% of people in 1990s (Fry et al., 2020). This level has not been seen since the Great Depression era when the percentage of young adults living at home was 48%. Additionally in Canada 35.1% of people aged 20-34 still live at home (Statistics Canada, 2022a). These are high numbers in comparison to previous years, in 2001 the 30.6% was what was recorded, this has since risen to 35.1% in the recent 2021 Census (Fry et al., 2020; Schwanitz & Mulder, 2015; Statistics Canada, 2022a). The share of young adults living with parent remained the same in 2021compared to 2016. Individuals from the ages 20 to 34 years are considered to be young adults by Statistics Canada. Within this age group the share of individuals aged 25-34 years who lived with parents increased from 38% in 2001 to 46% in 2021(Statistics Canada, 2022a). This remains the highest level on record and is speculated to be out of necessity, preference, or both. Reasons cited include increasing needs for continued financial support from parents or a lack of affordable alternative housing options; a personal choice by these individuals; or for companionship and emotional support, or other reasons (Statistics Canada, 2022a). In another perspective, research conducted on young adults and their choice to stay at home or in their childhood area found that staying at home or in the childhood neighbourhood was a form of attachment to place. Some individuals' decision making was based on their strong sense of belonging (Stockdale et al., 2018, p. 7). However,

this does not explain the rate of change or where this place attachment may be newly coming from.

2.1.2. Housing in Metro Vancouver

Since the Canadian Real Estate Association started tracking housing market statistics in 1980, Metro Vancouver has had one of the most expensive housing markets in Canada (Stone, 2016; The Measure of a Plan, 2024). The region is faced with high rent and housing purchase prices making housing issues the most significant challenge facing the region today (Bond, 2022). The crux of these issues is tracked as the median multiple (how affordable housing is relative to income levels) of Vancouver being 12.0 making it the third least affordable market amongst 94 major markets that were studied in Australia, Canada, China, Ireland, New Zealand, Singapore, the United Kingdom and the United States (Cox, 2023). To put things in perspective, median multiple rate range in four quartiles from most affordable which is 3.0 and below, to severely unaffordable which is 5.1 and above (Cox, 2023, p. 1). Using this understanding, it is apparent how severely unaffordable housing is in the Vancouver area with a 12.0 rating. Subsequently this housing unaffordability situation has led to a spread of unaffordable housing from Vancouver to smaller markets in Metro Vancouver. The housing affordability challenges have impacted renters in many ways such as high rental costs, limited availability of rental units, a rental market squeeze, instability of rental tenures and security and substandard quality of rental units (Judd & Jung, 2024; Statistics Canada, 2023b; Thomas, 2024). The impacts of these conditions vary depending on a person's income level, personal housing preference and location in Greater Vancouver.

To combat these issues of housing affordability, the government has put in place multiple measures to address these housing situations. Some of these include: the introduction of regulations on foreign investment like the two year ban on foreign ownership of Canadian housing (Department of Finance Canada, 2024), increasing the supply of affordable housing units, and implementing taxes in vacant properties (BC Housing, 2023a, 2023b; Bond, 2022; Canadian Broadcasting Corporation, 2022). Some other measures put in place include the Tax-Free First Home Savings Account (FHSA), which allows first time home buyers to allocate up to $40,000 of tax-free savings to the purchase of their first home (Department of Finance Canada, 2022). Although its intent is to make it more possible for new households to purchase a first home and free up

rental housing for those who cannot afford to do so, some analysts believe that the FHSA drives up prices as more buyers compete for units (Kohn, 2022). In British Columbia, there have been successive pushes to increase new housing construction and change development planning regulations in order to allow for higher buildings and smaller dwellings as land gets more expensive (City of Vancouver, 2023; Ministry of Housing, 2023b). Additionally, new legislation allows more transit oriented developments to be built across the various municipalities (Ministry of Housing, 2023a, 2024). For university students investments have been made by the Government of B.C. to increase student housing with 8,000 new beds on campus by 2028 (Ministry of Advanced Education and Skills, 2022). However, despite all the efforts mentioned above, the issue of housing unaffordability persists in the region due to the inadequacies of policies to effectively address the root causes of these issues (BNN Bloomberg & Johnson, 2023; Infrastructure Canada, 2024; Medi, 2024).

The number of postsecondary students in British Columbia continues to grow over the years. Despite the issues of the Covid-19 pandemic in 2020, the 2020/2021 academic year had an overall increase of 2.1% university enrolments in Canada (Statistics Canada, 2022b). The share of international students in BC has also increased from 5% to 14% within the past decade (Heslop, 2018, p. 5). These international students make up 78% of total tuition for some institutions in BC (Xiong, 2024). In January 2024 these students have been required by the Canadian Government to show proof of funds of $20,635 (IRCC, 2024b). This amount has significantly increased from the previous requirement of $10,000. Despite all these requirement international students are faced with a limit of working 20 hours a week as they study in Canada (IRCC, 2024a). These limitations coupled with the housing affordability crisis put a higher burden particularly on international students.

Existing literature shows that housing affordability challenges can significantly impact transportation conditions of renters (Duranton & Puga, 2019; Zhang et al., 2016). This is because people move away to further distances from cities and city centres to cut down on their housing costs. Such challenges can impact commute times, transportation costs, accessibility to public transportation and transportation equity which makes them transport disadvantaged. That is people who do not have sufficient public transport services opportunities but may need these services (Murray & Davis, 2001).

We see the housing crisis at play at a smaller scale in post secondary institutions, which causes some students to live further away from the institutions (Aslam, 2023; Turner, 2024). Housing is the number one concern listed by young people when asked about their standard of living prospects making it a very crucial issue to be researched and addressed (Judge & Tomlinson, 2018). In an institution like SFU despite measures to increase the housing supply, over 88 % of undergraduate students find themselves commuting to class daily, with many traveling long distances to the Burnaby campus (SFU Student Services, 2015). For students in post secondary institutions, these housing challenges are also observed to impact their time management and flexibility, social engagement, access to campus resources and stress and well-being (Coutts et al., 2018). In this research, findings explore how the impacts of the transport disadvantages caused by the housing affordability challenges in the Metro Vancouver region affect the campus involvement of SFU commuter students.

2.2. Transport Disadvantages

Scholars in transport studies, urban studies and human geography have conducted extensive research on the connections of mobility with social inequality and deprivation (Hanson & Hanson, 1980; Mullen et al., 2014; Neutens et al., 2013). As a result, a direct causal link between transport disadvantage and social exclusion has been suggested (Church et al., 2000; Lucas, 2012; Preston & Rajé, 2007). Transport disadvantage is a complex construct that results from the interactions between land use patterns, the transport system, and individual circumstances. The use of terminology is inconsistent in the research, but this condition is referenced in relation to terms such as transport exclusion, transport accessibility, mobility limitations, transport poverty and a lack of transport equity (Dodson et al., 2004).This makes transport disadvantage a multi dimensional concept often discussed by scholars, with different contributing factors. The concept is often discussed using two main perspectives. That is, a focus on the contributing characteristics of the transport system and urban form, and the characteristics of transport disadvantaged people. However, other scholars emphasise the need to consider them together (Church et al., 2000). The following sections elaborate on the different perspectives.

2.2.1. Disadvantage through the Transport System and Urban Form

This perspective of understanding discusses transport disadvantage as being created by factors external to the individual affected, hence, through the transport system and urban form. Most scholars focus on the lack of sufficient public transport in defining transport disadvantages and as a way of understanding the relationship between transport system and social exclusion (Jones et al., 2005; Murray & Davis, 2001).

In this section I discuss the different ways in which scholars have described factors that create transport disadvantages. Wixey et al. (2005) outline 6 factors related to public transport access, these include:

- Spatial: where people have long journeys to access locations.

- Temporal: occurs when people cannot go to the places they need to go at particular times (e.g., late evening).

- Personal: Physical limitations or worries about one's own safety. (e.g. research shows that in a neighbourhood where pedestrians do not feel safe there are less people that will use the infrastructure available (Thornton et al., 2016)).

- Financial: when the cost of traveling is unaffordable.

- Environmental: the experience of negative externalities of the mode of transportation used (e.g., air pollution, noise, and car crashes).

- Infrastructural: when a community is physically segregated by transportation infrastructure (e.g., freeway).

- Institutional: when institutional policies exclude particular populations.

Church et al. (2000) in their research identified seven ways in which transport can impose social exclusion. These share characteristics with other definitions of transport disadvantages despite being referred to as mobility limitations:

- Physical Exclusion: when the transport system and built environment hinders accessibility (e.g., people with mobility impairment)

- Geographical Exclusion: when residents are situated in peripheries therefore lack access to a robust transportation system.

- Exclusion from facilities: when services are dispersed making them challenging for some populations to access.

- Economic exclusion: People with limited access to the transportation system will have difficulties finding and keeping jobs.

- Time-based exclusion: poor transport can exacerbate time poverty.

- Fear-based exclusion: certain social groups may fear travelling in certain places at certain times.

- Space exclusion: security and surveillance strategies can either facilitate a welcoming environment or make some social groups feel unwelcome in public spaces.

Murray and Davis (2001) discuss 3 elements that lead to transport disadvantage. They explain that transport disadvantage comes about when need for services is unmet or hindered as a result of particular circumstances. They include:

- Constraints on Locational Choice: This could be cost of housing or proximity to family.

- Dispersed Services: Services such as education, healthcare, and recreation

- Inadequate Transportation: This includes poor access to public transport or no access to automobiles.

Trasport systems and the urban layout can be contributors to social exclusion. As echoed by scholars there are limitations caused by spatial, temporal, personal, financial, environmental, infrastructural, and institutional barriers (Church et al., 2000; Jones et al., 2005). Additionally, constraints on locational choice, dispersed services, and inadequate transportation lead to transportation disadvantage (Murray & Davis, 2001). These constraints that can be caused by an inadequate transit system are evidence of how multifaceted the concept of transport disadvantages is.

2.2.2. Transport Disadvantaged People

This perspective focuses more on the wide range of people who are likely to face mobility or access problems and their characteristics. In the literature, low income and lack of car access are identified as the commonly mentioned contributors to transport poverty (Clifton & Lucas, 2004). Groups typically defined as transport disadvantaged include women, elderly, youth, unemployed, outer- urban dwellers, students, and the disabled (Anne Hurni, 2007; Clifton & Lucas, 2004; Currie, 2004; Dodson et al., 2004; Jones et al., 2005, 2005; Murray & Davis, 2001). The following are the common concerns Jones et al. (2005) also identified across these groups:

- Lack of information on the availability of public transport services or opening times of different facilities.

- Lack of money.

- Lack of confidence.

- Inappropriate operating practices or rules.

- Lack of help from staff.

- Lack of security.

- Poor design of vehicles and infrastructure.

Church et al. (2000, p. 195) encourage researchers to consider a multidimensional perspective which does not only consider characteristics of disadvantaged people but also the wider transport and land use situation. Using such a perspective to assess transport disadvantage is ideal in this research because it considers detailed geographical factors, such as the relations between residential location, where the activities that they want to participate in are located, and their need and ability to move between the two.

The concept of transport disadvantage covers various perspectives that reflect the connections between mobility and social inequality. Scholars emphasize two primary models: one focusing on external factors such as the transport system and the urban form, and the other focusing on the characteristics of affected individuals. These perspectives collectively emphasize the multidimensional nature of transport disadvantage, which shows the importance of a collective approach in dealing with its complexities and addressing impacts on social inclusion. In this research I explored the factors that create transport disadvantages using the conceptualization of Murray and Davis (2001) and Hurni (2007) who define it as areas with limited or no access to public transport by comparing the distribution of services to the location of individuals involved. They define the transport disadvantaged as the people who do not have sufficient public transport services opportunities but may need these services for full participation in student life. The research investigates and identifies the circumstances of commuter students in relation to their transport which does not allow for their campus involvement to be met.

2.3. Student Involvement

Student involvement refers to the amount of physical and psychological energy that the student invests in the university experience. Literature on student development is often interdisciplinary because of the different ways in which researchers describe and discuss variables that affect it (Evans, 2010; Hassenger, 1981; King, 1978; Longerbeam, 2016; Moshman, 2011). Student development includes a wide range of student affairs practice and research. It includes a student's growth, progress, or increase in their developmental capabilities as a result of enrollment in an institution of higher education (Patton et al., 2016, p. 27). Student involvement is an aspect of student affairs which gives insight into the student developmental process. It includes factors such as students' characteristics, environments, and experiences that influence developmental opportunities and processes (Patton et al., 2016, p. 34).

Involvement is more susceptible to direct observation and measurement than abstract psychological constructs like a person's motivation (Astin, 1984). Astin (1984) describes students as falling in the range of being highly involved to being uninvolved students. A highly involved student allocates considerable energy to studying, spends more time on campus, participates actively in campus activities and interacts with other students and faculty members. On the other hand, uninvolved students spend less time on campus, do not engage in extracurricular activities and have infrequent interactions with others on campus. Student involvement includes a wide range of activities. Some types of involvement in a post secondary institution like SFU include participation in social clubs, fraternities or sororities; student- faculty interactions; athletics involvement; honours program and research participation (Astin, 1975, p. 106).In this research, focus is put on the involvement of commuter students in extracurricular activities

2.3.1. Student Involvement Theory

The student involvement theory is rooted in a longitudinal study aimed at identifying factors in a university environment that significantly affect students' persistence in a post secondary education (Astin, 1975). Astin conducted the longitudinal study from the students' freshman year to their time of degree completion (1968 to 1972). The purpose of Astin's study was to identify the practical measures to minimize students' chances of dropping out and to find ways of increasing students' chances of

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finishing college. The data was collected from a representative national sample of 358 two and four year colleges and university institutions and 41,356 responses were used for this study. Questionnaires included information about student's educational and career plans, study habits, daily activities source of financial aid, enrollment status and compared the environment experiences between students. The research results found factors that contributed to a student's persistence in college such as academic performance, campus employment, and extracurricular activities suggested involvement; while factors that contributed to the student's dropping out such as boredom with courses, family responsibilities, financial difficulties and difficulty commuting implied a lack of involvement (Astin, 1975, pp. 14, 176). Additionally, students that lived on campus residence were observed to be more involved in all aspects of campus life than their counterparts who were commuter students. The increased involvement was because they spend more time on campus and have more opportunities to be involved (Astin, 1975). This increased involvement in campus life may help develop a stronger sense of identification with the institution, deterring dropping out (Astin, 1975, p. 76). In the longitudinal study more than half of all respondents lived in dormitories, (49 percent of the men and 63 percent of the women). This theory despite being dated still remains relevant in the conversation of student development. The proportion of commuter students at the time was much lower than the current conversation in this research. However, it was a representative sample at the time,

but the change suggests significant societal differences in what it means to be a commuter student now. The study has also been replicated and explored by other scholars since the 1970s. Some of these scholars, like Astin, have focused on student retention (Berger & Milem, 1999; Xiao et al., 2020), technology (Heiberger & Harper, 2008), academics (Graunke & Woosley, 2005), commuter students (Van Zyl, 2018) and extracurricular activities (Vetter et al., 2019) to name a few. To add to existing literature, this study explores how transportation disadvantages impact the social involvement of commuter students on the SFU campus.

Astin's theory was developed to create a simple understanding of student involvement, to explain the environmental influences on student development and to draw connections with other classical learning theories which Astin simplifies as, Subject-matter, the Resource, and the Individualized (Eclectic) theories. Another purpose of this research is to also create a guide for researchers investigating student

development. The researcher developed five postulates of the student involvement theory. These include:

- Involvement includes physical and psychological energy invested in various objects. This includes any academic or non-academic activity related to the institution students are in. Examples of such objects could be the student experience or preparation for examinations.

- Involvement can vary; that is, the degree of involvement in an object may differ and the extent of involvement can change over time.

- Involvement has both quantitative and qualitative features. Examples of both include how many hours a student spends on student club activities and whether the student builds social connection from these interactions or not.

- The level of development and learning associated with a given program is directly related to the quality and quantity of involvement within that program. This includes involvement in and out of the campus but directly related to the institution.

- The success of any given educational policy is inextricably linked to its ability to increase involvement.

The theory describes a student's time as the most precious institutional resource that administrators should be concerned about. Meaning that the extent to which a student can meet certain developmental goals is reliant on how much time and effort is devoted to a particular activity. While Astin's study focused on factors influencing continued academic engagement, my study considers the same theory in the context of extracurricular engagement on campus. To translate this into the context of my research, the more time and effort spent in extracurricular activities, the higher the chance of being more involved. This translates to students building more social connection or social capital; the resources that an individual can mobilize through their network of social relationships (Coutts et al., 2018). Furthermore, the theory indicates that the psychic and physical time and energy of students are finite. Meaning institutions compete with other factors that also require a portion of a student's time and energy. Therefore, I examine the impacts of the transportation disadvantages on social involvement.

To add to Astin's research, this research does not focus on student retention but rather the factor that led to commuter student involvement on campus. I focus on the impacts of their transportation experience on their campus involvement. It is important that the influence of transport disadvantages on student involvement is studied and understood because universities are places where people develop social networks that

equip them for their lives and careers after school (Tinto, 1999). These networks are built as students involve themselves in more campus related interactions. It is important that this research identified the possible transportation factors that are hinderances to commuter students' involvement on campus outside the lecture rooms. It aims to improve the wellbeing and success of commuter students by; improving understanding of challenges and informing decision making that improve urban development, enhancing the student experiences, evaluating the initiatives at SFU, and contributing to existing literature.

2.3.2. Commutes and Student Involvement

According to Zhao et al (2012) the commute time of a person depends mainly on where they live, work (for this research case where they attend school), and how they travel (transport mode). My research examined the commute conditions of participants as it pertains to commute distances and time, transport options available, transport service frequency and their proximity to stations that may affect their involvement in the various Vibrancy Initiatives. These factors affect the times and ease with which student access the campus, causing a reduction in the 'finite energy' and time available for social activities (as described by the Student Involvement theory). Past academic research has drawn a connection between long commutes and social participation (Besser et al., 2008; Mattisson et al., 2015; Poulsen & Svendsen, 2005; Putnam, 2000).

The average time spent on transit by all public transit commuters in Canada is 85.8 minutes roundtrip however SFU students record and average transit time of 95 minutes roundtrip[1] (SFU Student Services, 2015; Statistics Canada, 2023a). This is 10.5% more that the national average that individuals commute using public transit. This is a concern because Besser et al.'s (2008) research suggests that long commute times are associated with less social participation. Their findings showed that every ten minutes increase in commute time had a negative effect on the odds of students making socially oriented trips (Besser et al., 2008, p. 210).

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[1] SFU's average transit time may have changed since 2015, however, that information was not updated at the time this research was conducted.

This chapter explores the interconnected themes of housing affordability, transport disadvantage and student involvement, providing some understanding of the experiences of commuter students. The housing crisis intensified by factors like income inequality and housing supply constraints leads to people living further away which could result in transport related challenges. Transportation disadvantage encompasses factors related to the transport system and urban form and the characteristics of transportation disadvantaged people. Furthermore, the social involvement theory shows the importance of student involvement in academic and extra-curricular activities on student success and development.

These concepts give an understanding of some factors that influence the commuter students' experience on campus and allows for the exploration of how transport disadvantages impact their social involvement on campus and the role of the Community Vibrancy Initiatives to create involvement opportunities for these students.

Chapter 3.   Research Design and Methodology

Building on Coutts et al.'s (Coutts et al., 2018) research I provide a better understanding of the connections between commutes and student involvement in post-secondary institutions. To conduct this research, I employed a qualitative research approach in the form of a case study, utilizing semi structured interviews and secondary data as my main sources of data. I analyzed secondary data from a survey conducted on the Community Vibrancy Initiatives at SFU. The aim of this study was not to provide a definitive answer or solution to pressing issues faced by commuter students, but rather to examine and understand how travel conditions can have an impact on the social involvement of students. This involved a detailed examination of students' travel circumstances to the SFU Burnaby Campus and their on-campus involvement in social activities.

As a student of SFU I have had the experience of living on campus and living off campus where I have now become a commuter student. This influenced my decision to explore the research topic as there was an apparent change in my student experience when I moved off campus. My experiences bring in some validity checks on the data collected; however, the research delves into more empirical evidence to explain the connection between housing affordability, transportation accessibility and student involvement, and its complexities.

3.1. Defining Variables

3.1.1. Social involvement

In this research what constitutes social involvement mainly includes commuter students' involvement in extracurricular activities. The extracurricular activity discussed primary focused on the community vibrancy initiatives. This is because it is a program targeted to increase liveliness and social atmosphere to make the student life on campus more enjoyable, which is relevant to the research question. It also gives an opportunity for the program's impacts to be assessed through the research. Another aspect of extracurricular discussed is student club involvement. This is discussed as a social involvement because there were some participants who had no to very little experience

with the community vibrancy initiatives but were involved in other extracurricular activities, which is participation in student clubs.

3.1.2. Transport disadvantages

Transportation disadvantage was determined by commute time to and from school, number of transport modes used, and transit transfers made. The semi-structured interview explored questions about students' commute distances and time, transport options available, transport service frequency and their proximity to stations that may affect their involvement in the various Vibrancy Initiatives.

A student was considered as transport disadvantaged if their commute time exceeded 95 minutes roundtrip. The rationale for this consideration was Besser et al.'s (2008, p. 210) study that found that people commuting more than 90 minutes had an increase in the risk of no socially-oriented trips. Therefore, considering SFU's average transit time which is 95 minutes any commute over the average was considered as a transit disadvantage.

3.1.3. Social trips

These are trips taken by commuter students to participate in extra-curricular activities on campus.

3.2. Secondary Data

The SFU Community Vibrancy Initiatives facilitators conducted a survey in February 2023 during the Spring Spirit Day. The survey included information from 63 respondents who filled out a short online form during the event. The purpose was to assess the involvement of students on implemented initiatives. Being an intercept survey, the result from the survey is not representative of the SFU student population. There was a limited reach, since participants had to be at the Convocation Mall at the time of the Spirit Day to participate in the survey. As a researcher, I engaged with the Community Vibrancy Initiatives facilitators in advance to add a question on transport behaviour to the survey and was present as an observer on the day of administration. There was a table in place where students were approached and asked to participate in

the survey on the spot by attendants. There was less traffic at the table considering there were many other engaging activities and tables with freebies.

The Spirit Day event was open to the entire SFU community as a result there was no bias in the sample size especially towards transport disadvantaged students. However, a limitation of the survey is the scarcity of questions related to transport disadvantages and habits, considering that majority of the student population commute using transit. The survey was the first since implementations started 2021 and there isn't much information on if another has been done since. However, the committee continues to implement more initiatives. The survey questions were generalised and not specific to the program's pillars for action.

To find patterns from the survey responses I ran cross tabulation of the survey data. This helped me understand, extract, and analyse responses from undergraduate commuter students. Using this information and report generated from the Community Vibrancy Initiatives survey results it set the context of my research. To gain access to the survey data I requested and received it from SFU Ancillary Services who commissioned the survey. To access more information on the Community Vibrancy Initiatives like the Vibrancy Playbook I visited the Ancillary Services website (Ancillary Services, 2022).

3.3. Primary Data Collection

3.3.1. Recruitment

The data collection process involved conducting individual semi-structured interviews with undergraduate commuter students at SFU Burnaby. These interviews were conducted remotely over the phone and on Zoom to allow flexibility for participants. The interviews were centred around the themes of the conceptual framework, these include the housing experiences of these commuter students, the commute conditions they face while commuting to and from campus and their involvement in the Vibrancy Initiatives (social involvement).

To commence my data collection, I contacted SFU Meeting, Event and Conference Services (MECS) to help set up a table for recruitment for 3 days at 2

different locations. Due to the Fall Convocation Ceremonies happening at the time of recruitment I was unable to book the Convocation Mall where I had initially planned to recruit participants. The recruitment tables were located at the Academic Quadrangle 3000 South Corridor and Blusson Hall 10000 Interior Corridor which is next to the SFU main bus loop (Transportation Bay 3). These locations allowed me to find commuter students rushing to catch a bus or participants entering the university using public transit. The selected days for recruitment included October 3rd to 5th from 11:00 am to 2:00 pm each day. During recruitment there was an ongoing Teaching Support Staff Union strike that required me to attain a picket pass on the first day to enter the campus building for recruitment. This also meant that there were fewer students on campus than normal because all tutorials were cancelled.

The recruitment process included a webform that students filled at the table or remotely. This is a screening process that helped identify participants that are transport disadvantaged. The eligibility criteria included the following:

- Undergraduate students: this is because the undergraduate student population make majority of the student population (larger pool), making it an easier process to find participants.

- Students that commute using the public transportation system.

- Students whose commute times are above the average SFU student transit time which is 95 minutes/ roundtrip. Students were identified and selected as transport disadvantaged if their commute time to campus exceeded the students' average.

To justify this selection guideline, I rely on Besser et al.'s (2008) research. Besser et al.'s (2008) research found a significant association between increasing commute times and social trips, and an inverse relationship between the variables was observed (Besser et al., 2008). For them social trips were those taken to attend school/religious activities; attend social/recreational activities; attend to family/personal obligations among others. Higher/longer commute times in this study were described as trips that took commuters 95 minutes or more to complete. These findings were used because based on Besser et al.'s (2008) findings a person's social capital outcomes can be affected by their commute times, and this is what I sought to demonstrate in my research in another context. Unlike Besser et al. (2008) the research examined university students

and took a qualitative approach to explain how the commute times can impact commuter students' involvement in activities on campus.
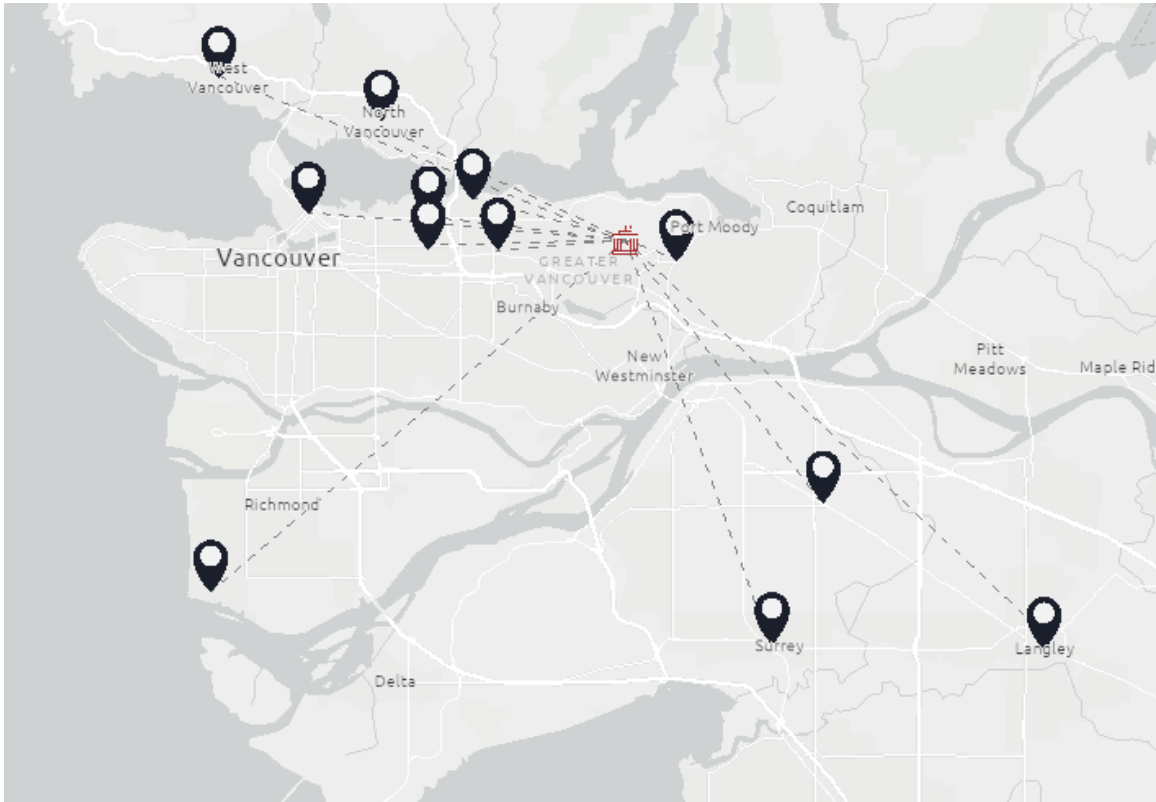
Figure 3.1.   Map showing residential locations participants travel from

This recruitment resulted in many inquiries on the days of recruitment and 48 people completed webforms. After screening for eligibility, 13 students were recruited to take part in the interviews.

3.3.2. Semi- Structured Interviews

I had planned to interview 8-10 students; I chose a small sample size because this research is not a representation of the entire SFU commuter population, rather it builds on reviewed documents on SFU student life, and the Community Vibrancy Initiatives' survey responses already completed. A qualitative approach helps give a better understanding of some of the initial data. The main objective of the interviews is to garner an in-depth understanding of responses of students by focusing on the travel

and involvement experiences (stories) of commuter students. All participants were asked a similar set of questions, but the discussions were open ended to allow participants to elaborate on their experiences.

During my recruitment process I had 48 participants who signed up to be contacted for the interviews. All interviews were to be scheduled within the period of 13th to 25th October, through the Calendly application or by responding to the email I had sent out. 14 out of these 48 participants responded and scheduled dates for the interviews. Out of the 14 people, 13 semi-structured interviews were successfully conducted as scheduled. For convenience participants had the option of having the interviews being conducted via Zoom or phone call. Only one participant opted to have the interview conducted over the phone. Each participant was then sent an incentive of a $20 gift card after the interview.

During and after the interviews it was noted that 5 participants did not meet the criteria for the study because they had commute times below the SFU average commute time of 95 minutes per round trip. This happened because these individuals misread the eligibility requirements when signing up to participate. However, most of these commuters had had recent experiences of transit further than the campus average and shared some of those experiences during the interviews. Additionally, I went ahead to use their inputs because of the time constraints to finish my data collection and because they mostly exceeded the national average transit time. Hence, in comparison to students who met the criteria their shared experiences were not their present situation but their past commute situation still as SFU students.

Table 3.1.   Profile of the participants

Participants	Year	Domestic/International Student	From Metro Vancouver	Resident Neighborhood
John	3	International	-	Langley
Henry	1	Domestic	Yes	Steveson
Bella	3	International	-	West Vancouver
Derek	3	Domestic	Yes	Fleetwood
Kwesi	1	International	-	Robson
George	5	Domestic	Yes	Hastings Sunrise
Naki	3	Domestic	Yes	Hastings Sunrise

Ravi	5	Domestic	Yes	Surrey
Natalie	1	Domestic	Yes	North Vancouver
Nabie	2	Domestic	Yes	Burnaby Heights
Dela	3	International	-	Brentwood
Hubert	3	Domestic	Yes	East Vancouver
Bumah	4	International	-	Burquitlam/Duthie

Note: Information on where international students come from was not collected. Hench, the hyphens shown in the table.

Table 3.2.   Commute Time and Social Involvement Information of participants

Participants	Commute Time (minutes)	Participated in the Vibrancy Initiative
John	240	Yes
Henry	210	No
Bella	90	Yes
Derek	180	Yes
Kwesi	180	No
George	90	Yes
Naki	120	Yes
Ravi	180	Yes
Natalie	180	Yes
Nabie	50.4	No
Dela	80	Yes
Hubert	110.4	Yes
Bumah	20.4	Yes
Average Commute for Eligible Participants	175	
Average Commute for All Participants	133	

3.4. Data Analysis

The quantitative data analysis focused on analyzing the survey results of SFU Community Vibrancy Initiatives survey on student involvement with implemented

initiatives on the Burnaby Campus. This information was acquired from the SFU Ancillary Services who are facilitators of the SFU Community Vibrancy Initiatives. The survey participants were recruited randomly during the Spring 2023 Spirit Day. This survey was designed to evaluate the awareness of the initiatives amongst students and their engagement with the initiatives and to understand their impacts on student life. This survey also offered demographic information such as undergraduate students, graduate students, staff, Fraser International College (FIC) students and others. Survey participation was entirely voluntary, and the responses were all anonymous when data was sent to me.

3.4.1. Quantitative Analysis

Data analysis was conducted, which was a cross-tabulation of survey data from a survey conducted in February 2023 by December 2023 when the data was released to me. This was to assess the implemented initiatives from the Vibrancy Playbook. This analysis was done to interpret commuter students' experience with campus involvement (the Vibrancy Initiatives). I generated new variables in MS Excel, such as commuter students, undergraduate students, commuter undergraduate students, student travelling more than 5km, and others. This helped me better understand and make different observations of the survey results in relation to commuter students and to help set the context of the research in the introduction. Reponses from the survey were consolidated for easier understanding of the parameters used.

After generating new variables, I then used the variables to conduct cross-tabulation to find out the relationship between factors. For example, cross-tabulation between undergraduate commuter students and their experience in making new friends, shown in Table 1.3. After cross-tabulations between relevant aspects of experience I then gathered all the relevant information and created tables for visualization and interpretation. The preliminary findings were essential data for me to identify patterns and trends that I chose to focus on during my research data analysis to fill the gaps of knowledge available.

3.4.2. Qualitative Data Analysis

This research is designed to reveal the details of individual transport and involvement experiences and is not intended to be a statistical representation of the larger commuter population at SFU. All interviews were audio recorded and transcribed for data analysis. Transcriptions were done in two stages. The first stage required the use of the Otter Ai software which did an automated transcription of the audio. The final stage required a careful listening of the audios as corrections were made to the initial transcripts provided in stage one. This allowed for a more accurate transcript for data analysis and ensured that I understood their situations and had given it enough thought. After this process all participants were anonymized for privacy reasons as agreed to in the consent form.

All interviews were followed up with memos, outlining my initial thoughts and reflections after the interview. Additionally, it helped make sense of the data and to note initial thoughts and observations. The data from the semi- structured interviews were examined in the context of the three concepts in the conceptual framework, that is, housing, transport disadvantage and student involvement. Using open coding method, I created some codes in relation to the concepts and emerging themes. This also captured the overview of each audio; interesting comments made and drew some connections between participants.

To understand the level of transport disadvantages faced by an individual and the impacts on their involvement on campus I focused my analysis on Murray and Davis's (2001) elements that create transportation disadvantages. These include details of an individual's residential location choice, the existing inadequate transport and dispersed service (that is the opportunity created on campus). Coding in this analytical stage is more focused on the relationships between observed concepts and themes derived from the open coding. Using the memos, I captured all emerging analytical findings which clarify and link themes and documented discovered insights (Emerson et al., 1995). The final stage of analysis I identified patterns and similarities from the interviews. This helped identify and refine some characteristics of the students. Additionally, I compared findings to the original theoretical frameworks to assess the usefulness of the findings in explaining the research question. Finally, I identified recommendations mentioned in

interviews that can be implemented to improve the vibrancy initiatives amongst commuter students.

Using qualitative coding the research identified and elaborated concepts and insights by closely examining the qualitative data. This type of coding helps to identify, elaborate, and refine analytical insights from and for the interpretation of data (Emerson et al., 1995, p. 151).

3.5. Validity

My approach to ensuring the validity of my research was based upon the triangulation of my data sources, the secondary data provided by SFU Ancillary services and primary data from my semi-structured interviews. Each of my data source for my research has some limitation, however, bringing them together bolsters the validity of my research. This triangulation approach does allow me to have some confidence to generalise to an extent since the approaches for participant recruitment for both data sources were similar and reached students with different commute distances. Being able to compare the results of those two approaches increased the reliability of my research. I do not make claims to the representativeness of my research results to the general SFU undergraduate population as a whole because my recruitment reached a different array of commute experiences. However, my qualitative approach allowed me to create a multidimensional model of a variety of factors that impact the social involvement of students that have some level of transport disadvantage.

Chapter 4. Determinants of Students' Living Arrangements

This chapter sheds light on the intricate relationship between housing choices and transportation challenges. It addresses the question of what housing factors or conditions impact a student's travel time? The factors that influence student living arrangement that that will be discussed include family support, cost of rent, comfort, familiarity with living places and the perceived distance from the campus. The living arrangements of students are pivotal in shaping their university experience and transport challenges. This chapter explores the factors that impact students' living choices and shows the complex relationship between housing arrangement and students' commute experiences, the broader implications on their campus life.
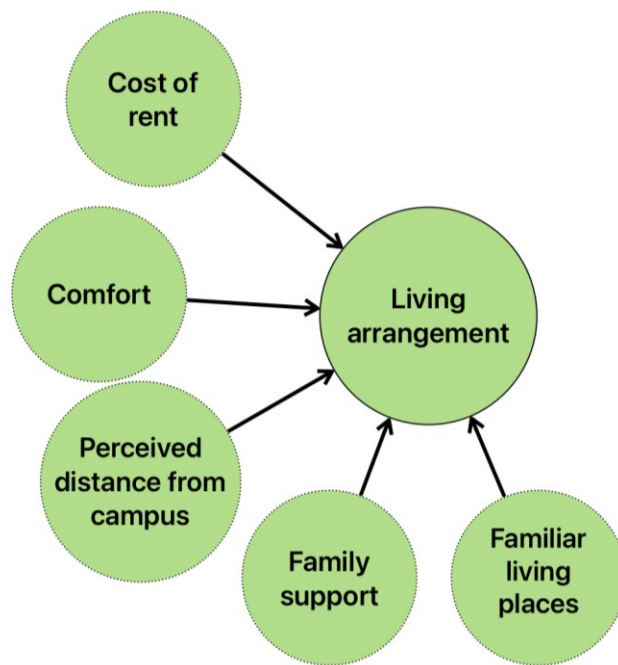

Figure 4.1.   This diagram is a visual representaton of the various factors discussed in this chapter that influence a student's living arrangement.

Note: The various factors in the diagram are explained in this chapter.

4.1. Family Support

From the interviews I deduced that students' living arrangement play a very big role in their university and transit experiences. Majority of the participants (9 participants) interviewed mentioned living at home with their families. George, who lived in Hasting Sunrise and worked part time when asked why he doesn't not live on campus answered "It doesn't make sense economically for me because I live with my parents… my parents don't charge me anything to live here… I can't even afford to live on my own". This is very similar to other responses given by participants who lived with their family. Many of these students were being financially supported by their parents.

It was interesting to see that these participants who lived with family had never lived on campus or by themselves outside of their parents' home. In addition to rent prices being a determinant factor for their living arrangement there seemed to be a preference to live with family amongst a few of the participants. Ravi, a student who commuted from Surrey mentioned that, not wanting to miss her family was one of the reasons she chooses to stay at home. Fears and concerns usually play a role in a young adult's decision to stay home, thoughts of the uncertainties that come with living alone and not being able to survive living alone (Nayla Fuster et al., 2020). These can also stem from emotional attachments.

Aside from students that lived at home others interviewed lived with friends, had a roommate (shared accommodation), or lived on their own in a rented apartment. There were three main reasons for these living arrangements. These reasons are discussed below, and they include cost of rent, comfort, and perceived distance from the campus.

4.2. Cost of rent

Cost of rent was the main factor that played a role in the living arrangements of 12 out of 13 of the students that participated in the interviews. There were differences between them, however. There were students who needed no or lowered rent prices hence their arrangements, students who wanted more value out of their choice of living arrangement or students that wanted both. For most of the students interviewed, the cost of rent was the biggest factor that influenced their decision to stay at home with their family or to find affordable accommodation further away from the Burnaby campus.

Derek, who lived in the Fleetwood neighbourhood in Surrey mentioned that he did not live on campus because of the cost of living on campus and the extra expenses like food that came with it. He made it known that cost was the only factor that played a role in his decision to live at home with his parents. Just like him there were other students that expressed the same views and mentioned that they live with family to avoid paying rent.

For students that did not live with family the cost of rent remained a determinant factor because the general cost of living in Metro Vancouver put them on a tight budget. Bella, an international student who lived in West Vancouver said:

I think in general the cost of everything like the rent and all of that also limits my other expenses because it is really high. So, because of that, I think I have to really focus all my salary on just my rent. So, I think that that kind of prevents me from spending on other things that I would want to do.

For some of these students this meant finding accommodation in areas further away from the SFU Burnaby campus with lower rent prices that they could afford. An example is Hubert who lived in East Vancouver, when asked why he does not live closer to the university he said "This is a good rent price that I found. It is a single bedroom, basement suite, for $750 which is much cheaper than you can get anywhere else to live alone". He described rent price as "everything" when asked about its influence on his living arrangement. In their responses I realised that despite the interest in staying close to the campus they had no choice but to settle for their current living arrangement. There are recurring cases seen in other universities in Metro Vancouver about commuters that live in peripheries; often enough cost of housing plays a major role their choice for housing (Aslam, 2023; Turner, 2024).

Additionally, an interesting finding was that students wanted more value out of their choices. Students who had previously lived on campus moved away because they found the spaces provided in the residence rooms to be smaller in comparison to off campus accommodation elsewhere. What is more is that in comparing the residence costs and cost of living off campus they get more value for what they are currently spending. Which for them is lower or in a few cases similar to the residence fees. Students mentioned they will consider moving to campus if it was affordable, spacious, and had more amenities close by, such as restaurants and stores but currently found it

far from everything else. Students mentioned that the Burnaby Mountain where the campus is has very limited amenities and services for them in comparison to elsewhere. When asked why he doesn't live at the campus or very close to, Dela said:

> It's mainly to do with rent… Yeah, basically that and also I guess too far away from everything else… I prefer Brentwood, it's better… It's just that rent on the mountain is higher than it is in other places, for how much you get from it.

4.2.1. Painful commute

From the conversations with some of these participants it was apparent that many of these students will prefer to live on campus or close to the campus if given the opportunity of affordable rent prices. Natalie, who was commuting from North Vancouver mentioned how tiring her commutes really were but had no other option because it was cheaper to live at home and she could not afford living on her own. John from Langley also described his transiting experience to campus as a "painful commute". His commute from home to the university was a 4-hour roundtrip commute which included a 15 minute walk to the bus stop, two bus rides and 2 train rides. Adding that he had no choice but to live in Langley with family because being an international student added another layer of cost to his student experience. He said:

> As international students we're already paying twice as much as domestic students. And to add to that, if you have to pay a lot more for rent, you know, it adds to the gravity of the situation. So, I'd say it (rent prices) affects us a lot.

Upon my research undergraduate international students regularly pay five times more the tuition fee in SFU than their domestic counterparts and they were permitted to work only 20 hours a week as students, limiting their ability to earn money (Sivakumar, 2023; Student Services, 2024). This means any student in a similar situation as John with limited funds would live further away from the university and live with family if they had that opportunity.

4.3. Comfort

Comfort is another major reason given by many participants as a reason for their living arrangements. The comforts that came with not living in the university residence

included, having a more spacious living space; not having roommates; not having to share bathrooms with other people particularly strangers; and less disturbances from things like the fire alarm. There wasn't much variation in what students described as concerns they had for their comfort. Nabie a student commuting from Burnaby Heights said:

I don't think I would ever live on campus… I'm not a fan of dorms. If I were to live on campus, I think it would have to be an apartment rather than a shared dorm kind of space with shared like bathrooms and showers. I don't think that's something I want to do.

In my understanding and personal experience as a student who lived on campus and currently lives alone; having to live on campus will be very difficult now because I have established new habits, which if disturbed can impact my tolerance level for others. I currently have control of how my kitchen and bathroom is used and cleaned and living on campus means I lose that control. There are different nuances such as familial, physical, and social elements that represent strong senses of belonging. These are all factors that influence a person's decision making when it comes to their living arrangements. For many people like me and some of these students, they will prefer a living arrangement on campus that has more comfort and less external interferences while living on campus.

4.4. Familiar Living Places

A reason for the living arrangement that was unique to just one participant, but an interesting finding was that Bella who lived in West Vancouver decided based on her familiarity with the neighbourhood. Bella was an international student who had moved off campus to find accommodation elsewhere due to rent prices. In deciding on where to live Bella chose to move back to the neighbourhood she first lived in when she relocated to Canada for school. When describing why she moved there instead of somewhere closer she said "Well, I was actually living in West Van before when I just came to Vancouver, I was living there in a homestay… I think that was the main reason, that I was already living there (West Vancouver not the homestay) before". She had some attachment to the place because it was where she was most familiar with.

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4.5. Perceived Distance

Perceived distance was another reason for some students' living arrangements. Despite some of the participants having a longer commute than the average SFU student some of these students mentioned that they also live at their family's home because the Burnaby campus is not too far from their home. Hence, their decision to stay at home. Ravi who lives in Surrey when asked if she had ever lived on campus said "No, I haven't, because my family lives close enough" when describing her living arrangements. Regardless of all the commute challenges they face on their journey to the university, which will be discussed in other sections some saw it as a good option. I deduced that many of these commuter students find themselves amongst other commuter students who share similar commute challenges hence viewing their journeys as better than or same as their peers.

Discussions with these commuter students showed that rent pricing is a major determinant in the living arrangements in which students find themselves. There however exist some nuances like comfort and perceived distances that also have some influence. The findings show how directly connected the impacts housing costs are on an individual's transportation experience. Students living further away from the university and/ or in neighbourhoods with limited transport option have transportation challenges that could make them transport disadvantaged.

The findings show the multifaceted nature of the determinants of students' living arrangement, with factors such as family support, cost of rent, comfort. Familiarity with living places and perceived distance from the campus play a significant role. These not only affect living arrangements but have implications on their transportation experiences and consequently, their university experience. In the next chapter I continue to show the interconnections between housing affordability, transportation access and student involvement. I explore how the relationships between these factors shape student involvement in campus activities.

Chapter 5.   Determinants of student involvement

This section continues to discus the various findings of the research. It includes the information deduced from the interviews with participants. Information on the details of their commutes, the challenges they face and how their commuting situation influences their participation on campus. The section also discusses the various strategies that transport disadvantaged students employ as part of their commuter student experience.
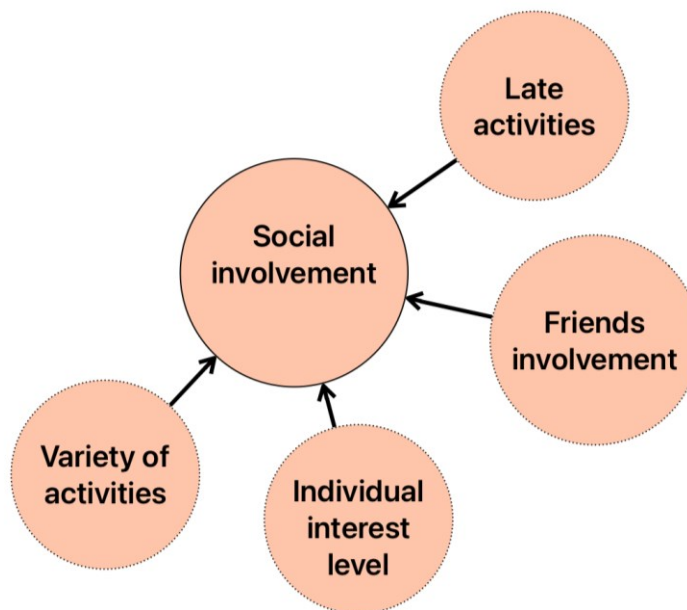
Figure 5.1.   This diagram is a visual representation of the various factors discussed in this chapter that influence a student's social involvement.
Note: The various factors in the diagram are explained in this chapter.

5.1. Long commute

In this study, students were described to have a long commute if their daily travel from home to school exceeded the average SFU student transit time which is 95 minutes/ roundtrip. 8 participants out of the 13 participants interviewed exceeded this transit time and all the participants interviewed commuted used public transit. This section discusses how students described the length of their commutes and how it impacted their social involvement on campus. Overall, the average time traveled by

participants was 133 minutes round way which exceeds the average SFU student commute time. For participants who satisfied all the eligibility criteria the average time of their commutes was 175 minutes which is almost twice the school's average. This information is shown in Table 3.2 Students were commuting from areas such as Langley, Surrey, North Vancouver, and Hastings Sunrise. These findings help to justify the importance of this study as it explains how individuals' commute times result in them being transport disadvantaged.

John a student who lived in Langley described his journey to campus as a 2-hour one way journey which included transfers on two different buses and 2 train routes. As a result of this 4 hour- long travel he mentioned that time spent on transit is a big determinant on his attendance to events. He described his typical commute to campus, as follows:

So, first is taking a look at the transit app so that I'm not standing there waiting for the bus for you know, 30 minutes or 40 minutes. So, I make sure that the bus arrives in 15 minutes because that's how long it takes me for me to get from my place to the bus stop… So, I take my bus, and I'd take it to King George (Skytrain Station), which is where the Expo Line starts. I take the train to Columbia. And after Columbia, I switch to the Production Way (Skytrain) one, you know, go to the other side of station (other platform) and get to Production Way and get down the station. I get to the bus stop and take the bus. So, I have to take four modes of transportation in my commute, bus, train, train, and then bus.

Another student who describes her commute was Natalie from North Vancouver, she said: "I take one bus from North Vancouver to downtown to Burrard Station and that takes about half an hour. And then from Burrard Station its just R5 (Bus) straight to Burnaby campus. It's about half an hour."

They both mentioned that a default attitude towards events he is not sure about is not wanting to go. This sentiment was also shared by many of the participants. Just like John other students had a commute that consisted of multiple transit mode transfers to get to the Burnaby campus from their homes. Natalie who commuted from North Vancouver four days in a week to the university noted that her commute time (180 minutes) makes it hard for her to get involved in social activities on campus. This is

because for her it is a long way back home and when she's done with classes there is no interest to stay on campus. The commute for her often left her with less time to partake in social activities and do other things like schoolwork or chores, which makes her prefer to go home once her classes are done for the day.

For many of the participants on days where they did not have to be on campus for lectures, they would always opt not to go to the university campus for any other reason. Their only purpose for being on campus was to engage in academic activities which were lectures and tutorials. Considering their commute time and the duration of social events and activities, a trip the campus on their no school days was not worth it to these participants. Derek from Fleetwood said,

… there was a couple of times that I wanted to go to a couple of club events that I just decided not to go because of transportation constraints.... It was like a Caribbean club, I am Caribbean, but I think the dates or the times that they were holding their events, it was just not working with what days I'll be on campus. So, I guess I kind of missed out like socially meeting new people.

For a student like Naki who lived in Hasting Sunrise she engaged in social activities only if they were right after her classes and only during the day for safety reasons. She said, *"…if there's like a big gap between my class and an activity that I want to go into, I probably will just go home because otherwise, I'd have to go home and come back and that's like, two hours."* This shows that many of these students miss out on activities and engagement not entirely willingly. Additionally, I deduced that some of these students miss out on engagements that could help them build some social capital on campus as a result of their long daily commute times. This is because their campus experiences as they shared is mostly limited to interactions in lecture rooms or interactions that are connected to their academic. This is a typical sign of situations that make them transit disadvantaged, since they have transport- related barriers that affect their student experience.

As explained by the student involvement theory, every institution is in competition with students' daily activities for the finite time and energy of students (Astin, 1975, 1984). Having a long commute that leaves students with little personal time or exhausted takes away from their ability to get involved on campus.

Dela who had a fairly short commute in comparison to others shared that he was previously more involved in the community vibrancy initiatives in his first year but isn't currently an active user. This he said was a result of a loss of interest over time and because he moved off campus from the SFU residence. He however mentioned that he does use the SFU Fitness Centre very often. This showed me that for a student like him there was some interest in engaging in extracurricular activities. When asked what about the initiatives push him from the activities he responded saying,

> I guess, the sameness of these activities (no variety). They're just, ping pong tables and whatever the small games that are there, that's it. It's convenient when you live on campus, because you can just go with your friends and kill some time. But when you live off campus, it's not as appealing. But activities such as the fitness center, and I guess swimming and rock climbing, those are much better than the piano and ping pong tables.

5.2. Transit System Challenges

Different from long commute which resulted from the choice of living arrangement, this chapter discusses the student experience on the transit. This part of the research discusses the various ways commuter students face transportation disadvantages. I focused my questions on the transportation system and the aspects of it that prevent them from their desired campus involvements. Most of the challenges participants brought up were centred around the bus services available to them. In this section I discus the various factors and their impacts.
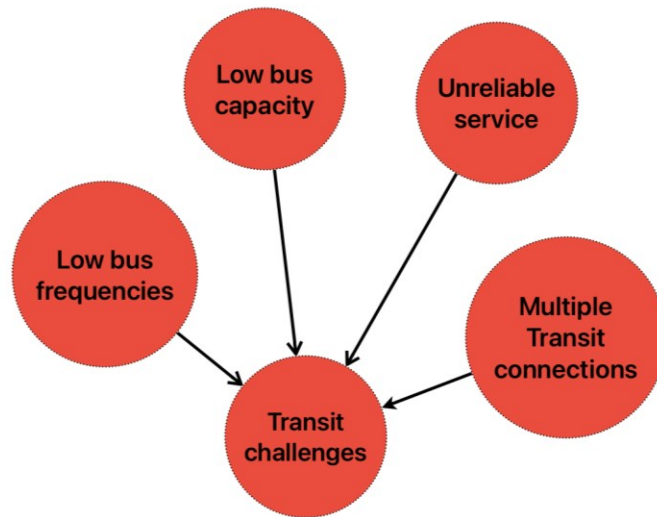
Figure 5.2. This diagram shows the various factors that lead to travel challenges for students.

5.2.1. Bus Frequencies

As part of the discussion, students were asked about their challenges faced on transit. Bus frequencies were one of the discussed components that most students pointed out. For students that live in suburbs like Steveson (Richmond), Surrey, Langley and North Vancouver the intervals between the bus times available to them were either 30 minutes or an hour depending on the time of day. This to them meant that they could just miss a bus and not expect to be late or miss a class or an event, they generally did not have that leeway. The long wait times to catch a bus was a challenge to students and many of them requested for some improvement to bus times in their neighbourhoods. According to some students the intervals between buses increases later in the day making students very conscious of their time when participating in any activity. Most of these students do not consider staying on campus during late hours because it will require them having a more extended commute since buses were not as frequent. In some cases, their journeys will have to be rerouted because the bus services would have ended. This for some would even mean spending extra money on

taxi or ride hailing fares. Bumah who at one point lived in Burquitlam expressed some frustrations with the bus services at night and on the weekends, he said.

> … the 143 (bus from SFU) doesn't work on the weekend and then on the weekdays its only till I think 7:30pm. So the problem with that is, to commute you have to go to Production Way (Station)… especially on the weekends. And if you stay after seven studying then it's going to be a longer commute…

In discussing transit improvements Henry from Steveson also said,

> It'd be nice to have more service at night so that people can get home that way. We won't necessarily have to pay extra money for like Uber or taxi just to get from Vancouver to say Coquitlam or even Delta... I think those are the biggest challenges… I feel like if there are more options available or more service, more frequent service, they'll probably leave me with more time to participate in certain events or opportunities and whatnot.

This to me also showed that despite the efforts of the Upass to reduce costs for students, it can be ineffective at certain times of the day for commuter students.

During the winter season was the most challenging times for these commuter students. The most common occurring challenges during this time was transit service delays and cancellations. This meant students missing or being late to class and congested stations. For most students it was the one challenge that a solution was needed for. When talking about transit challenges Bella said, "I think sometimes it's about the weather, especially during December and all of those months, I think, when you have to get to campus, I think it's hard with the snow, because the buses get canceled, or they reduce the times."

5.2.2. Bus Capacity

At particular locations and on certain buses that served SFU there were concerns by multiple students about overcrowded buses and full buses which meant longer wait and commute times. Students that were using the R5 buses mostly had complaints about their buses being always overcrowded while on board adding to their commute discomforts. Kwesi when discussing his transit challenges said, "the challenge I will say

would be the constant stopping of the bus (multiple stops on the route) and also overcrowding sometimes on the bus." For 145 bus users the major concerns were that buses will get so full most of them are left behind. An interesting observation shared was that during certain times in the day and at certain periods in the semester the 145 bus from the Production Way- University Station to SFU had very long queues hence, full buses. Some of these crucial times of the semester mentioned were midterms and finals period. John said,

> …sometimes on like Wednesdays and Thursdays when a lot of people have to commute because most of them have classes those days or, close to the finals season or midterms season. I would have wished that the frequency of buses was just a lot better. Because you know, we have to get to our midterms and there's this like 200 and 300 people waiting to onboard the bus… the buses are packed and we have to wait for another round of bus to come pick us up, which takes like 20 or 25 minutes or close to half an hour. We don't want to miss our midterms, right? So that was another problem.

Ravi also shared an experience with the 145 where she almost missed a quiz as a result of the high user traffic times. She said,

> *… in my first year I was transiting to school, at the 145 bus (station) in the mornings, they're always very cramped. I didn't get on the bus, and I almost missed my quiz for one of my classes. I was first year, so I was very nervous and stressed…*

For some students, the overcrowded buses and trains meant there was some form of odour that caused them a lot of discomfort in their transit experience. For George this happened mostly when it rained, "I hate it when it rains because when it rains like on the bus it smells really bad for some reason".

A major concern shared by most of the student that lived further away from campus was full buses. Participants from North Vancouver, Fleetwood, and Langley mentioned experiencing full buses more frequently. John describes his neighbourhood as an area where most inhabitants were transit users, which meant that on certain busy days he would not have the opportunity to get on a bus passing by, which added to his transit time whenever that happened. For some of the students like John this meant

having to leave home earlier to catch buses ahead of time to avoid getting home late from campus. For such students it meant not having much time to stay on campus for other activities.

5.2.3. Unreliable service

A factor that impeded on the commutes of many students were the inconsistencies that the transit services have at various times. There were complaints made about the buses not showing up when they had to or showing up earlier which made them miss their buses. Students mentioned relying largely on the transit software applications on their phones (Google Maps and Transit), and the inconsistencies between the applications and the services resulted in unwanted delays. George shared, "Sometimes the buses are inconsistent, when I'm waiting for the R5 it doesn't show up. It doesn't show up on the time that the Transit App shows but then the next bus comes in and there's two of them bunched together". Students expressed that with such experiences they left campus early to avoid dealing with the unreliable services especially at night. This shows the direct impacts transit challenges has on student involvement.

5.2.4. Transit Connections

As expressed earlier in the writing, most of these students are faced with long exhausting commutes that require multiple transfers or connections and modes of transit. Students having to make multiple connections to get to campus was a big deterrence for them going to the campus. They shared that their commute experiences largely affected their interests in also wanting to make social trips to the campus on days where they did not have lectures or tutorials. Derek who lived in the Fleetwood area shared his experience by saying, "if I want to go to Surrey Central, I'd have to take two buses or take a different kind of connection to be able to get there" while describing his transit limitations. For a lot of the students, changes they wanted to see were more direct transit options. Ravi said, "I wish there was like a direct train to Production Way from King George". Many of them shared the view that having more direct options to the university will improve their student experience because it will shorten their trip. Natalie when asked how improved transit access will be for her campus involvement said:

If it would take a shorter amount of time to get here then for those events that happen on days where I'm not on campus, if it was like 45 minutes (commute) I'd consider it but an hour and a half? No way.

5.3. Commute Challenges

There were some factors that affected students' experience on the public transit system which had an indirect ripple effect on their involvement on campus. This involved their feeling of safety, and comfort while using the transportation system this part of the findings elaborates on that.

5.3.1. Safety

A recurring concern mentioned for students during their commute was their personal feeling of safety. For some students they had safety concerns with active transport, and for most it dealt directly with concerns on public transit. There is a lot of discomfort around people on transit that these students mentioned, however, in their explanations they were hesitant to fully explain how other people on transit made them feel unsafe. Ravi discussed that there were varying people on the public transits that made her feel a sense of danger and unease, mostly in times when she travelled alone. She found the transiting experience to be competitive and aggressive in some ways, including the fatigue it comes with. Ravi mentioned that her time-consuming trip to the campus and safety were her biggest concerns about her commute; because of this she refrained from taking transit late at night. This meant that she missed any social activity on campus that run later in the day. When talking about campus events she said:

> …the Friday night ones I never (attend), no; because then it's not even about getting here, it's also coming back (home) as well. Let's say you're gonna come back at night on a Friday night, it doesn't feel necessarily like the safest…

Bella also shared a similar experience about traveling at night alone from the campus. She explained that she no longer tries to stay on campus at night because the R5 bus "at night is pretty empty and it also passing some streets where I feel like it's kind of dangerous or some people just enter the bus, and sometimes they can make you feel uncomfortable". In a scenario where she had to leave campus late and without a

companion, she rerouted her journey through routes that's she felt more comfortable with. Existing research shows that passengers are sometimes attacked when there are fewer people at stations or in buses (Smith & Clarke, 2000, p. 179). Additionally, offenders target passengers at isolated stations in off hours. Students that live in suburbs like these students will often find themselves in such an environment during their commutes. Hence the need for them to leave earlier in the day when there is daylight and more people around them.

Derek another commuter student mentioned that he disliked the experience of riding on public transit but had to because it was the only option he had at that moment. When asked what his dislikes he said having to "share that experience with a bunch of random people especially, you know, there's sometimes a lot of transient people taking transit… people who might be mentally ill it's just kind of an inconvenience to be around, people all the time". In Edmonton, similar concerns have been raised about public transit where commuter users (youth) and their parents have expressed a fear of homeless and transient people (Riebe, 2023).

While describing his commute to and from the university campus, George explained that he had a 15-minute walk from his home to the bus stop. Describing his walk as dangerous for him as a pedestrian because the attitudes of automobile users in that neighbourhood ignored the safety of pedestrians. He said:

> … actually to walk from my house from Hastings sometimes I feel like the cars in my neighbourhood go too fast or they don't stop for you when you're crossing. So I have to be more defensive when I walk to just like let them go first basically.

For someone like George it is a demotivation to want to step out of the home on days where he doesn't have class because there are layers of discomfort when it comes to his commute. In his case these were road safety and the inconsistencies of the transit system.

In summary there were factors that directly and indirectly affected students' involvement on campus. These were their living arrangements that determined their commute experience. The research found that, predominantly economic factors, and family support were influential in determining students' living arrangements. As a result, these students were faced with, lengthy commutes that came with systemic and

experiential concerns about their commute to the SFU Burnaby campus as transit users. The diagram below shows how these different variables are connected.

Figure 5.3.   Connections that exist between the three main concepts of the research.
Note: The diagram shows the connections between living arrangements, transportation disadvantage and social involvement and the various factors that impact them. The unshaded circles are factors that appear in the cross-thematic analysis of interview results.

5.4. Coping Strategy

This section of the research paper explores the coping strategies used by students to navigate their transit challenges to mitigate the impacts on their involvement on campus. Students are faced by extensive commutes, worsened by factors such as unreliable and inadequate bus services and safety concerns that force them to develop adaptive measures to mitigate the issues. These coping strategies include a range of actions from detailed time management to selective involvement in campus social events which shows students' resilience as they encounter different forms of transportation disadvantages. Despite these strategies providing short term solutions to their transportation issues, it creates long lasting consequences on students' involvements hence, requiring deeper investigation. Understanding the connections between these

strategies and student participation in social activities is crucial for finding diverse effective interventions to enhance the university experience for all students. Particularly ensuring that opportunities are equitable for all students. The rest of this section covers the various coping strategies discussed during the interviews.

In many scenarios students had to find alternative options to get to campus. These scenarios sometimes included delays from buses or individuals missing buses as a result of their lateness. Discussing alternative options to get them to campus Nabie mentioned that she would get her parents to drop her off on days she was running late for class. For her it was an easy option because she was one of the closest students to the campus. Ravi, who lived further away had a similar option most of the time to be driven by her parent half the way of her journey after which she continued using public transit the rest of the way. On her return from the university, she would schedule her time to catch a ride back home with her parents. This shows the benefits some of the students get from living at home and having their families directly support them. However, what is apparent is that a student like Ravi's social involvement is reliant on her parent's schedule. For her to escape her long commute from the campus to her home, she had to leave school to catch a ride with her parents. Meaning she misses any event that comes after her parents closing time from work. For some other students their alternative transit experience looked different. This only happened for them during crucial times in the semester when they were running late. Therefore, for midterm, finals and quizzes they would have to take a ride hailing service to make it in time for class. Henry said, "…sometimes if I oversleep, I won't risk being late to class and sometimes I'll just opt to Uber to campus, which then sets me back like 50 bucks." This was mostly done by students who lived the furthest from the university.

The general strategy used by all the students was to leave early. Students shared that they choose to leave a couple of hours early to make up for any impromptu delays and cancellations that would affect their arrival time. They repeated this behaviour on their way back home from the campus, meaning that they rarely took the risk of staying longer on campus to participate in social activities. On leaving early Derek shared,

> I mean, just the challenge of catching the bus, sometimes it's only half an hour
> service. So sometimes it's kind of hard to time the bus right... I have to wake up

really early to get going, because I have to give myself at least an hour and a half to travel…

For such students it is important to note that during semesters where they are required to take morning classes it forced them waking up very early because they have a long commute, and the bus systems are not ideally as relievable. Henry said:

 I have to wake up a lot earlier than I usually do if I have like a morning class. If I had a 8.30AM class, sometimes I'd wake up at 4.30 in the morning, wake myself up and have to get ready and then get on the bus for the two hour commute.

It was unclear how he often enrolled in morning lectures because that was not discussed. Discussing his return home from campus he said:

It's hard, sometimes I can't participate in school much because if I stay on campus until like 6.00PM maybe I end up going home like around 8.00PM or 8.30 ish… So sometimes whenever I finish a class, I just want to go home so it's hard to participate in certain social activities.

An observation I made was that, despite having a commute above the SFU average students compared their commute condition to others, and thought they are better off. Naki said, "I think my commute relative to my peers is pretty good. I have friends that come from Abbotsford and Richmond, and it's like two and a half hours". Neglecting her challenges as she's soothed by another person's travel being longer than hers.

A recurring pattern observed from 12 out of the 13 interviews was that students mentally cancelled out events that happen on days they were not on campus. Regardless of how interested these students were in an event if it was during their off days from school, they were uninterested in making the commute. This was because of their lengthy commutes and the consideration that the duration of most of these social activities were less time than their commute time. Many of these students as a result had made up their minds in such scenarios not to attend such events. Hubert shared that "if there's something in the morning or at a time when I'm not already in school and I have to go to school just to do that thing, I may reconsider actually attending that thing because it's an hour there an hour back". Similarly, Ravi said:

if I don't have class on certain days or on the weekends I'm not coming here. You can't catch me here if I don't have class pretty much only if I was going to stay for the whole day and work on something would I come here if I didn't have class.

Sharing the same view Natalie said "…days where I don't have classes. If there's like an event going on, I'm definitely not going - an hour and a half all the way to campus just for an event. So yeah, I miss a lot of those".

The subsequent discussion details the coping strategies that the interviews revealed, which included their reliance on alternative transportation, time management to offset potential delays, additionally, mentally discounting events on non-school days. This behaviour was viewed as a coping strategy that students used to manage their transport disadvantages, which mostly resulted in missed social opportunities.

Chapter 6.   Impacts of the SFU Community Vibrancy Initiatives

As established earlier in this paper, student involvement is crucial because universities are places where people develop social networks and connections that equip them for their lives and careers after school (Tinto, 1999). However, commuter students are often faced with challenges that limits their time on campus. In this chapter I evaluated the effectiveness of the SFU community vibrancy initiatives addressing any gaps among commuter students at SFU. Using Astin's involvement theory as a guide I also explore the effectiveness of the SFU Community Vibrancy Initiatives to increase the likelihood of commuter students being more involved on campus. The overarching aim is to unveil nuanced insights into commuter student involvement and recommend strategies for enhancing their campus experience. It is important to properly understand the initiatives and its impacts on these students. This will help derive ways to improve it to create same involvement opportunities for commuters on campus.

6.1. Postulate 1: Involvement includes physical and psychological energy invested in various objects

In looking at how student invested their time and energy in involvement in these initiatives I asked questions on how engaged they were in the implemented interventions. Most students had not heard much about the idea of Community Vibrancy Initiatives or the Vibrancy Playbook. However, all the participants had seen the various initiatives with most of them having an experience of interacting with them.

For John, he enjoyed using the ping pong tables and used them regularly within the week. When asked if he had ever engaged with any of the activities he responded and said, "I feel like that (the initiatives) was a fantastic addition. From time to time me and my friends, after class, we will just go hit the ping pong table to just relax a bit". He was one of the few students that were enthusiastic about engaging in activities that had to do with the implemented initiatives. Students like him found it to be an enjoyable experience and a way to take a break from their academic work while on campus. Bella shared that the initiatives create another experience out of the lecture rooms for her.

For most of the other students there was not much interest in participation because they had other commitments that occupied their time. For a student like Henry, they preferred to not engage in these social interactions because he preferred to start his commute home right after class, this was to help him save time and prepare for the next day. Derek explained that he was not socially involved on campus and usually had other commitments with friends off campus. He stated:

I'm not too much of a social person on campus, but I mean, knowing that I have to take the bus and train back home, it kind of limits how late I would stay… I try to go to the gym with my friends after school. So I have to time it right, like leave campus at the right time to end up at the gym, because I go to the gym in Guildford.

There was Nabie who did not have any interest or put any effort in interacting but rather preferred the comfort of being home. She shared her opinion on the interventions saying, "I think in my opinion, it's (social activities on SFU campus) a waste of time, just because I feel like I have better things to do like study or to go to work or, you know, do things at home." She was convinced there was not many changes SFU could implement to change her mind about being socially more involved. My interpretation of her response showed me that her only experience and connection with the campus had to do with her academic life and not making much room for other interactions.

For some other students they still participated in other social activities on campus despite not being involved with the vibrancy initiatives. Although a few students did not have much social engagements on campus, most students in some way participated in school club or organization events. This was because they had more fixed times and did not have several occurrences in the semester that required their presence, they required minimal effort. Some of these groups had one event weekly or monthly therefore not being demanding for their participation. Kwesi said "I am part of the SFU eSports club. I tried to do this once a week." Just like him, Ravi also shared that she was actively involved with a Catholic Club on campus.

As explained by the Involvement Theory, institutions, in this case intervention programs, compete with other factors that also require a portion of a student's time and energy. For this research such factors included, other commitments, academics, and

commute. These were the factors that the program competes with for the time and energy of students on campus. Although there might not be a lot administrators can do to change such factors, they can advocate for changes in the transit system that are beneficial to commuter students. This will alleviate the burdens that come with commuting.

6.2. Postulate 2: Involvement can vary; the degree of involvement in an object may differ, and the extent of involvement can change over time

The interview questions explored variations in the level of student involvement with the SFU Vibrancy Initiatives among participants. Differences in reasons why people chose to be involved were observed and a shift in involvement over the course of their academic journey was observed. This section of the research paper discusses the observed variation.

6.2.1. Varying Reasons Why People Interacted

Interest Level

Student were observed to have varying levels of interest which persuaded or discouraged them from participating in the activities. Bumah shared that "as an extrovert, I actually love engaging in sports and these kinds of things. So, this has been a key to my student life, and my university life on campus." He mentioned that he has fun playing at the ping pong table where he connects with others. Contrary to students that had an interest in getting involved Natalie shared that her commute time makes it hard for her to participate in things because it's a long way for her back home and when she's done with classes there is no interest in staying on campus. Although her commute time was her main reason for her non-involvement there was attributed to her interest level that could persuade her to stay for a social activity. The same attitude was shown when it came to other social activities on campus. Students chose to commute off campus or stay on campus longer depending on their level of interest in the activity. Their interest level seemed to be what they prioritised to get involved. This showed that many have missed out on events that could have been beneficial to them because it did not seem interesting to them at first glance. John shared that activities and events that he

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participated in which he did not have much interest in are events he had mostly enjoyed. For Derek he argued that if bus frequencies and direct connections were increased, it will make campus activities more appealing to him. This is because he will save some time from his commute that can be allocated to more social involvement.

Pass the Time

Another reason why participants got involved with the initiatives was to pass the time in between lectures or events. Usually during this time, they were free or idle but could not leave campus. Natalie shared that "Sometimes I use the ping pong tables, but previous semesters when I've had less work and more time between classes, I've used the games and stuff with friends". Similarly, Dela shared that he doesn't get involved regularly but on days where he was free he will engage with some of the games available.

Influence of Friends

For students that had no interest in participating they noted that on days they got involved if it was with or because of a friend. George said "I am just not interested to be honest. I only play sometimes when my friends are or if I am with my friends and they are like, "oh, let's play some ping pong". Other than that, I wouldn't really actively go out of my way to play it myself." I observed that students only stayed longer on campus during times where their social involvement was with a friend. For example, Ravi mentioned that she would stay longer on camps if she was with friends, this was because they had the same mutual experience of commuting, and it was enjoyable staying and traveling together. Staying on campus longer with a friend for social activities was a recurring tone of some the students interviewed.

6.2.2. Varying Times of Involvements

Some students mentioned that they were more involved at certain times of the semester. For students like Naki who shared that they are more active in the first week of the semester and particularly in the Fall semester because those are the times when there are more variety of activities put in place for students to be involved with. She said "… September is always great because they start off with a bang. There's all these cool events and stuff, but then it kind of dies down…" George also shared that "It is usually

only like the first week or the first month that we have something and then afterwards there is nothing." He listed the Street Fest and activities in the Convocation Mall as examples of such initiatives. Some mentioned being more involved in the early weeks of the semester because these were times where they had less pressure with their academic workload. Some students lamented because they would have preferred if these initiatives were vibrantly occurring through out the semester. This made students make comparisons with schools like University of British Columbia which they perceived to have more activities semester long. Henry said "you go to places, another campus like UBC it's a lot more at least visually, it's a lot more appealing to go there. It's more vibrant, sometimes I go there myself to study there."

Additionally, there were students like Dela and Ravi who shared that they were more involved during their first year as students. Their reasons or the reduced involvement included a change in living arrangement and level of interest. Dela, who previously lived on campus mentioned not being involved as much as in first year because of his lack of interest and it being a bigger commitment now to travel on campus to participate in activities.

6.3. Postulate 3: Involvement has both quantitative and qualitative features

Analyzing the quantitative aspects of their involvement, it was recorded that some initiatives were popular amongst participants. The most engaged initiatives that students were involved with were the ping pong table, games at the Convocation mall and the fire pits. Some students shared how often they were involved in the initiatives; this is shown in Table 6.1. Although this is not a quantitative measure, it shows how often individual students were involved. Based on the data presented in the table, it appears that the frequency of involvement for each student is lower than should be anticipated, given the efforts invested in the initiatives. Based on the information I initially provided about the students' commute and involvement, I deduce that their commute condition is one factor affecting their frequency of involvement with the initiatives.

Table 6.1   Participants frequency of involvement with the various Vibrancy Initiatives

Participants	Frequency of Involvement	Commute Time
John	Regularly	240
Henry	N/A	210
Bella	2x/ Month	90
Derek	1x/ Week	180
Kwesi	1x/ Week	180
George	1x/Month	90
Naki	Once every couple of weeks	120
Ravi	N/A	180
Natalie	1x/Week	180
Nabie	Very rarely	50.4
Dela	When free	80
Hubert	None (0)	110.4
Bumah	3x/week	20.4

The involvement however is not only about how much students do but also the quality of their experience with these Vibrancy Initiatives. In examining the qualitative dimensions of involvement, I asked questions on students' overall enjoyment and sense of community derived from engaging with the initiatives. Bumah share that the campus was more enjoyable and livelier with the initiatives and students "can at least come out and enjoy the fresh air and also play some sports." Four others also thought it increased, social interactions, things to do with friends and chances of meeting new people.

Many of the students expressed their thoughts on how these initiatives can be enjoyable for the general student population but were uncertain in their explanations if it applied to them since they were not as involved. Henry in answering if the initiatives has made SFU more enjoyable said. "…to a certain degree, like I'm kind of neutral about it just because like I haven't really participated much from it... So, it's hard for me to say it's had a significant impact." George found the initiatives enjoyable but when discussing sense of community established, he said:

Not really just because I feel like I'm not really meeting anyone else. It's mostly just you and your buddy just playing ping pong. Or you toss the beanbag that kind of stuff. But it doesn't help the community, people don't really talk to each other.

Overall responses showed that these initiatives made SFU more enjoyable for these students however on the conversations on the sense of community it created, a large proportion of students found that their sense of community did not increase.

It is important to acknowledge that John who participated regularly, Bella and Bumah who previously participated regularly had made friends through their involvement with the initiatives. This emphasises the point by scholars that the more time and efforts spent in extracurricular activities the higher the chance of being more involved and creating social connections (Astin, 1984; Coutts et al., 2018). The facilitators of the program must now find innovative ways to increase student involvement, and in this case commuter students' involvement.

6.4. Postulate 4: The level of development and learning associated with a given program is directly related to the quality and quantity of involvement within that program

This postulate emphasises the importance of meaningful involvement by a program that facilitates development amongst students. Although the initiatives have brought people together, it has not created meaningful long-lasting social outcomes. I say this because from the interviews most students engaged with the initiatives when they were with friend; and they mostly made new friends only when there was a mutual friend present. Naki shared this interesting opinion when asked if she felt the initiatives were inclusive. She said:

> I do think they're inclusive because they're just kind of out there in the open. Kind of inviting everyone to use them in the space. But I guess it is kind of intimidating to see people already using it and you want to join but you don't know who they are, and they just keep doing their thing.

Despite meeting many people through some of these activities, she has not made friends out of them. They have just been random one-time meetings. Derek also mentioned that he hadn't met friends through other ways on his own without any preexisting connections. This shows that the initiatives are yet to position students in a situation (activities) where they are able to participate without the presence of a familiar face (friend) or create friendships on their own.

In my opinion there are other initiatives in the Vibrancy Playbook that if implemented can help students create more friendships, develop more skills and generally enhance the sense of community on campus. Some of these initiatives include the connections to learning initiatives that involve opportunities like cooking lessons and learning gardening; and the spaces to support health and wellness initiatives like outdoor yoga, and an all-ages skate park, to name a few.

6.5. Postulate 5: The success of any given educational policy is inextricably linked to its ability to increase involvement

It is assumed that students that are more involved will succeed both academically and socially (Astin, 1975, 1984; Coutts et al., 2018). It's important for facilitators to take a critical look at more targeted initiatives that will impact commuter students' involvement. Additionally, a focus on initiatives that help students develop new skills and a sense of community on campus is more likely to lead to academic and social benefits. During the interviews students made suggestions for improvement. These included:

- Semester- long drop-in social activities outside the lecture rooms.

- Variety of activities to catch the attention of diverse students.

- Increase SFU staff-led engagements along side student-led engagements facilitated by volunteers. This is to ensure that activities are running during times when the semester workload increases for student volunteers (e.g. midterm or finals period).

- Mental health resources for international students and first year students.

- More sitting spaces for studying.

- Improved (more engaging) bulletin boards and some form of requirement for posters to have English translations.

- More food truck options especially for people with food restrictions (e.g. halal).

Drawing on Astin's involvement theory, five postulates are explored to evaluate the effectiveness of these initiatives on commuter student involvement. Insights ranged from the varying levels of physical and psychological energy invested by commuter students to the qualitative and quantitative dimensions of their involvement. Through the semi-structured interviews and data analysis, it has become evident that while certain

initiatives resonate well with students, others struggle to foster meaningful connections and long-lasting outcomes. Thus, the findings underscore the significance of targeted interventions and innovative strategies aimed at enhancing commuter student involvement and creating a more vibrant campus community. By showing the complexities of student involvement, this chapter helps for informed decision-making and the formulation of policies geared towards promoting inclusivity and enriching the overall university experience for all students.

Chapter 7.   Recommendations and Questions for Further Research

7.1. Recommendations for facilitators of the Community Vibrancy Initiatives and SFU Administrators

Targeted Engagements

Having a variety of engagement strategies allows for diverse groups to participate. It allows for the needs of a wider portion of the population to be met (Dickson et al., 1998; Evergreen, 2023). A targeted approach to increasing student engagement will require the planning committee and facilitators to put in place more mixed strategies that accommodate the different student groups. Currently the very engaging times in the semester and activities happen at the begin of the semester when there are events like, Spirit Day, Club Days and Street Fest. Additionally, variety in provided activities may make theses initiative more attractive to students. In this case activities that consider the various factors that prevent commuter students from participating are important. As established in the findings of this research, commuter students have difficulties accessing activities that happen out of the lecture room and at late hours of the day. Having more specific initiatives will mean innovative activities that allow for them to be socially involved on campus and accommodates their commute needs. This can be done by identifying and leveraging social media platforms that SFU commuters frequent, or partnering with student organizations that represent commuters' interest to develop activities. With the help of these tools SFU off-campus activities can be developed to allow for some social involvement for students with interests in being involved but are faced with transit constraints.   These measures will help increase awareness and their sense of community on campus.

Evaluation of Initiatives implemented

Evaluating a program's effectiveness is important because it demonstrates the degree of attainment of the program objectives, and points to the problems that exists in the program (Deniston et al., 1968). Additionally, it helps to give some accountability for how finite university funds are being used to effectively meet needs of all students

(Tingle et al., 2013). A more recuring and in-depth evaluation of the implemented vibrancy initiatives will maximise their impacts on commuter students' engagement and satisfaction. This is because the state of the interventions will constantly be tracked, and the impacts are assessed.

One way they can improve the quality of their evaluations is to ensure adequate consultation is collaborating with student serving groups like the Simon Fraser Student Society (SFSS). This helps ensure the value of the initiatives to students are considered from the students' perspective as well. An additional way to add some validity to the evaluation of initiatives could be to have a control sample of on-campus students to compare how well the initiatives serve both commuter and on-campus students. These evaluations could also include collection and analysis of usage data and interviews with users to gather feedback. These actions will help refine existing initiatives, introduce more targeted programs or reallocate resources based on student needs.

Advocating for better transit services to the school

Advocacy for better transit at SFU in previous years resulted in programs like the U-Pass which led to students adopting transit lifestyles across Metro Vancouver (Lambert & Beaudoin, 2006). In more recent years transit advocacy from SFU has focused on the prospect of a gondola to the Burnaby Mountain campus from the foot of the mountain. While this has potentially beneficial impacts to alleviate transport disadvantage for students going to SFU Burnaby, my research demonstrates that the diverse living arrangements and the varied geographies of students requires further advocacy for regionwide transport solutions for students. SFU is a three-campus university, which show the need for diversity in the transit services. Some undergraduate students may be required to attend classes in all three campuses in one semester, and a more efficient transit connection between campuses may allow students to make best use of academic and extracurricular opportunities. Facilitators can advocate for enhanced transit services such as increase bus frequency, improve connectivity to the campuses and establish more safety measures that will address barriers faced. Advocating for these heightens awareness and boosts the influence for change.

Redefining Student Success

Astin's involvement theory suggests that student development is directly proportional to the quantity and quality of student involvement in academic and extra curricular activities. While the context and modes of student involvement have evolved, the theory remains relevant today because it emphasizes active learning and student engagement linked to better learning and student growth outcomes. While Astin's theory of involvement remains influential, the study focuses on retention as a measure of student success. In recent times there are several factors that scholars need to consider in measuring student success. Some of these being the digital transformation, where virtual learning environment challenges the traditional notion of involvement; economic pressures that force students to prioritize paid work over campus involvement and mental health and well-being factors that impact involvement.

Further research questions that could be considered by post secondary institution administrators and engagement facilitators in redefining student success could be to investigate topics like digital engagement, inclusive involvement, career- relevant engagement, economic considerations and technological interactions to enhance engagement. Additionally, further research on how student culture at an institution impacts student involvement on campus.

7.2. Recommendations for Municipal Planners and Local Leaders in Charge of Housing

As the province works on addressing the housing crisis by passing comprehensive laws that deliver more homes, there is the need for more legislation targeted to universities (BC Housing, 2023b; Ministry of Housing, 2023b). Just like the Homes for BC housing plan targets increasing on campus accommodation by about 5000 new spaces across British Columbia by 2028; there should also be such plans for increment of housing in the neighbourhoods around these institutions (BC Housing, 2024; Ministry of Advanced Education and Skills, 2022). These could include regulations and policies that incentivise affordable housing projects for students. Additionally, legislation that suggests more transport-oriented developments should consider such development around many post-secondary institutions to directly accommodate the student population (Ministry of Housing, 2023a).

As reported by students the high cost of rent plays a vital role in their living arrangements which impacts their commute experiences. If students can afford to live on campus or close by this can reduce the transportation burden, changing the dynamics of their student life.

7.3. Recommendations to Transportation authorities

To reduce the burdens of the transit system that make students transport disadvantaged; a more thorough usage and analysis of data collected on buses that serve SFU to assist in reallocating and adding more resources to the transit service. This will help to make more informed decisions on how and when to increase bus frequencies and to extend transit service hours from SFU.

Participants described their commutes to have multiple transfers using different modes of transport, of which most requested more direct connections to the campus. As a partial measure of comparative level of service provision, Unlike post-secondary universities such as University of Toronto Scarborough and University of British Columbia which have 6 and 13 bus routes that serve their campuses respectively, SFU has 4 buses (Chen, 2021; TransLink, 2021, 2023). This shows that despite the campus also being a commuter campus the transit system is limited to directly serving students arriving from only 4 routes. These areas are, the Production Station, Metrotown, Hastings Street, and Burquitlam. Many others are required to transfer multiple times during the journey. If more bus routes are added to the transit network from SFU the transit system will reduce the transportation burdens of a large proportion of the commuter student's population.

Safety was a big concern listed out by students that contributed to their commute challenges. It led to their unwillingness to stay late on campus to get involved in social activities. They preferred not to travel at night. A suggestion of how to improve the feeling of safety for such students is to increase supervision on public transit at night. This can include the presence of more transit staff on trains, buses and at station at night. Additionally increasing forms of technology like CCTV and alarms passengers can use (Smith & Clarke, 2000). Such interventions have been adopted in places like Tokyo, Melbourne, Lagos and Los Angeles (Ceccato & Loukaitou-Sideris, 2020). Such interventions will require training of transit staff to be more attentive and sensitive to

prevent and respond to safety issues. This reduces an opportunity for crimes to occur and will help commuters feel more secure commuting at night. It will help reduced the perceived dangers that students feel around other people, especially at night and when they travel alone.

Chapter 8.   Conclusions

In this thesis, I sought to explore how transport disadvantages faced by commuter students at Simon Fraser University impact their social involvement on campus and I evaluated the effectiveness of the Community Vibrancy Initiatives to create involvement opportunities for these students. Through qualitative interviews and analysis, key findings emerged. These findings gave more insight on the complex relationship between housing, transportation, and social involvement. Additionally, the vibrancy initiatives were also evaluated using the information from the interviews. Although the results of the evaluation were mixed, evidence does suggest that the initiatives have not created meaningful long-lasting outcomes that aid commuter students' social involvement on campus.

Information gathered from the research showed that the factors that influence student living arrangements were, cost of rent, the need for comfort and family support. Many of these participants chose to live with family to alleviate the financial burden of housing. This decision of students to live off campus resulted in commute distances and times that made them transport disadvantaged in some cases. These disadvantages included low bus frequencies and capacity, unreliable and limited transit connections, which resulted in a negative impact on social involvement for some of the cases.

Drawing from the information from the findings, recommendations were made to decrease the disadvantage experienced by commuter students via greater student involvement. These recommendations include facilitating the community vibrancy initiatives, improving housing and transportation options for commuter students. These suggestions included more targeted engagements on campus that consider the needs of commuter students to increase their involvement and sense of belonging. Additionally, suggestions were made for engagement facilitators and university administrators to advocate for better transit services to the university to enhance accessibility and convenience for students, ultimately strengthening community involvement.

Municipal planners and local leaders play a crucial role in addressing the current housing crisis by implementing affordable housing policies around universities and supporting more housing projects near post-secondary institutions. Furthermore, collaboration with the transport authorities to devise transit-oriented developments

(TODs) near these institutions prioritize access to education and transportation for students. Some guidelines to ensure that students benefit from new TODs is to have a student representation in planning and decision making. This will ensure that some student needs are considered in development plans. Additional implementations could be affordable housing provision particularly for student, flexible lease terms that considers the sometimes-transient nature of student life and student-centric amenities like study lounges and communal spaces.

Transport systems can be enhanced for commuter students by the transit authorities by increasing bus services to the campus from different travel routes in the region; increasing bus frequencies and service hours; and improving supervision on transit at night to improve safety. All these recommendations to remove transportation burdens can facilitate involvement in campus activities.

To conclude, it is apparent that addressing these challenges requires a multifaceted approach that integrates housing, transportation, and community involvement efforts. Using recommendations stakeholders can work together to create vibrant university experiences for commuter students in Metro Vancouver.

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