

“Exploring the Impacts of an Unlimited Access Program: A Case Study of Brock University”

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Abstract

In this paper we present and discuss the results of a study that explored various impacts of Brock University’s “U-Pass” program, which provides students with fare-free public transit access in exchange for the payment of a flat-rate annual fee. The study results suggest that this program is viewed positively by most students, including many who are required to pay the annual fee but are either unwilling or unable to commute by public transit. Among the program’s benefits have been a dramatic increase in public transit ridership among students, the reduction of on-campus parking pressures, and a lower cost of attending university for many students. However, the study also identified several challenges that, if addressed, could potentially lead to improved service efficiencies for the three transit agencies taking part in the program and, ultimately, further transit ridership increases among students.

Background

Efforts to reduce automobile dependence and its myriad environmental, economic and social consequences have become increasingly common throughout North America. As part of this trend, many post-secondary institutions in Canada and the United States have initiated “unlimited access” programs that provide

students with “the right to ride public transit without paying a fare”.¹ Unlimited access programs normally involve students paying a pre-determined annual fee to their school, which is followed by that institution paying a fixed amount to the local transit agency/agencies to cover the cost of providing a mutually agreed upon level-of-service. Students then use their student card as transit passes each time they make a public transit journey.

A study conducted in 2001 found 35 unlimited access programs in place throughout the United States², while another study conducted in 2004 identified 20 similar programs at post-secondary institutions across Canada.³ One such institution is Brock University. Located in St. Catharines, Ontario, Brock University has witnessed enormous growth in student enrollment over the past several years. Between 1999 and 2004, for example, the number of students registered at Brock University rose from 11,000 to over 16,500. By 2002, this growth had generated an increasing demand for automobile parking spaces, a problem that was exacerbated by the school's suburban location on the St. Catharines/Thorold municipal boundary and along the brow of the Niagara Escarpment. A lack of off-campus housing opportunities within the immediate vicinity of campus, combined with the Escarpment's steep slope and the presence of a massive highway interchange just east of the university, makes it difficult for students to walk or cycle to campus. Also, a large proportion of students commute to school from more distant places, such as Niagara Falls and Welland. Accordingly, the improvement of public transit accessibility to the university campus was identified by a Parking and Transportation Task Force as having a critical role in the overall effort to reduce the school's transportation problems.⁴ It was with this in mind that a referendum was held in 2003 in which Brock University students voted in favour of commencing an unlimited access program. As a result, the Brock University Student Union (BUSU) entered into a contract with the three public transit agencies providing service to the campus – St. Catharines Transit, Welland Transit, and Niagara Transit – to create the Brock University U-Pass program, which would allow most students to pay an annual fee and then simply present their student ID cards when boarding the bus.

This paper presents and discusses the results of a study that explored the impacts and challenges associated with the implementation of the now four-year-old Brock University U-Pass program. There were several motivations for conducting such a project. Perhaps most importantly, understanding how various stakeholders feel about the program can assist in determining what aspects have worked well and what changes may be necessary in order to for its benefits to be maximized. Furthermore, it further addresses the need for research that explores the role of unlimited access programs within broader efforts to promote sustainable urban transportation. For example, a detailed overview of Brock University's experience can provide useful information to post-secondary institutions that have not yet implemented, but are considering, an unlimited access program. Finally, it may also demonstrate to municipal, provincial and federal policy-makers the importance and benefits of providing increased financial support to public transit and, more specifically, to programs of this nature.

Methodology

This study was conducted in two phases. Phase one took place between January and April 2006, when a survey questionnaire was completed by 402 Brock University undergraduate students. Participants were asked to indicate the extent to which they use their U-Pass (in terms of frequency, location, and time and days of travel), their reasons for using or not using the U-Pass, their levels of satisfaction with the transit services provided as part of the program, and any suggested modifications that they felt might improve the program's effectiveness. In phase two, carried out in February 2007, several key informant interviews were conducted with individuals representing the four organizations responsible for administering and delivering the Brock University U-Pass program, including: the Brock University Student Union's Vice President of Finance & Administration; the General Manager, the Manager of Transportation, and the Marketing & Customer Service Supervisor of St. Catharines Transit; the Manager of Welland Transit; and the Manager of Niagara Falls Transit. The key informant interviews sought to gather information and to explore participants' perceptions regarding various

aspects of the U-Pass program, including service changes that have been made following the program's implementation, the program's positive and negative impacts, any challenges that they felt have prevented the program from achieving its maximum potential, and any modifications they felt could further improve the program.

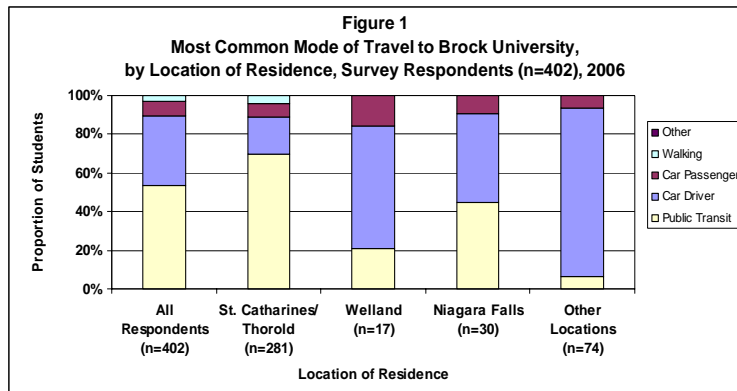
Findings

U-Pass Usage

Brock University students have, for the most part, embraced the school's U-Pass initiative. For example, St. Catharines Transit's Manager of Transportation noted that the U-Pass initiative brought a dramatic increase in ridership that went far beyond their initial expectations. "When we first started...we figured maybe 25-30% increase in ridership, and it took off to about 200%." Indeed, the survey results show that public transit is the most frequently used mode of travel to Brock University for students, with 56.5% of survey respondents indicating this to be their regular means of travel to school (Figure 1). Transit usage was highest among students residing in St. Catharines and Thorold, where almost three-quarters of students commute to school via public transit. Transit use was also very high among students residing in Niagara Falls; just less than one-half of students reported using public transit regularly for travel from that city to the university. Less than one-quarter of respondents living in Welland reported travelling to school regularly via public transit and, less surprisingly, the automobile continued to be the dominant mode among those residing outside the service areas of the three transit agencies participating in the U-Pass program.

The results obtained from the survey questionnaires identify a number of patterns in terms of U-Pass usage. Considering that Brock University is located on the border of St. Catharines and Thorold, it is not surprising that the highest number of U-Pass users resided in one of these two locations, totalling nearly 86% of all users. Of these students, three-quarters use their U-Pass daily, which is higher than the already impressive figure of 70% calculated for all students who identified themselves as U-Pass users. A very high portion of students

who use their U-Pass, ranging from 92% to 100% in the three transit systems, ride public transit to school. It is also notable that many students use their U-Pass for other tasks. This is particularly evident in St. Catharines and Thorold, where nearly one-half also use transit for both running errands and taking part in social activities, while one-third also use it to commute to work. This may also account for the significant amount of use of the U-Pass on weekends in St. Catharines and Thorold, when 45% of students residing in these two cities use public transit.



It is also worth noting that 40% of the students living in St. Catharines and Thorold identified access to public transit as having an influence over their residential location decision. This was followed by 32% of students from Niagara Falls noting that the availability of the U-Pass influenced their choice of residential location, while none of the Welland students identified having the U-Pass as playing a role in their locational choice.

Program Benefits

Participants were asked their opinions of any benefits gained from the U-Pass program. A majority of student participants found the program to be highly beneficial as it was a cheaper mode of transportation that could be used for a number of purposes. Other

benefits reported by the students were that the program provides a reliable and convenient mode of transportation, that they did not have to worry about carrying bus fare, that taking the bus provided students with service right to the doors of the University, and that the program had important environmental benefits due to its role in reducing automobile use. However, one-half of student participants who indicated themselves as car drivers felt there to be no benefits associated with the U-Pass program.

One of the strongest benefits identified by the key informants was the role of the U-Pass program in altering individuals' perceptions of public transit. As one St. Catharines Transit official stated, "The U-Pass program has really opened a lot of eyes with a lot of people that were very negative about transit before." Similarly, the Niagara Transit representative noted that "...if university students take public transit they become more familiar with it, and when they are more familiar with it they know the alternative now. And if they go out into the work force they can possibly use those alternatives." Several interviewees also noted the environmental benefits of the U-Pass program. For example, St. Catharines Transit's Marketing and Customer Service Supervisor stated that "...it's telling people, environmentally, transit is one of the options...it can help with greenhouse gas emissions." All three transit agencies indicated that the ridership increases associated with the U-Pass program have enabled them to receive more funding from the federal and provincial governments' gas tax programs. Much of the funding that transit agencies receive is determined by ridership levels and, therefore, the increased funding they receive provides them the opportunity to renew or enlarge their transit vehicle fleet. This, in turn, provides them with the ability to increase the number of buses on the road, the number of transit routes, and/or the frequency of transit service. The General Manager of St. Catharines Transit also noted that the program provides the transit agency with a reliable, pre-determined source of revenue, which can assist greatly in service planning. Also, as the General Manager of Welland Transit noted, the U-Pass program has produced a stronger, more reliable ridership level which is beneficial when the transit agency must deal with the city council to discuss important items such as its annual budget. Furthermore, the

BUSU representative explained that the program benefits both students and local businesses in the cities served by the participating transit agencies, especially St. Catharines, as it encourages students to travel around the city. He noted, for example, that the program enables and encourages students to visit places such as local shopping malls more often than they otherwise might without the U-Pass. Overall, most student participants view the U-Pass program as beneficial since it provides an inexpensive and reliable mode of transportation that can be used for a variety of purposes, with travel to school being only one of these. The transit agencies are benefiting from this increase in ridership as it is not only increasing their ability to obtain gas tax funding, but it is also a program that is promoting sustainable development and alternative modes of transit to students and future generations.

Program Challenges

Study participants were also asked their opinions of any challenges associated with the U-Pass program. The fact that all students were required to pay for the U-Pass, without the ability to opt out, was viewed to be a negative aspect of the initiative by a large share of student participants. At the time of the survey, most students at Brock University were required to pay a \$126 fee for the eight-month school year, which a small share of respondents viewed to be too expensive. However, it is important to note that, without the U-Pass initiative, it would cost students \$540 for a St. Catharines Transit bus pass during the school year. Therefore, students using that transit system who would initially be paying for a bus pass are saving \$414 annually. Although there are many complaints about the mandatory fee, an additional 112 student participants proclaimed that there were no challenges faced through the U-Pass program. Service-related concerns were also prevalent in the responses to this question. For example, many students viewed public transit to be inconvenient, which, ironically, is an outcome of the program's popularity. Several participants identified overcrowding on buses as a problem, as well as the related problem of having to wait for another bus if those before it were already full. These travel delays were cited as being problematic not only as an inconvenience and as the cause of some discomfort,

particularly during inclement weather conditions, but also because it sometimes made students arrive late for their classes. Several respondents also noted that this problem was instilling in some students the perception that public transit is an unreliable mode of transportation, something that could influence their decisions to use public transit later in life. Students using Niagara Transit and Welland Transit also identified service-related problems, but in their cases this had more to do with the limited frequency of service these agencies provided to Brock University than with crowding-related issues.

Students' comments regarding crowding- and service frequency-related issues did not come as a surprise to the key informants. All of the interviewees noted that these problems are largely the outcome of several factors that, although beyond their control, could ultimately be solved. For example, the Niagara Transit and Welland Transit representatives emphasized that complaints about their agencies' hours of service and service frequencies are understandable, but that a lack of available funding – even with their allocations of U-Pass revenues – does not enable them to provide higher levels of service to Brock University. In the case of St. Catharines Transit, which serves Brock University on multiple routes and at very high frequencies yet still has trouble at times in meeting the demand for service, a key challenge has to do with the scheduling of class times. One reason that buses are often overcrowded is that most classes begin at the top of the hour; thus, most students travel to Brock in the latter-half of the hour. On the other hand, buses arriving to the university at in the first-half of the hour usually have seating available. For example, between 7:30 and 8:00 am, every available bus in St. Catharines Transit's fleet is on the road, yet students are still sometimes forced to wait at their bus stops for another vehicle with room available. The Marketing & Customer Service Supervisor of St. Catharines Transit also noted that the efficiency with which the agency's bus fleet can be used is also reduced by the lack of a proper bus terminal at Brock University. Currently, the main campus bus stop is situated in a location that does not have designated bus stops for all routes and that is also open to automobile traffic. As the interviewee noted, this causes student and vehicle congestion problems that extend passenger loading and unloading times, meaning that buses must spend more time simply

sitting idle on campus rather than allowing drivers to quickly carry passengers to their destinations and to make a return trip to campus.

Suggestions for Improvement

Participants were also asked to suggest improvements that might enhance the U-Pass program and their experiences as transit users. Again, crowding-related concerns dominated the responses provided by users of St. Catharines Transit. These included suggestions for more frequent service, to improve the timetabling of routes (e.g., to have them arrive earlier than only a few minutes before the hour), to reduce crowding on buses, to improve buses' on-time performance, and to increase the size of St. Catharines Transit's bus fleet. Other service-related suggestions were to provide transit service closer to students' homes, to provide more direct bus routes to campus, to allow students to use the U-Pass during the summer months, and to improve the customer service provided by some drivers. Also notable were the large number of comments that no further improvements to the U-Pass program were necessary and that, for some students, nothing could be done to encourage them to use public transit in lieu of driving a car.

When the U-Pass program was first implemented in 2003, the initial contract between BUSU and the partner transit agencies was only for a three-year period. However, despite the various challenges identified in this study, the survey results showed that a majority of students supported the U-Pass program's continuation, regardless of where they lived. Support was strongest among students residing in Niagara Falls, St. Catharines, and Thorold. The high level of support among students residing in St. Catharines and Thorold was least surprising, for several reasons. Most important is the fact that, of all the public transit service improvements made following the program's introduction, most have been made by St. Catharines Transit. This has included higher service frequencies on several routes, longer service hours and expanded weekend service, and the introduction of several new routes directly serving Brock University. The high level of support among students living in Niagara Falls, on the other hand, is somewhat surprising. Fewer than 50% used public transit regularly

for travel to and from Brock University; however, 93.3% supported the program's continuation. The weaker level of support among students residing in Welland could be due to the limited frequencies at which service is currently provided between Brock University and Welland. This problem could be resolved quite soon, however, as the expected implementation of a similar Unlimited Access program at Niagara College, located in Welland, is likely to bring with it a doubling of service frequencies between Brock University and Welland. Of the responses to this question, perhaps most surprising is the fact that there was majority support for the U-Pass program even among those who live outside of the partner transit agencies' service areas. Over one-half of students living outside the service area supported the program's continuation. Among those who did, this came primarily with recognition of the program's broader societal benefits (e.g., environmental benefits). Furthermore, these students also noted some personal benefits, such as less competition for parking permits and spaces, the ability to use their U-Pass when they were going "out on the town" with friends in communities served by the transit agencies, and even the ability to use the U-Pass to quickly reach parking lots located on the outer periphery of the Brock University campus.

Discussion

Crowding On Buses

One of the most commonly cited problems among all study participants was the level of crowding on public transit vehicles travelling to and from Brock University throughout much of the school day. In this regard, the program can be considered to have, in some ways, become a victim of its own success. The problem of crowded buses must be dealt with for at least two reasons. For one, there is the risk that students who are routinely bypassed by full buses while waiting at a stop, or those who do not appreciate the discomfort associated with riding on a very crowded bus (either while seated or while standing), will forego the use of public transit and instead resort or revert to driving a car. Furthermore, if students begin to associate riding in crowded conditions as a "normal" part of using transit, there

is a lowered chance that they will use transit later in life, due to this negative experience.

There are several possible ways of dealing with the issue of crowding on buses, not all of which require a large financial investment. The least expensive way would be to educate students about the fact that buses tend only to be full to capacity when they are traveling to Brock immediately before class start times. Buses arriving mid-hour, for example, often have empty seats available. Thus, if students could be encouraged to ride to school a little earlier, they could save themselves and others significant discomfort. A second solution would be for Brock University to change its scheduling practices. If class start times were staggered so that some began at half-past the hour, student commuter traffic could potentially be distributed more efficiently. No extra buses and drivers would be needed; instead, it would simply involve spreading the traffic load to peak just before the hour and half-hour. A third, but much more expensive, way of handling the problem of crowded buses is to enlarge the transit system's fleet size, or at least the size of its buses. Currently, St. Catharines Transit has its entire fleet of available buses on the road during the morning peak periods, the time at which crowding problems on buses to Brock are most prevalent. Thus, there would be no way of expanding its seating capacity without the purchase of more buses. At a cost of anywhere from \$450,000 to \$650,000 per bus, this is not necessarily an economically efficient solution, given that the extra vehicles would only be needed for a few hours a day.

Crowding At Bus Stops

Yet another crowding-related issue associated with the U-Pass program concerns the waiting environment at the main Brock University bus stop. For passengers, this is a comfort issue; for the participating transit systems, particularly St. Catharines Transit, it is a service and cost efficiency issue. The crowding of students to get on buses, without designated areas for each bus route, means that the boarding and alighting process is sometimes chaotic. This, combined with the all-too-often ignoring of "No Parking" policies in the bus stop areas on campus, means that a great deal of time is wasted that

could otherwise be used to get people to their destinations more quickly (thus improving transit's competitiveness vs. the car) and, perhaps more importantly, to get buses to their destinations more quickly so that they are freed up to start serving the next load of passengers. What this implies is the need for a more formal transit terminal on the Brock University campus. As noted earlier, transit has is the most common mode of travel to/from campus among students, thus suggesting that the university would be well advised to ensure that the needs of transit users and the partner transit agencies are properly served. Having exclusive buses-only areas and designated waiting areas for different routes will improve the level of comfort afforded to students waiting for the bus; this is an important consideration, given that comfort has been shown to be an important criterion in one's modal decision-making process. It will also improve transit service efficiency, by reducing the amount of time buses have to spend on campus. The less time it takes students to board and alight vehicles on campus, the more likely the transit agency will be to increase service frequencies, as buses can do a full return trip in a shorter time.

Student Residential Clustering

Although not discussed extensively up to this point in the paper, another issue for which the results of this study have important implications is the topic of student housing, a "hot button" issue in many university and college communities. Currently, a large proportion of Brock University students reside in a small number of residential areas, most of which are in close proximity to bus routes serving Brock University. Each year, problems emerge when student lifestyles collide with those of more permanent residents. Since this study has shown that a large proportion of students living in St. Catharines and Thorold use public transit, and that public transit accessibility to Brock University is a critical factor in the residential location decisions of many students, the geographical distribution of bus routes directly serving Brock University could potentially be more widely dispersed as a way of more broadly distributing the student population. This could then result in smaller concentrations of students being found in any one particular area, thus reducing "town-

gown” tensions, and could also help solve the problem of crowding on buses, as there would be reduced demand for service in any given area. Fewer students living in areas where there is currently a great demand for transit service would mean a lower likelihood of buses exceeding their passenger capacity. An added advantage of such a move would be that, if higher levels of service were provided throughout city in order to accommodate this redistribution of students’ residential locations, this could also potentially mean a higher level of service for all transit users in St. Catharines and Thorold, not just Brock University students.

Underutilization of Niagara Transit

As highlighted in the study findings, it can be stated that Niagara Transit is being underutilized as a provider of transit service to Brock University. It was expressed by both students and the Niagara Transit representative that student ridership is fairly low primarily because of the limited transit schedule, which, in turn, is the result of inadequate funding availability. An increase in utilization of Niagara Transit would increase the cost for BUSU; however, these short-term costs would be outweighed by long-term benefits that would be experienced by both groups. Another crucial point that was raised in the Niagara Transit interview was the issue of employment in Niagara Falls. With close to 14 million tourists visiting the city every year, this area is well-known for its abundance of jobs in the service sector, many of which are appealing to students due to their part-time nature. Service improvements might encourage more Brock University students to live in Niagara Falls, or at least to use Niagara Transit to travel between their homes in St. Catharines or Thorold and jobs in Niagara Falls. This could result in socioeconomic benefits for students and employers while helping with the problem of labour shortages in the region and reducing the amount of automobile commuting that occurs.

Niagara College U-Pass

The upcoming implementation of a U-Pass program at Niagara College, which has campuses in Welland and Niagara-on-the-Lake, is

expected to bring benefits to all three transit agencies and their users. Brock University is used as a major transfer point for buses operating between these cities, as well as by a transit route that St. Catharines Transit provides to the Niagara-on-the-Lake campus. The additional funding provided through Niagara College's U-Pass program will therefore lead to higher service frequencies to Brock University, which will especially benefit users of Niagara Transit and Welland Transit. Improved services to and from Niagara Falls might encourage students to reside and work in the area, which would also distribute the student residential population more widely and alleviate student housing-related problems in St. Catharines and Thorold. St. Catharines Transit will benefit from greater interconnections with the Niagara Transit and Welland Transit routes and from more frequent service between Brock University and the Niagara College campus in Niagara-on-the-Lake. A similar effect would be expected for Welland Transit, which would also be able to provide more frequent service between Brock University, the Welland Campus of Niagara College, and downtown Welland.

Service Area

Many students do not utilize the U-Pass due to a lack of transit service where they live. Of all student participants, only 8.6% living in St. Catharines and Thorold purchased a parking pass during the 2005-2006 academic year. However, 64.7% of survey participants living in Welland purchased a parking pass, as did 50% of those living in Niagara Falls and 87.8% of those residing outside of the transit agency service areas. By increasing serviced areas this could cater to a larger market and result in an overall increase the number of riders. The above argument provides one more justification for the creation of a Niagara Region-wide public transit system.

Conclusion

This study has shown that providing the right incentives can go a long way in encouraging public transit ridership among particular market segments and, ultimately, in reducing automobile dependence. The Brock University U-Pass program has been successful in many ways,

perhaps most importantly in that public transit has become the most common means of travel to school among Brock University students. However, there is the potential for the program to assist in reducing automobile dependence even further. For St. Catharines Transit, the most significant challenge is to reduce crowding on buses. For Niagara Transit and Welland Transit, the challenge is to increase students' use of the services provided to Brock University. In order to provide more benefits to students who are unable to use public transit but who are nonetheless required to pay the annual U-Pass fee, the challenge is to provide a high level of transit service where there is currently none available or where an inadequate level of service is provided. Although some solutions to this problem are non-monetary in nature, an increased level of funding for the Brock University U-Pass program could potentially assist in dealing with many of these challenges. Given their growing interest in the promotion of sustainable transportation – in the face of growing evidence of global warming, for example – government officials would be well advised to seriously consider the provision of targeted funding for unlimited access programs. Given the large number of people who typically access post-secondary institutions on any given school day, the impact of changing transportation habits at the post-secondary level may be more large scale than one would assume. As Dorsey has noted, “universities play a key role in resolving regional transportation problems, particularly at larger institutions that contribute highly to regional transportation demand.”⁵

References

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