

Mobility of NDSU Students Transit Survey Results – Year 2

Dustin Ulmer*

Small Urban & Rural Transit Center
Upper Great Plains Transportation Institute
North Dakota State University

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*Ulmer is a student research assistant with SURTC.

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Mobility of NDSU Students

The student transit use survey for NDSU received responses from 598 students. The survey information provides insight into current transit issues including movement demands of campus students, perceptions of MAT services and campus parking, as well as campus public transportation and transit accommodations.

It is not possible with an electronic on-line survey to ensure equal participation from all students. However, there was a proportionate distribution from all undergraduate and graduate classes (Table 1). The junior class had the highest representation. All classes were within 2.47% of actual class distribution.

Table 1. Survey Response Distribution Compared to Actual Class Distribution

Classification	Actual Class Distribution (Spring '04)	Class Number	Responses Distribution	Survey Number
Freshmen	18.59%	2,024	16.56%	99
Sophomores	19.02%	2,071	18.23%	109
Juniors	17.31%	1,885	25.59%	153
Seniors	30.06%	3,273	27.59%	165
Graduate	12.78%	1,392	11.37%	68
Non-degree	2.23%	243	0.67%	4
Total	100.00%	10,888	100.00%	598

Of the 598 students who responded, 367 or 61.4 percent were female, and 231 or 38.6 percent were male. The actual NDSU spring 2004 enrollment consisted of 4,816 females or 44.2 percent and 6,072 males or 55.8 percent.

Student's employment status often influences their attitude towards and use of public transportation. About one-fourth of the survey respondents were unemployed (Figure 1). Just over two-fifths of students are employed off campus and just under one-third of the survey respondents were employed on campus. Compared with the previous year, these figures show a slight increase in people shifting from off-campus employment to on-campus employment, with unemployment being within a .07 percent difference.

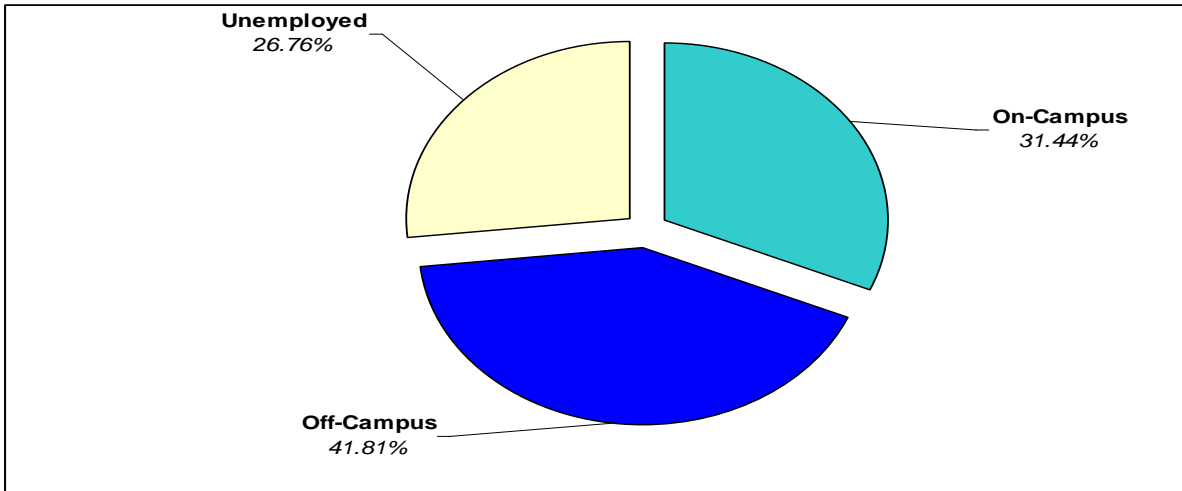


Figure 1. Student Work Status (n=598)

A further breakdown shows that a slightly higher proportion of female respondents held jobs (Figure 2). A higher percentage of males identified themselves as unemployed. There is no survey information available to explain the differences.

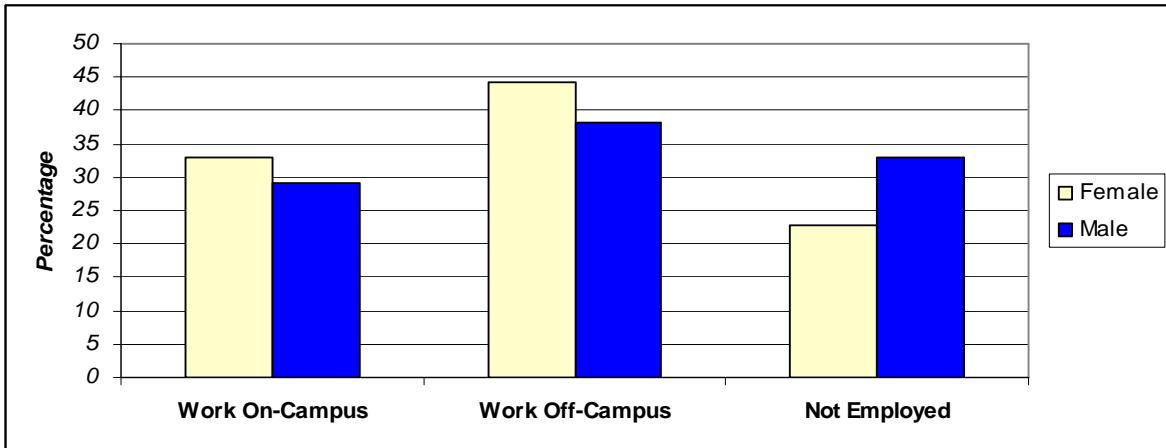


Figure 2. Employment by Gender (n=367,231)

Whether students live on or off-campus was also evaluated. Just below two-thirds of the students surveyed indicated that they live off-campus. The respondents' results show that 83% (82) of freshman live on-campus, while only 50% (54) of sophomores, 29% (45) of juniors, and a mere 12% (20) of seniors live on-campus. This indicates that many students must use some form of transportation to get to school.

Movement Demands of Students

There are many factors that influence the movement patterns of students. This section details some of the influences and habits that drive some of these patterns. Survey results in this section detail how far students live from campus, the origin of campus bound trips, the times students are on campus, modes of travel, what influences mode of travel, why on-campus students leave, as well as information related to weather changes and transportation. The information that is gathered from these results is helpful in determining what services can be offered that will coincide with normal travel activity of the student body.

Students live at various distances from campus (Figure 3). Approximately 50% of the off-campus students who responded to the survey live at least 2 miles from campus. A more in depth look shows, that a higher percentage of male students live closer to campus when compared to female students (Figure 4).

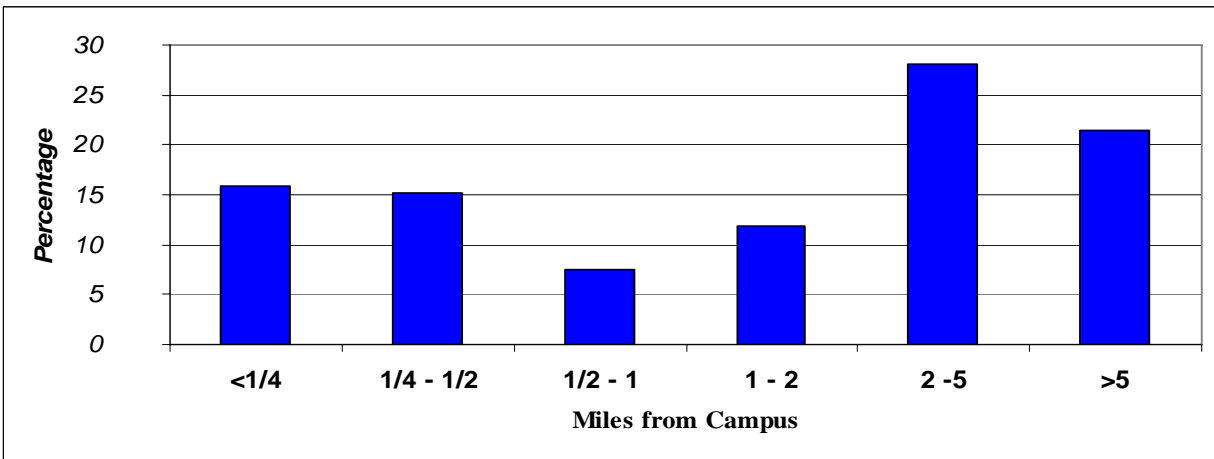


Figure 3. Distance Students Live from Campus (n=377)

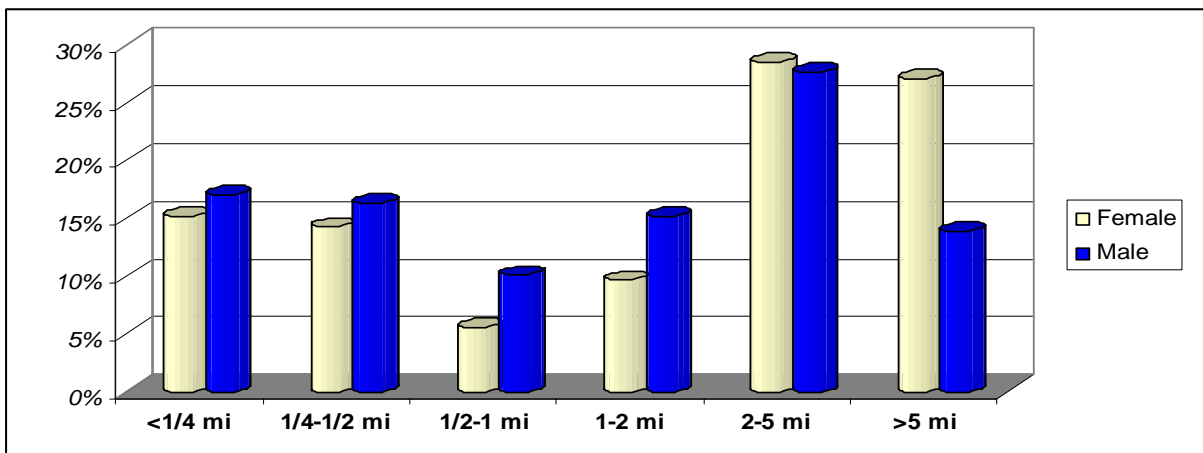


Figure 4. Student Distance from Campus by Gender (n=377)

Above 93 percent of respondents indicated they travel to campus from home (Figure 5). Roughly 5 percent indicated that they travel to campus from their place of work, and the remaining 2 percent travel to campus from child care, shopping, and other locations.

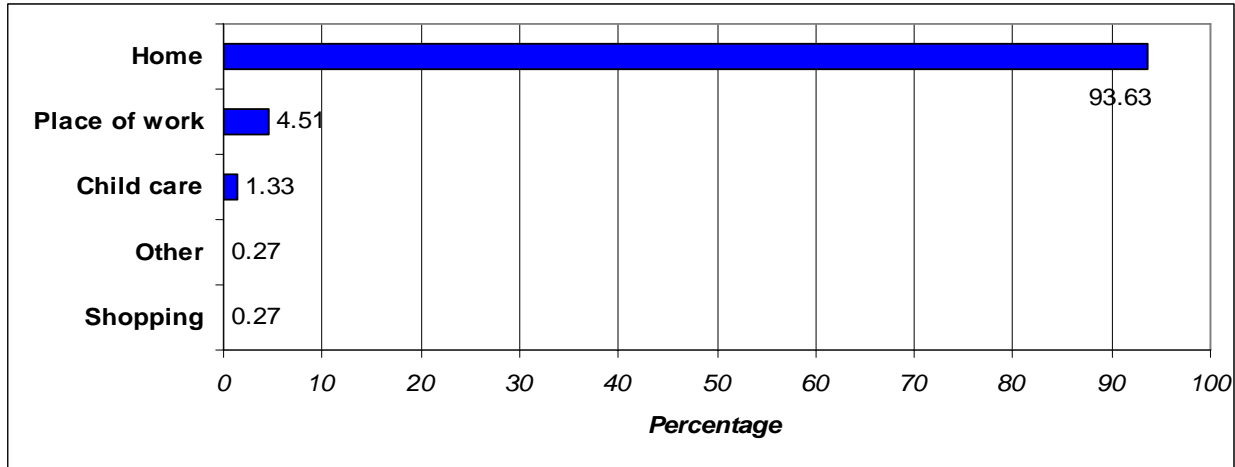


Figure 5. Where Students Depart From to Arrive on Campus (n=377)

The majority of student respondents indicated they are on campus from 8 a.m. to 4 p.m. following the normal semester class schedule (Figure 6). The results indicated that most students are on campus from 10 a.m. to 12 noon, with approximately 86 percent indicating they were on campus during this period. A large number of students indicated being on campus, nearly 76 percent, from twelve o'clock noon to 2 p.m.

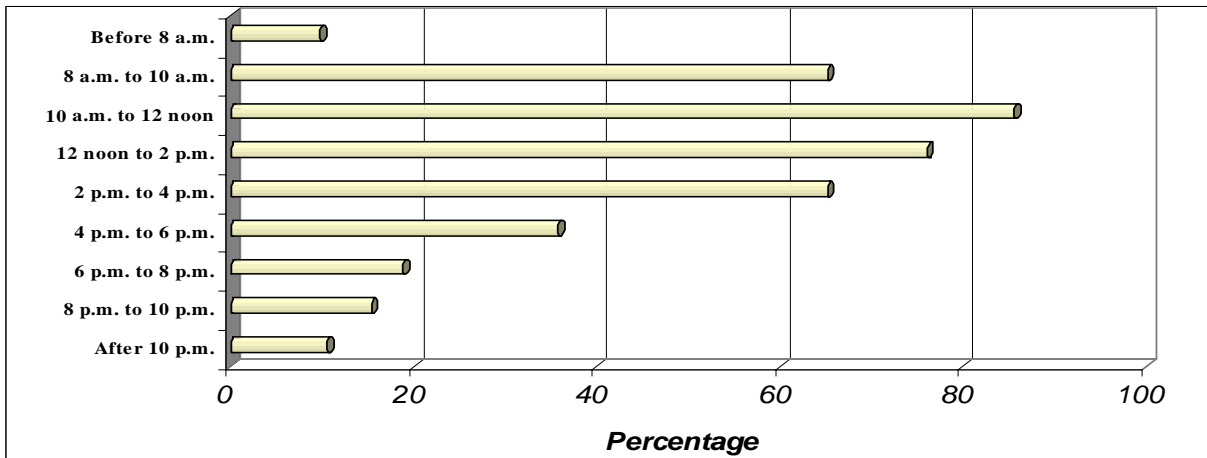


Figure 6. Times When Students are on Campus (n=377)

Approximately 91 percent of respondents indicated they have access to motor vehicles. A study done by Independent Insurance Agents of America and College Parents of America showed that nearly 70 percent of college students have either their own or use of their parents' car at school; this places NDSU above the national average by a 21 percent margin.

The majority of NDSU respondents make one trip to school and back equaling two one-way trips (Figure 7). Approximately 47 percent of students indicated that they make 2 one-way trips per day and nearly 35 percent of the respondents indicated that they made 4 one-way trips per day. Almost 10 percent, thirty-nine, of the students had responses indicating they made more than 4 one-way trips per day.

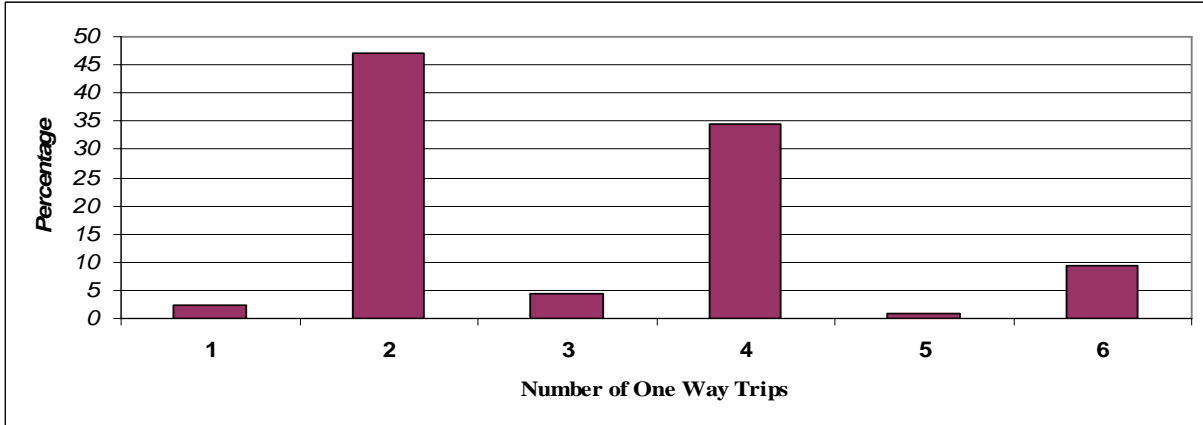


Figure 7. Number of One-Way Trips (n=377)

Students were asked to rate the importance of various factors when deciding on a mode of transportation. The factors included convenience, vehicle expense, parking expense, weather, parking availability, and time. Convenience, time, and parking availability were the top three factors in deciding a mode of transportation (Figure 8). Approximately 93% of respondents felt that convenience was either an important or very important influence on transportation mode choice. Time and parking availability also had a high percentage of respondents indicating important or very important with 84% and 78% respectively.

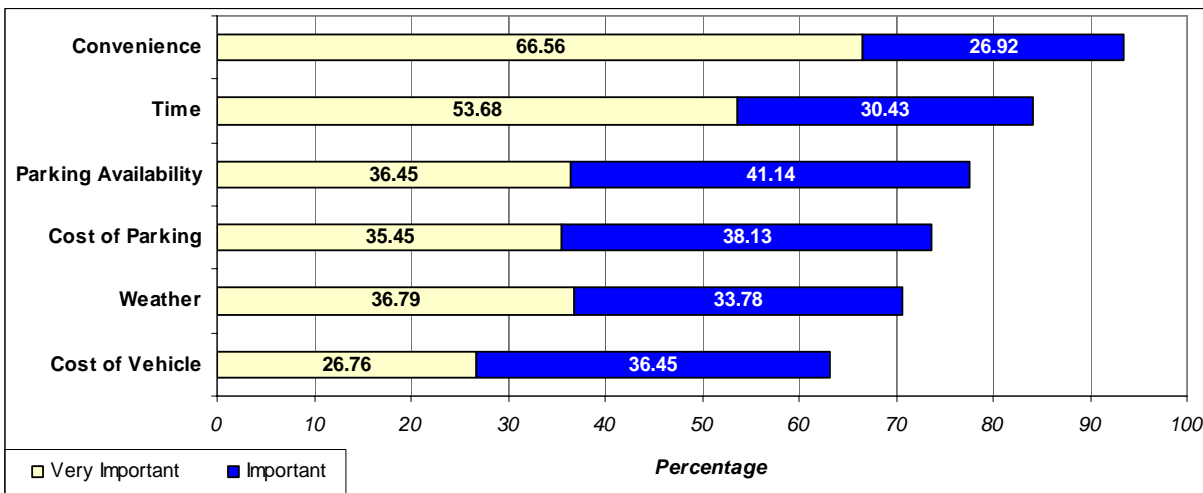


Figure 8. Factors Influencing Mode of Travel (n=598)

Students were asked how they most frequently travel to campus. Nearly 60% of the respondents indicated they travel to campus via auto. The next most popular form of transportation to campus was walking with 47%, followed by MAT bus with 12%, and bicycling with 11%.

On-campus students were asked why they most often leave campus (Figure 9). Seventy-nine percent responded that they most frequently leave campus to do general shopping, 70% indicated that they leave to do grocery shopping, 62% leave to visit family and/or friends, and 57% of respondents most frequently leave campus to go to restaurants. Other choices the students were given included going to the movie theatre, entertainment (other than movies), and work.

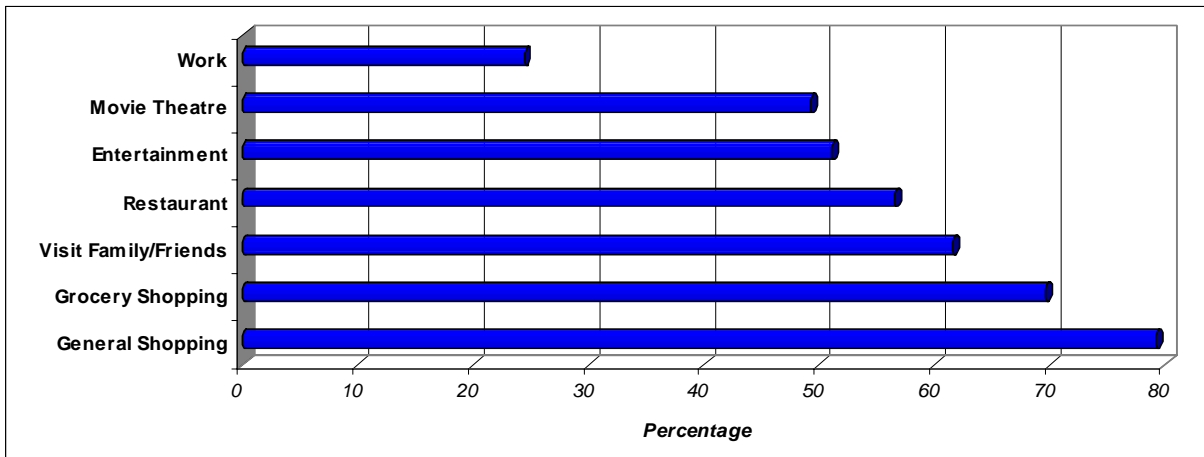


Figure 9. Why On-Campus Students Leave Campus (n=221)

If a student has a car, he/she can travel any time of the year regardless of the outdoor temperature. Results show that more than 29 percent of students choose their mode of travel based on the weather (Figure 10).

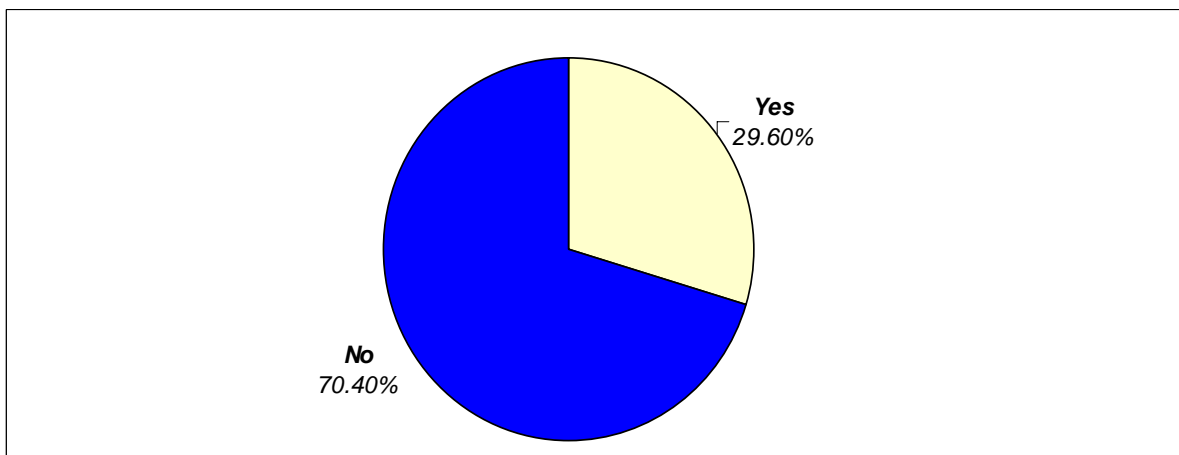


Figure 10. Weather Influences Mode of Travel in Winter (n=598)

Students were asked what distance is too far to walk to campus at different temperatures. Weather had a large influence on walking distance (Figure 11). It is easy to see the difference in reasonable walking distance when related to temperatures. As the figure shows, over 65 percent believe that walking less than ¼ mile when temperatures are below freezing is too far.

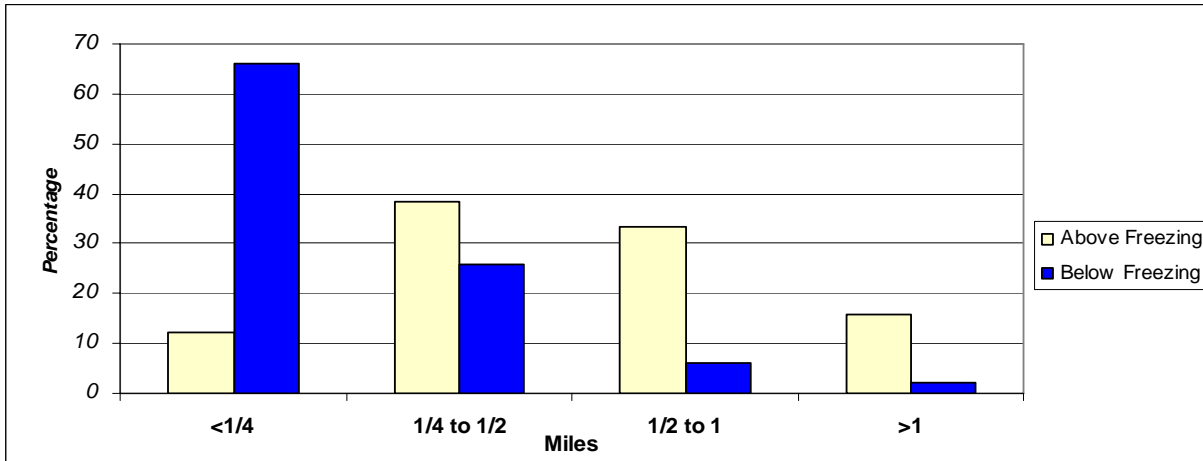


Figure 11. Reasonable Walking Distance by Temperature (n=598)

Student Perceptions of MAT Services

This section of the report focuses on student respondent's perception of the quality of MAT transit system service.

There are many benefits to public transportation. These benefits range from reducing parking demand and saving money to safety and saving time (Figure 12). The majority of respondents felt that public transit services help to reduce parking demand and reduce traffic congestion, along with the added bonus of saving money.

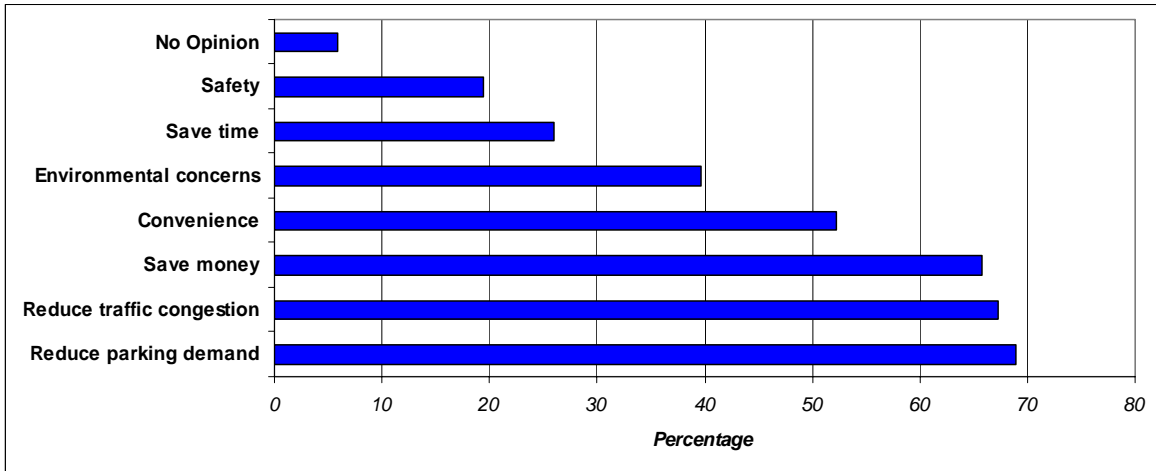


Figure 12. Benefits to riding Public Transit (n=598)

NDSU showed a marked increase in MAT usage compared to survey results from the 2002-03 to 2003-04 school years. The 2002-03 survey, 20 percent of respondents indicated using MAT services whereas in 2003-04, 32 percent of respondents indicated using them (Figure 13, 14).

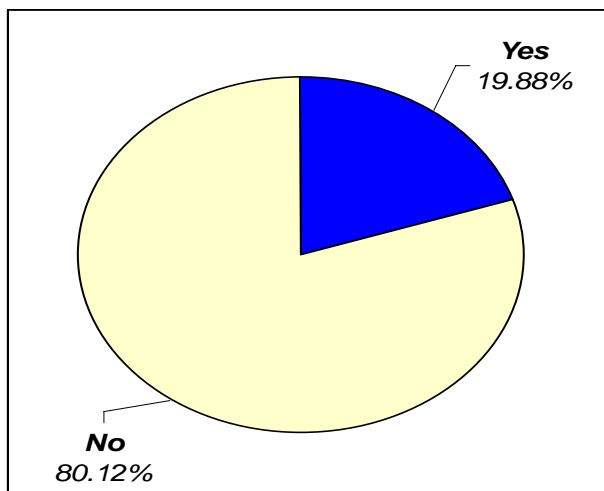


Figure 13. 2002-03 Students Using MAT (n=1665)

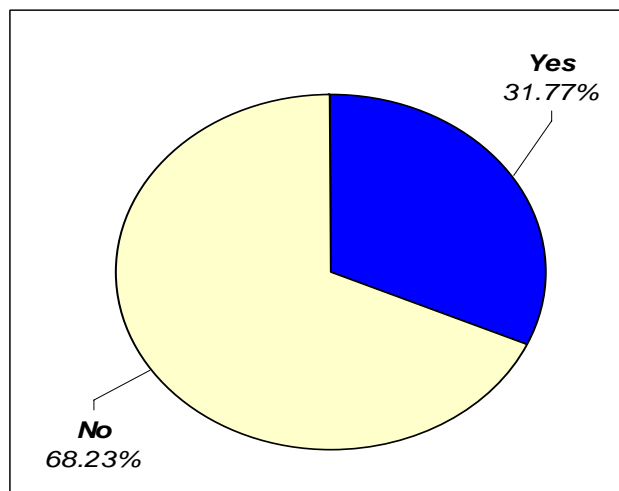


Figure 14. 2003-04 Students Using MAT (n=598)

An important issue is what motivates students to use MAT. Survey respondents were asked to state their most important reasons for using MAT from among the following choices (Figure 15). Two percent of respondents also indicated they would use MAT services for other reasons.

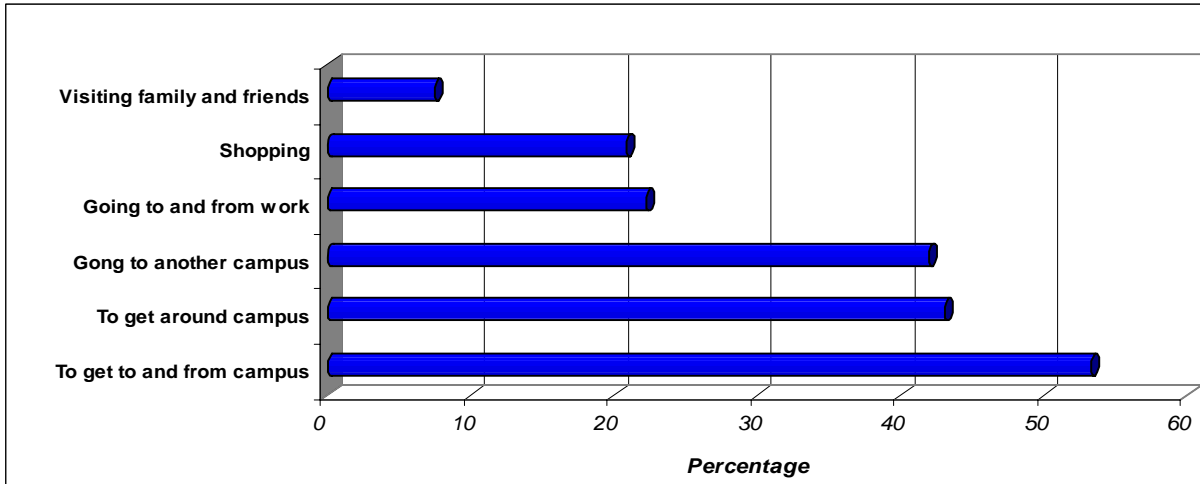


Figure 15. Reasons Students Use MAT (n=598)

Understanding why people use MAT services is very important. Realizing why people do not use MAT services is also important as it helps to determine what areas of service require improvement. SURTC asked students to identify the reasons that keep them from riding MAT. The students were given a set of possible reasons for not using MAT services and asked to respond with a level of agreement with the reason (Figure 16). Preferring to drive/walk/bike, lack of information, as well as taking too long were the main reasons that keep students from riding.

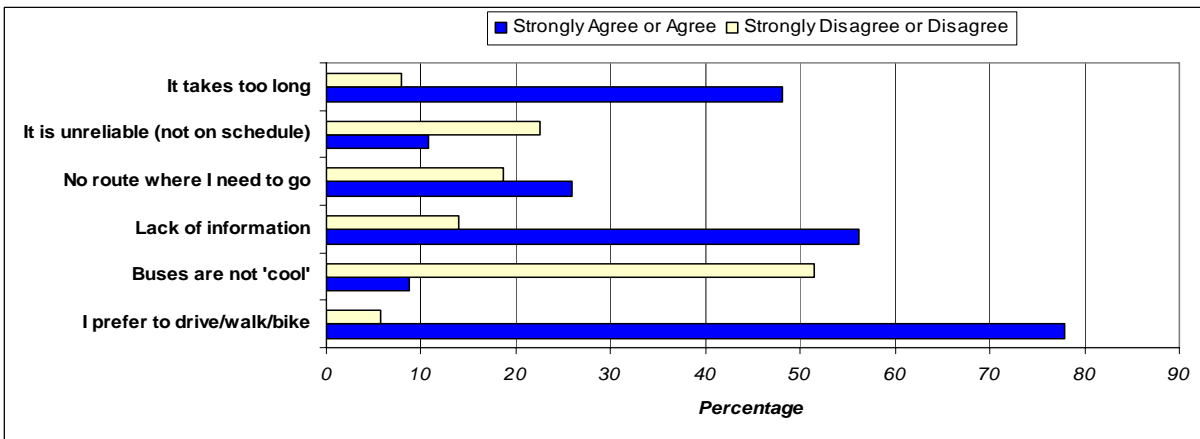


Figure 16. Factors Keeping Users from Using MAT Services (n=598)

SURTC probed the respondents to see what characteristics of transit services are important to them. These choices which were qualitative in nature included free service, convenience, friendly drivers, and environmentally friendly characteristics (Figure 17). Respondents indicated that a free service, a reliable/on time service, and friendly drivers were the most important characteristics to them.

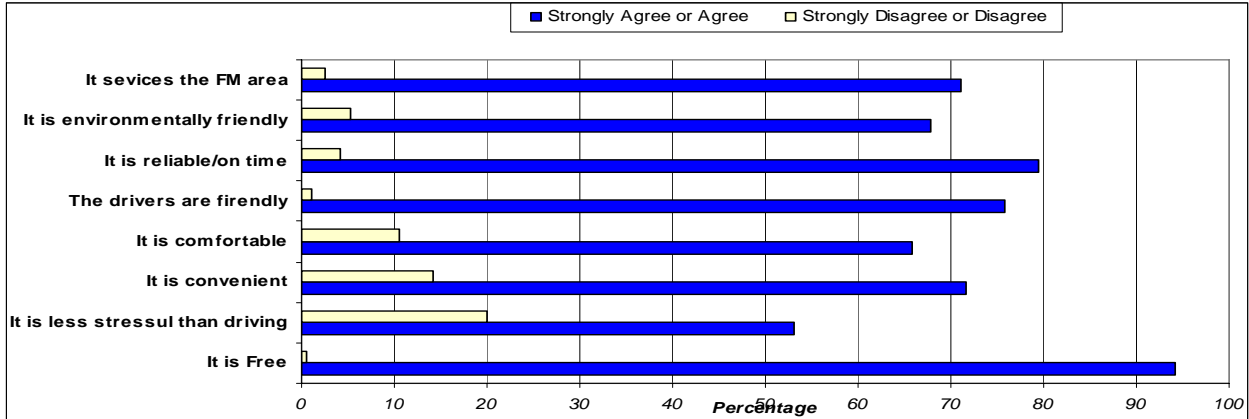


Figure 17. Characteristic Values of Public Transportation (n=190)

It is helpful to be aware of how customers perceive their previous MAT service experiences (Figure 18). Arriving on time was the worst experience indicated by respondents. The percentage of people who felt this was the worst experience increased from the 2002-03 survey. The following chart displays the percentage of people who agree or strongly agree that they were happy with these aspects of MAT services.

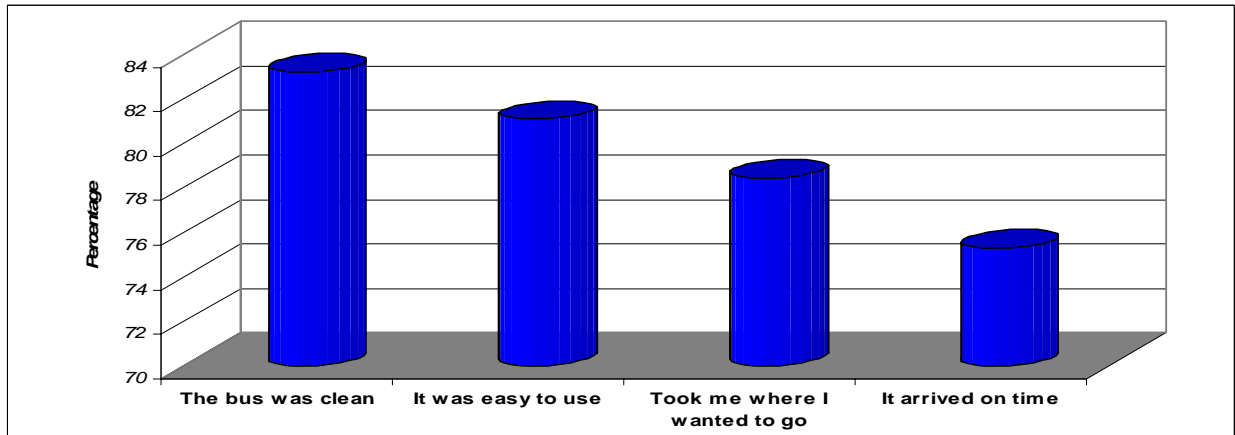


Figure 18. MAT User Experience (n=190)

In the transit industry, wait times for customers is very important. It may often mean the difference between satisfied customers and unsatisfied customers. According to the respondents, a wait time longer than 15 minutes will have a negative influence on ridership. Only 53 percent (314) of respondents indicated they would wait 15 minutes, 8 percent (46) would wait 30 minutes, and 39 percent (233) would not wait to use transit services. Wait times of 45 minutes and 60 minutes had very minimal responses, together equaling less than 1 percent (5).

Student Perceptions of Parking

Parking is a major concern on college campuses. With over half of the students who responded to the survey having parking permits (Figure 19), we asked students questions pertaining to affordability and convenience of parking at NDSU as well as the possibility of using MAT to resolve parking problems.

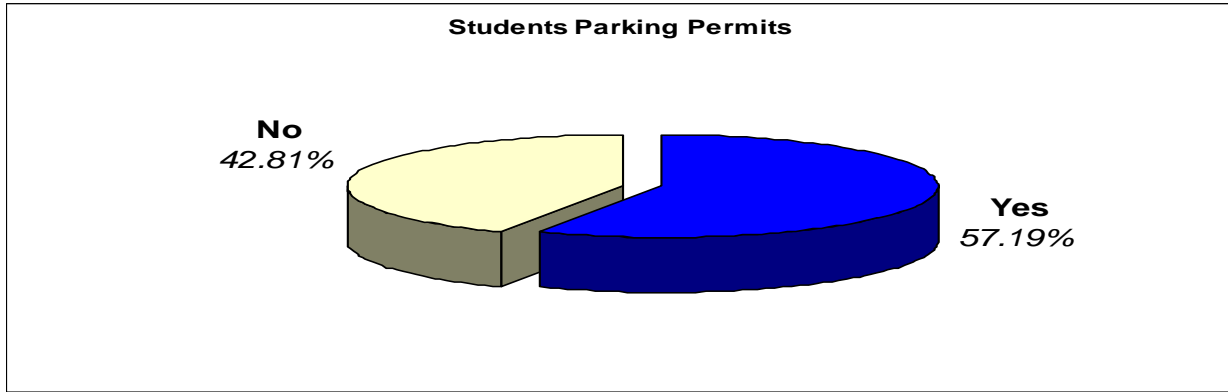


Figure 19. Students with Parking Permits (n=598)

The highest number of parking permits issued on the NDSU campus was in the T and R lots (Figure 20).

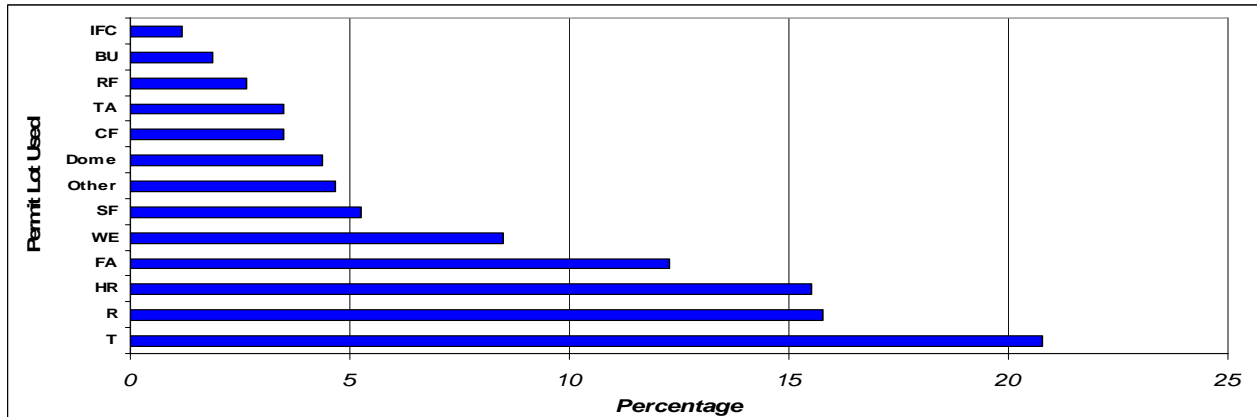


Figure 20. Parking Lots Used by Survey Respondents (n=342)

NDSU respondents indicated they are satisfied with on-campus parking convenience (Figure 21). Nearly 28 percent of student respondents rate NDSU's parking convenience as either good or very good, while 26 percent indicated that the parking convenience was poor or very poor.

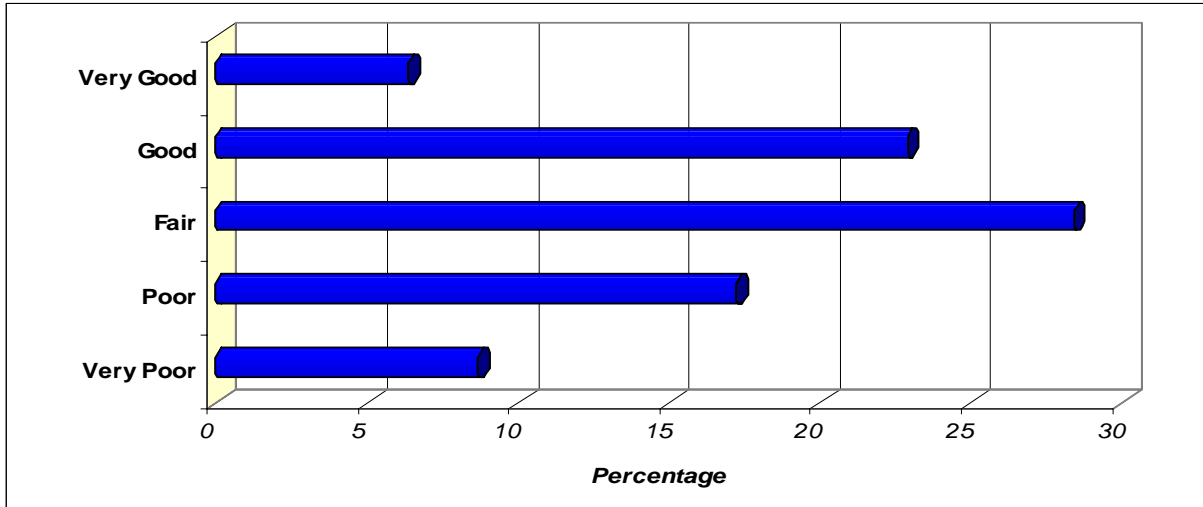


Figure 21. Student Perception of Parking Convenience (n=598)

When asked about parking affordability, most respondents, 46 percent, indicated it was poor to very poor, only 12 percent rated the parking affordability as good or very good (Figure 22).

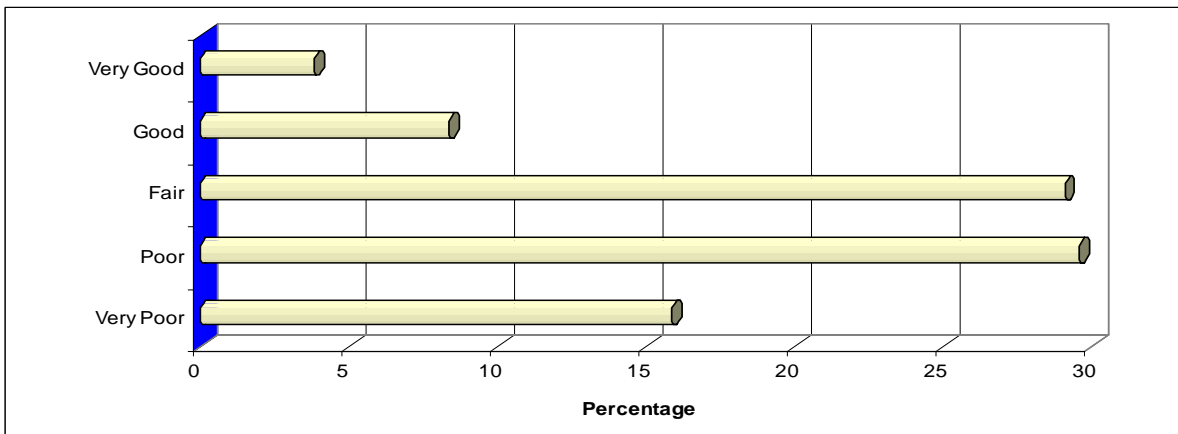


Figure 22. Student Perception of Parking Affordability (n=598)

Campus Public Transportation

Students from NDSU may take classes through the Tri-College system, which consists of NDSU, Concordia, and MSUM. This section contains questions to determine whether there is sufficient demand for public transportation to be provided between the three colleges. The first question addresses whether or not students plan on taking Tri-College courses with 40 out of 598 indicating that they planned on taking classes. Of those 40, 36 responded that they would be taking Tri-College classes during the daytime. Nearly 58 percent of students indicating they would be taking Tri-College courses indicated they would consider taking the MAT bus. Only 12 percent of respondents indicated they would not consider taking the MAT bus, and 30 percent said they would maybe consider taking the MAT bus for their Tri-College classes (Figure 23).

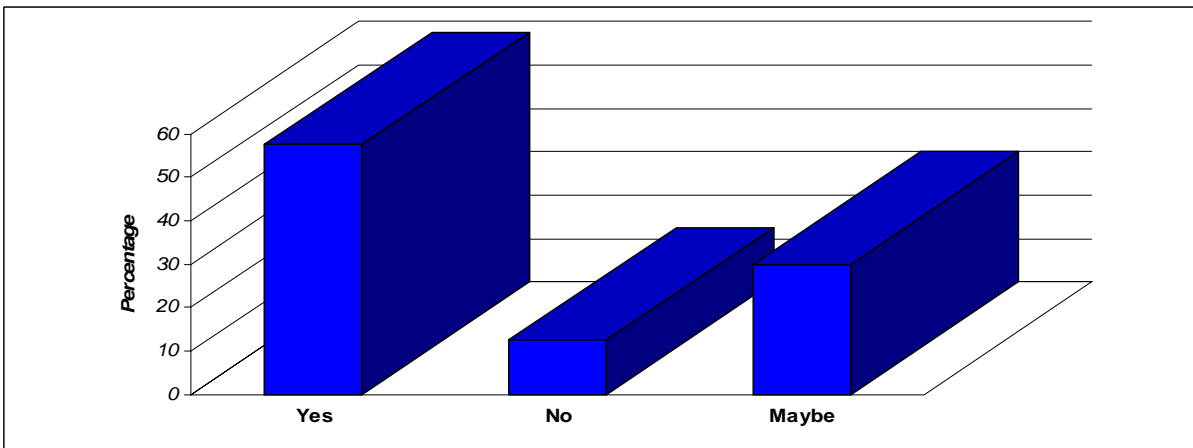


Figure 23. Tri-College Students Who Would Consider Taking the MAT Bus (n=40)

The NDSU students were then asked if they were familiar with the campus circulator (Figure 24). Over half of respondents indicated that they were.

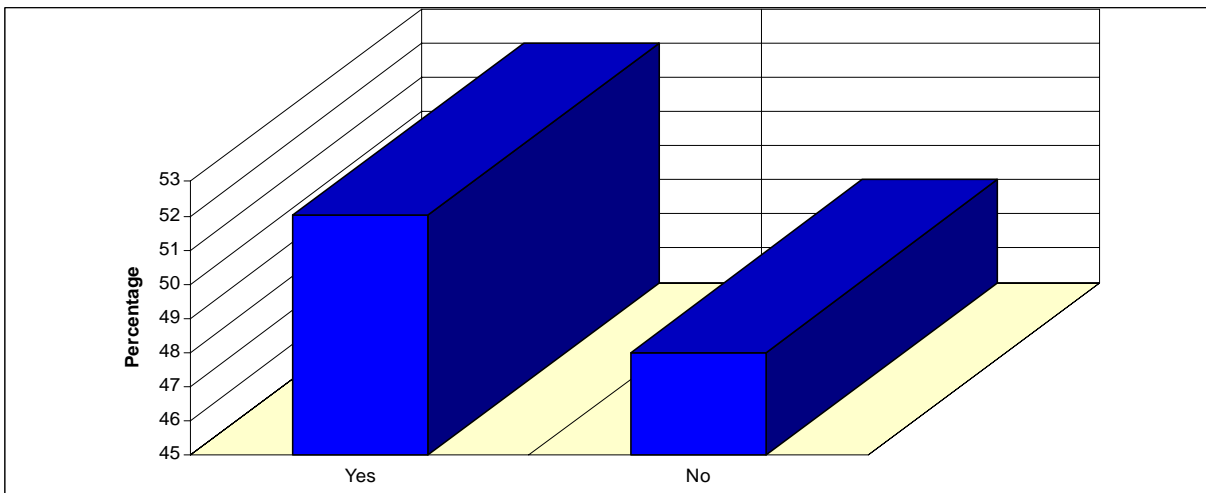


Figure 24. Students Familiar with Campus Circulator (n=598)

Respondents were then asked if they use the campus circulator, with under 9 percent of respondents indicating they use the campus circulator. Over 90 percent of the respondents indicated they did not feel there needed to be additional coverage of the campus circulator. Students were also asked how long they would be willing to wait for the next circulator bus if they were to miss one (Figure 25). Just over 26 percent of the respondents indicated they would wait 7 minutes, 18 percent would wait 10 minutes, while only 8 percent would wait 15 minutes, and 46 percent are not willing to wait.

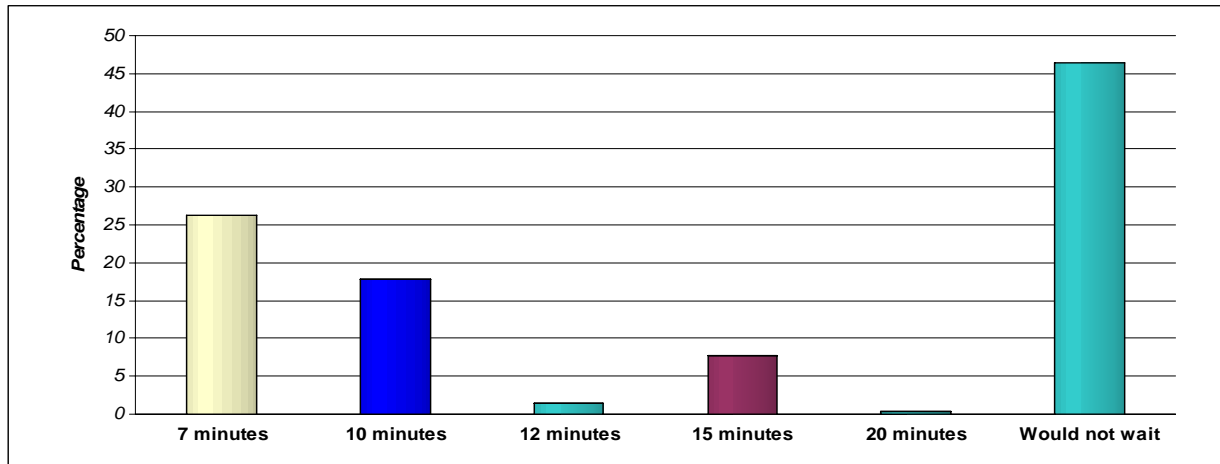


Figure 25. Time Period Students are willing to Wait for Circulator (n=598)

Campus Transit Accommodation

The final section of the survey asked the respondents whether they think more shelters should be placed around campus and whether or not they would be willing to pay a fee per semester to use the MAT services.

The first questions which asked respondents whether there should be more shelters or more heated shelters changed slightly when compared to 2003 survey results. Nearly 45 percent indicated they would like to see heated bus shelters and roughly 41 percent indicated they would like to see more bus shelters all together (Figure 26). In the 2003 survey 43 percent of respondents indicated they would like to see more bus shelters on campus, and 50 percent said they would like heated shelters. Those numbers decreased by 5 percent on heated shelters and 2 percent on bus shelters.

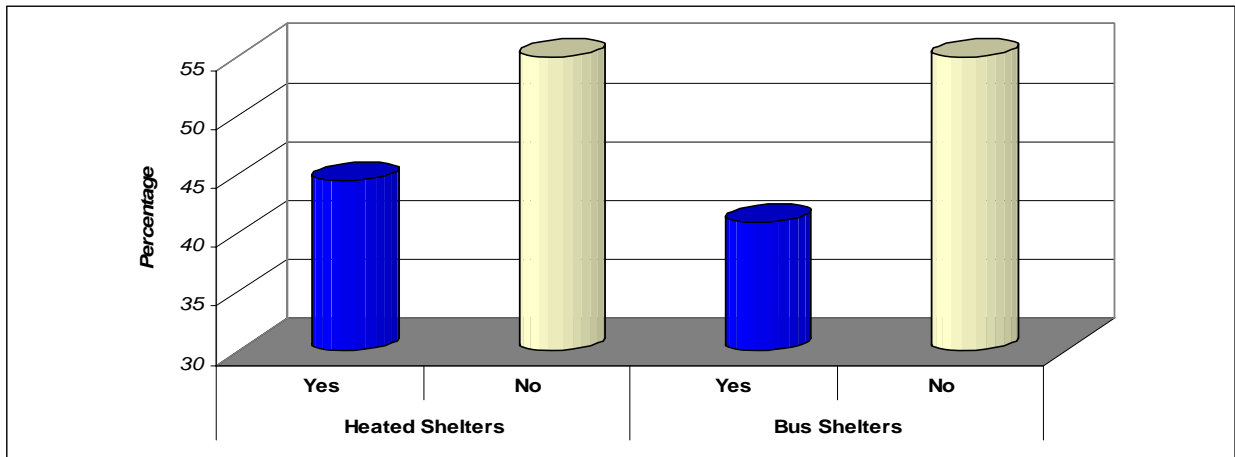


Figure 26. Desire for More/Heated Shelters (n=598)

One of the main factors that determine the value of service is whether the customer is willing to pay for that service. Students were asked if they would be willing to pay an activity fee for free, unlimited use of the MAT Bus around campus and the Fargo-Moorhead area (Figure 27).

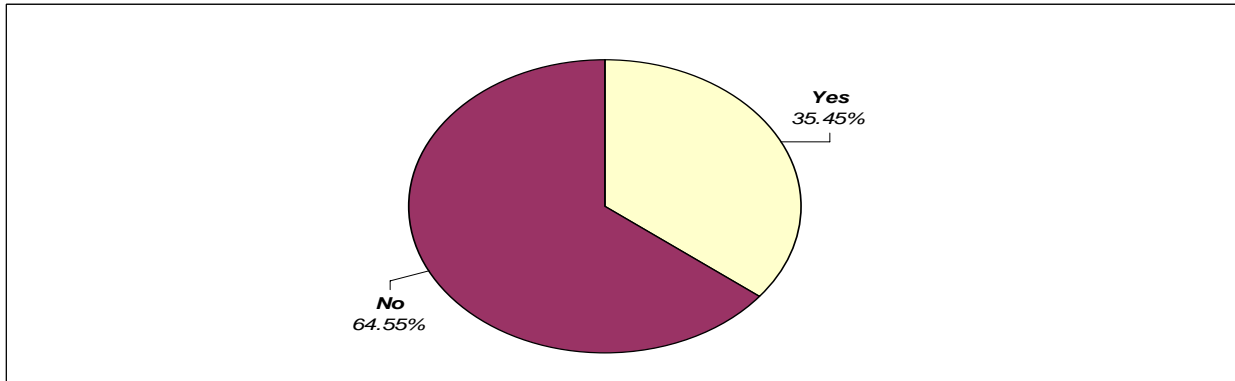


Figure 27. Students Willing to Pay Activity Fee (n=598)

Students were then asked how much they would be willing to pay on a per semester basis for unlimited use of MAT services (Figure 28). Nearly 43 percent of respondents indicated that they would be willing to pay \$10 or more. The majority indicated that they would be willing to pay an activity fee of 2 or 5 dollars.

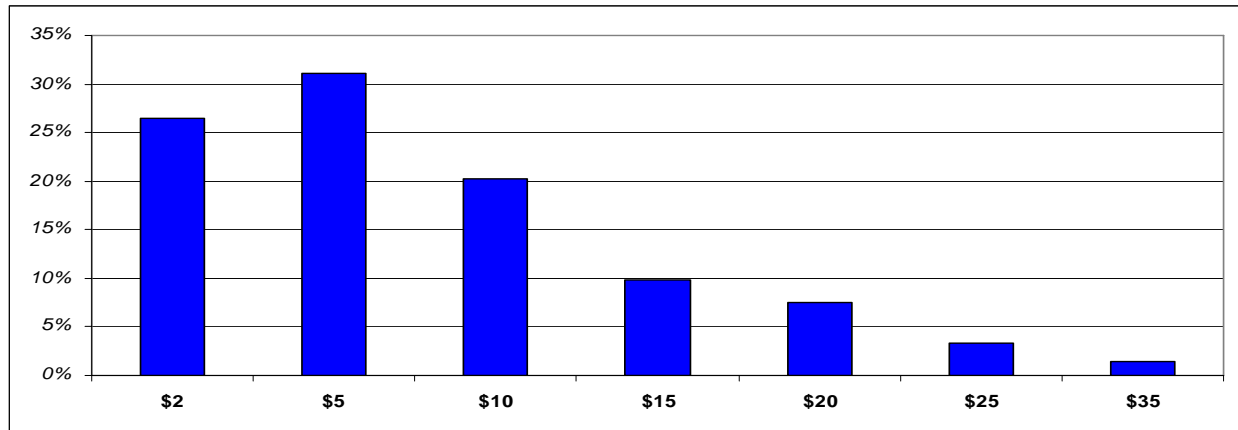


Figure 28. How Much Students are willing to Pay for MAT Service (n=212)

Summary

In summary, the survey data collected revealed some key points about North Dakota State University campus transit needs. A comparison of data from NDSU 2002-03 and 2003-04 school year surveys show an increase in MAT riders of approximately 12%. Another question shows that the main reason that students are using MAT is to get to and from campus. The main reason some do not use the service is because of a preference to drive/walk/bike. Overall value found in public transportation according to the respondents is the service is free and MAT is reliable and on time. MAT users have been satisfied with current aspects such as taking them where they need to go, the ease of use, cleanliness of the bus, and on time arrival. Students indicated dissatisfaction with parking affordability but were satisfied with parking convenience. Over half of the respondents were familiar with the campus circulator. A much greater percentage of students live off campus than on campus leading us to believe there is a large need for public transportation. The information and knowledge that is gained by this data will not only help in making transit decisions for today, but also help build a foundation in planning for tomorrow.