Street Coaching for

Pedestrians and Cyclists:

PUTTING LAWS INTO PRACTICE ON UNIVERSITY CAMPUSES

June 2021

Texas A&M Transportation Institute

The Texas A&M University System

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Task: Survey Technical Memorandum

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Introduction

College campuses and the communities built around them present challenges for pedestrians and bicyclists. These areas are typically dynamic, multimodal environments. A diverse group of road users experience elevated motor vehicle, pedestrian, and bicyclist traffic, which may result in increased conflicts or crashes (Loukaitou-Sideris et al., 2014). These unique environmental factors perpetuated the need for the Texas Department of Transportation (TxDOT) to fund this project, Street Coaching for Pedestrians and Cyclists: Putting Laws into Practice on University Campuses. The purpose of the project is to promote awareness of pedestrian and bicycle state laws on and around a college campus. This pilot project focuses specifically on Texas A&M University's College Station campus, but is intended to develop a roadmap that can be deployed in and around other campuses.

Texas A&M Transportation Institute (TTI) conducted a survey of students and employees of the Texas A&M University/Texas A&M University System (TAMU/TAMUS) located in College Station. The findings from the survey, along with the other project tasks, will provide guidance for a mobilization plan and educational outreach materials. These activities are intended to increase awareness of pedestrian and bicycle safety laws for local roadway users.By raising awareness of the laws associated with pedestrian, bicycle and vehicle interactions as well as highlighting the vulnerability of some road users, we can positively affect traffic safety behaviors.

Methods

Development

The survey was submitted under Texas A&M University Institutional Review Board (RB 2021-0384M) which received an exempt status. **Error! Reference source not found.** includes a copy of the approved survey. The survey focused on asking about frequency of walking and biking and behaviors associated with pedestrian and bike laws/safety.

Distribution

The project team distributed the survey using existing Texas A&M Transportation Institute social media (e.g., Facebook), as well as emailed to the Pedestrian Bicycle Safety Advisory Committee for distribution.

Analysis

Descriptive analysis (e.g., counts and percentages) of the survey data was conducted for each question split by university classification (e.g., student/employee). There were 185 survey responses; of these 26 were excluded because 11 were not a student or employee of TAMU/TAMUS, 9 did not agree to take the survey, and 6 did not make it beyond the demographic questions. A total of 159 respondents were included in the analysis.

Limitations

A limitation to the survey was COVID-19 which impacted the project team's ability to conduct face-to-face intercept surveys as originally proposed. The team modified the activity to be completed 100% online with no interaction. This may have biased the survey sample based on who saw the electronic distribution, whereas the face-to-face plan was to target individuals walking and riding bicycles actively. In addition, another issue due to COVID-19 is what the media has coined "zoom fatigue" which is fatigue and reluctance to do tasks online due to spending large amounts of time on computers. This may have impacted this survey as there were several skipped questions and no respondents answered the final question.

Findings

Demographics

Overall, 67.9 percent (n=108) were employees of TAMU/TAMUS. Of the employees a majority were female (57.4 percent, n=62), older than 25 years old (96.3 percent, n=104), and white (82.4 percent, n=89). In comparison student respondents were largely female (58.0 percent, n=29), 21-24 years old (46.0 percent, n=23), and white (54.0 percent, n=27). Table 1 provides the reported demographics for survey respondents split by university classification.

Table 1. Survey Respondent Reported Demographics.

	Employee	Student	Missing
Gender			
Female	62 (57.4%)	29 (58.0%)	1 (100.0%)
Male	43 (39.8%)	18 (36.0%)	0 (0.0%)
Prefer not to say	3 (2.8%)	3 (6.0%)	0 (0.0%)
Age			
18-20 years old	0 (0.0%)	18 (36.0%)	0 (0.0%)
21-24 years old	3 (2.8%)	23 (46.0%)	0 (0.0%)
25 years or older	104 (96.3%)	9 (18.0%)	1 (100.0%)
Missing	1 (0.9%)	0 (0.0%)	0 (0.0%)
Race/Ethnicity			
Asian	1 (0.9%)	10 (20.0%)	1 (100.0%)
Black or African American	3 (2.8%)	1 (2.0%)	0 (0.0%)
Hispanic or Latino (Any Origin)	7 (6.5%)	6 (12.0%)	0 (0.0%)
Hispanic or Latino (Any Origin), White	1 (0.9%)	3 (6.0%)	0 (0.0%)
Other	2 (1.9%)	1 (2.0%)	0 (0.0%)
Prefer not to say	5 (4.6%)	1 (2.0%)	0 (0.0%)
White	89 (82.4%)	27 (54.0%)	0 (0.0%)
White, Pacific Islander	0 (0.0%)	1 (2.0%)	0 (0.0%)

*Percentages may sum to greater or less than 100% due to rounding to the nearest decimal place.

A majority of employee respondents reported they were solely motorist (43.5 percent, n=47) followed by pedestrian and motorists (36.1 percent, n=39). In comparison, a majority of student respondents reported they were both pedestrians and motorists (38.0 percent, n=19) followed by pedestrian (24.0 percent, n=10). Overall, 50.9 percent (n=55) of employees and 92.0 percent (n=46) of students reported they were pedestrians. In comparison, 12.0 percent (n=13) of employees and 36.0 percent (n=18) of students reported they were bicyclists. Figure 1 displays respondents reported road user classifications by university classification.

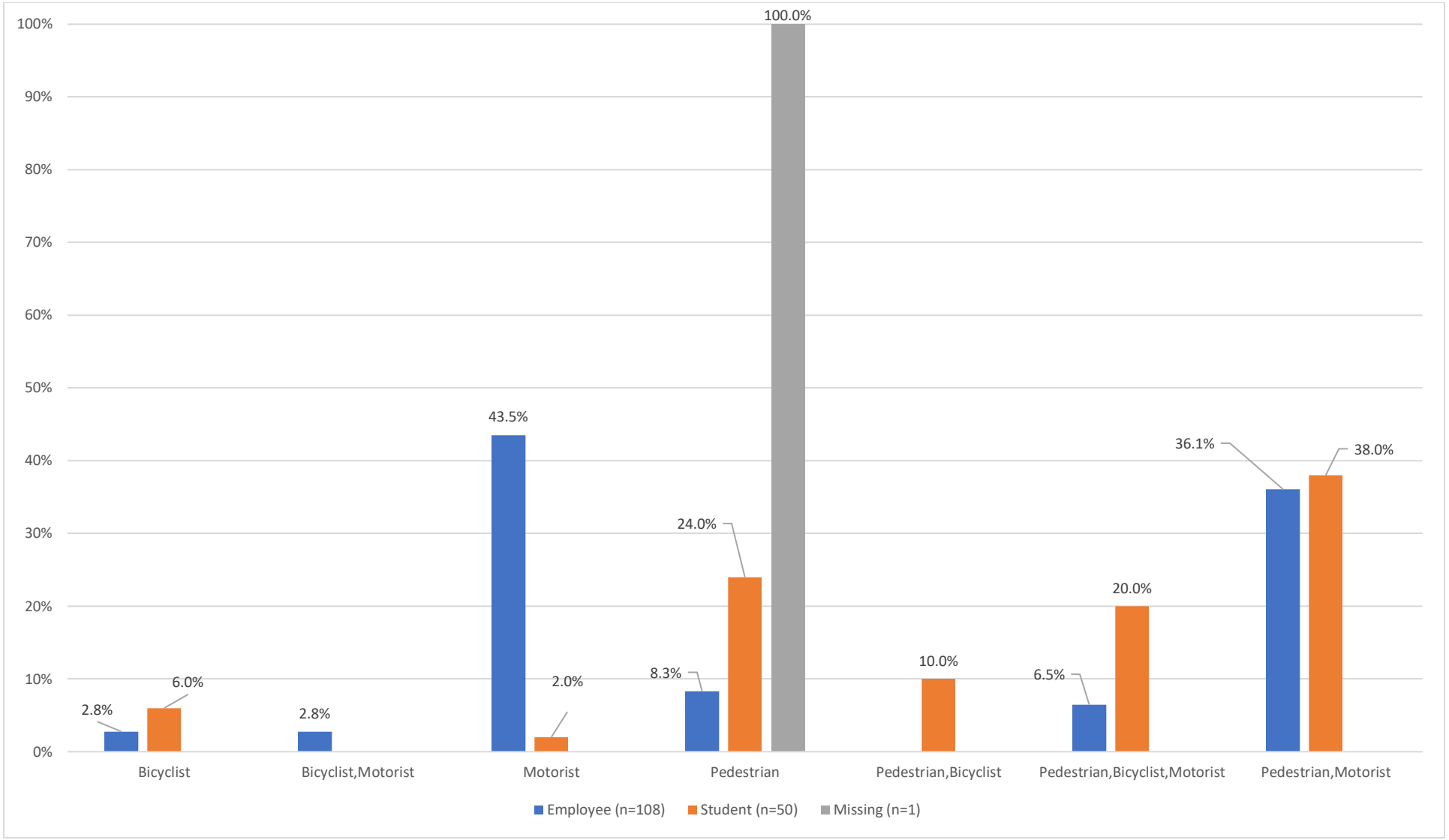

Figure 1. Reported Road User Classification by University Classification.

Pedestrians

Overall, 50.9 percent (n=55) of employees and 92.0 percent (n=46) of students reported they were pedestrians. Of the employees that reported walking, the top three daily destinations were within campus (30.6 percent, n=33), around residential areas (14.8 percent, n=16), and to campus (3.7 percent, n=4). In comparison, the top three daily walking destinations for students were within campus (62.0 percent, n=31), around residential areas (30.0 percent, n=15), and to campus (16.0 percent, n=8). While the top destinations were similar, students were much more likely to walk to these destinations on a daily basis. Table 2 shows reported walking frequency by destination and university classification.

Table 2. Reported Walking Frequency by Destination and University Classification.

Destination	University Classification	Daily	Weekly	Monthly	Never/ Not Applicable	Missing
To campus (from off-campus to campus)	Employee (n=55)	4 (3.7%)	1 (0.9%)	1 (0.9%)	49 (45.4%)	0 (0.0%)
	Student (n=46)	8 (16.0%)	9 (18.0%)	5 (10.0%)	24 (48.0%)	0 (0.0%)
	Missing (n=1)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Within campus (from campus to campus)	Employee (n=55)	33 (30.6%)	9 (8.3%)	10 (9.3%)	3 (2.8%)	0 (0.0%)
	Student (n=46)	31 (62.0%)	11 (22.0%)	2 (4.0%)	2 (4.0%)	0 (0.0%)
	Missing (n=1)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
To work (off-campus)	Employee (n=55)	1 (0.9%)	1 (0.9%)	2 (1.9%)	50 (46.3%)	1 (0.9%)
	Student (n=46)	2 (4.0%)	0 (0.0%)	0 (0.0%)	43 (86.0%)	1 (2.0%)
	Missing (n=1)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Bar districts (e.g., Northgate)	Employee (n=55)	1 (0.9%)	1 (0.9%)	18 (16.7%)	34 (31.5%)	1 (0.9%)
	Student (n=46)	1 (2.0%)	6 (12.0%)	13 (26.0%)	26 (52.0%)	0 (0.0%)
	Missing (n=1)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)
Around residential areas	Employee (n=55)	16 (14.8%)	11 (10.2%)	9 (8.3%)	18 (16.7%)	1 (0.9%)
	Student (n=46)	15 (30.0%)	14 (28.0%)	4 (8.0%)	13 (26.0%)	0 (0.0%)
	Missing (n=1)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Around shopping districts	Employee (n=55)	3 (2.8%)	17 (15.7%)	17 (15.7%)	17 (15.7%)	1 (0.9%)
	Student (n=46)	2 (4.0%)	15 (30.0%)	13 (26.0%)	16 (32.0%)	0 (0.0%)
	Missing (n=1)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)

The survey asked pedestrians about walking behaviors over the past 90 days (see Figure 2). It was found students had a higher percentage of always or very often crossing the road at a location other than a crosswalk or intersection compared to employees (26.1 percent versus

12.7 percent of employees). This finding was also true for entering the crosswalk after the pedestrian countdown started with 52.2 percent of students reporting always or very often doing so compared to 41.8 percent of employees. Employees has higher percentages of yielding to vehicles when crossing at a location other than a crosswalk or intersection and following pedestrian crossing signals when they are available compared to students. Interestingly, employees had a slightly higher percentage of walking on the roadway when a sidewalk was available compared to students (3.6 percent vs 2.2 percent).

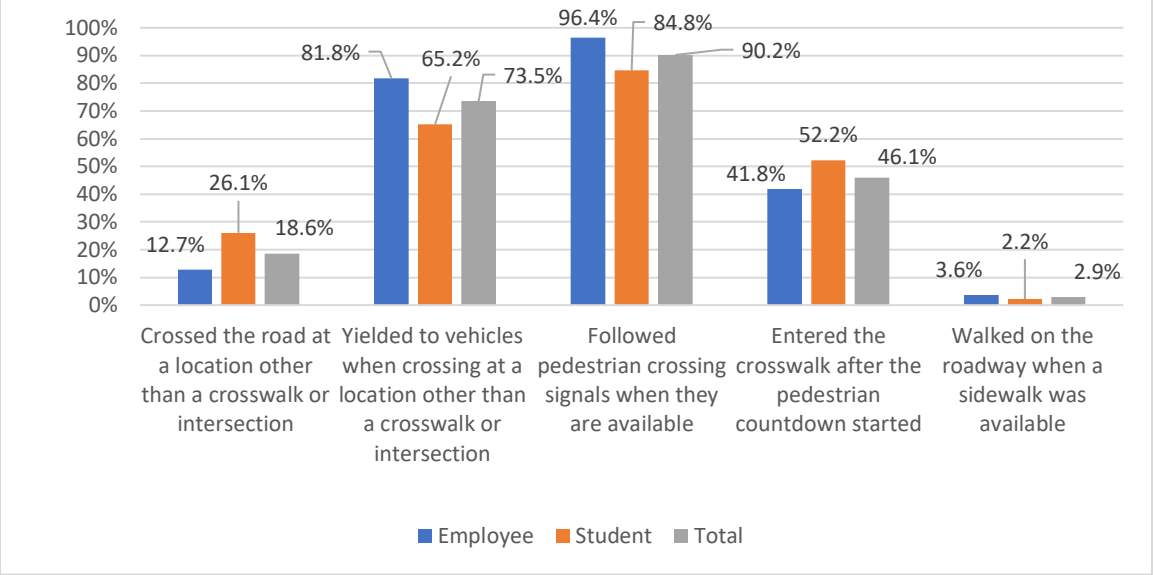

Figure 2. Percent Always or Very Often Reported Pedestrian Behavior by University Classification.

Pedestrians were then asked while walking, how often motorists performed pedestrian behaviors over the past 90 days (see Figure 3). It was found students reported a lower percentage of motorists yielding for all conditions compared to employees.

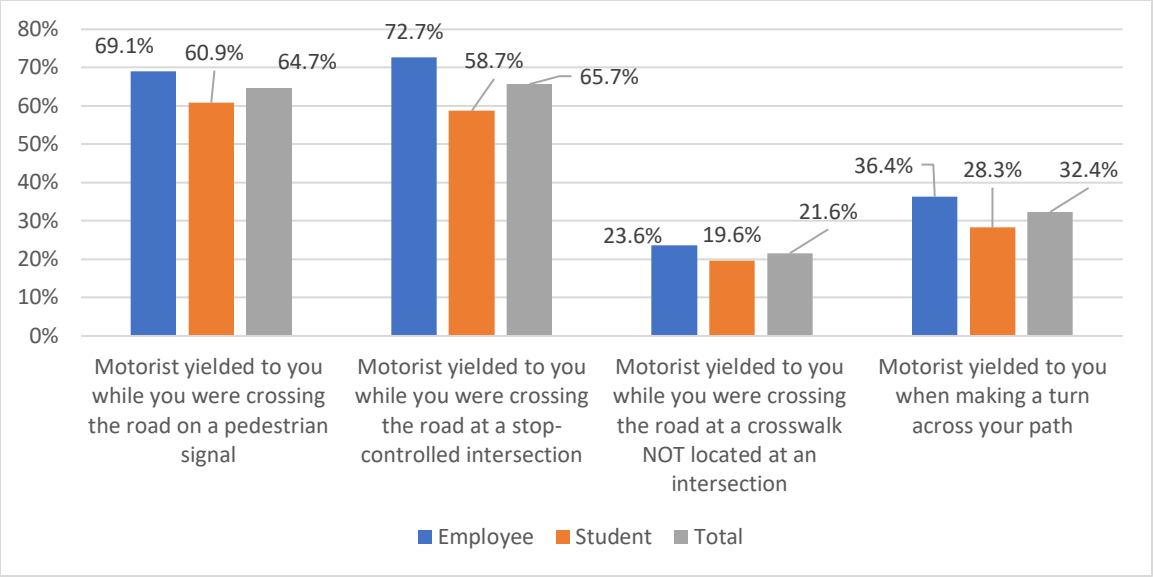

Figure 3. Percent Always or Very Often Reported Motorist Pedestrian Behaviors by University Classification.

Researchers inquired about crash or near crash involvement over the past 90 days for pedestrians. Respondents reported either being almost hit or involved in a crash 26.5 percent of the time (see Figure 4). Employees had a higher percentage of almost being involved in a crash with a vehicle as compared to students (29.1 percent versus 21.7 percent). No employees reported being involved in a crash with a vehicle, however, 2.2 percent of students had been involved in a crash within the past 90 days. Pedestrian reported crash involvement can be seen in figure 4.

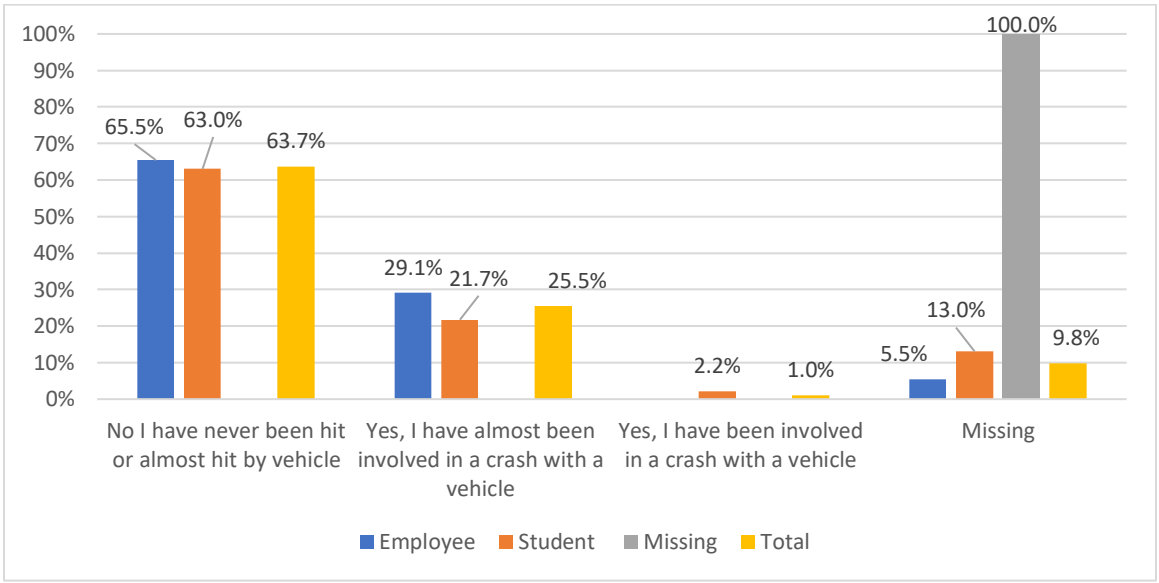

Figure 4. Pedestrian Reported Crash Involvement Over Past 90 Days by University Classification.

Individuals who reported crash involvement within the past 90 days were asked to describe the environment in which the crash or near crash almost occurred (see Figure 5). A majority of reported crash incidents occurred in the evening (81.5 percent). Employees had higher percentage of crashes that occurred with clear weather, on university property, and near university property compared to students. Whereas students had a higher percentage of reporting crash incidents near a bus stop compared to employees (18.2 percent versus 6.3 percent).

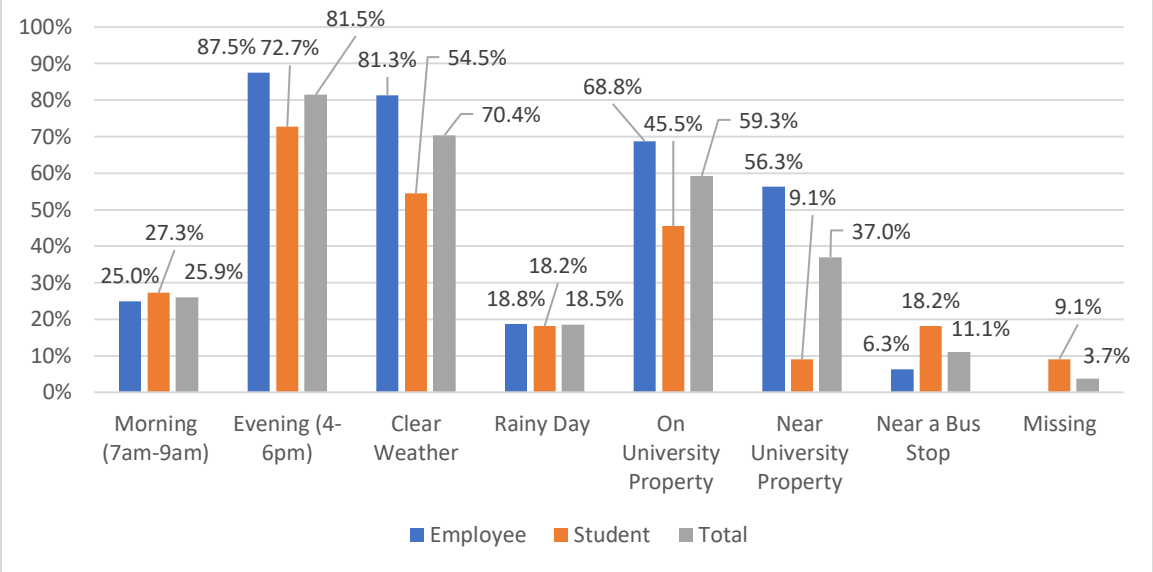

Figure 5.Characteristics of Near Crashes or Crashes involving Pedestrians.

Bicyclists

Overall, 12.0% (n=13) of employees and 36.0% (n=18) of students reported they were bicyclists. Of the employees that reported bicycling, the top three daily destinations were to campus (30.8 percent, n=4), around residential areas (30.8 percent, n=4), and within campus (15.4 percent, n=2). In comparison, the top three daily bicycling destinations for students were to campus (27.8 percent, n=5), within campus (27.8 percent, n=5), and around residential areas (11.1 percent, n=2).

Table 3 provide information on reported bicycling frequency by destination and university classification.

Table 3. Reported Bicycling Frequency by Destination and University Classification.

Destination	University Classification	Daily	Weekly	Monthly	Never/ Not Applicable	Missing
To campus (from off-campus to campus)	Employee (n=55)	4 (30.8%)	1 (7.7%)	3 (23.1%)	5 (38.5%)	0 (0.0%)
	Student (n=46)	5 (27.8%)	5 (27.8%)	4 (22.2%)	4 (22.2%)	0 (0.0%)
Within campus (from campus to campus)	Employee (n=55)	2 (15.4%)	1 (7.7%)	5 (38.5%)	3 (23.1%)	2 (15.4%)
	Student (n=46)	5 (27.8%)	6 (33.3%)	5 (27.8%)	2 (11.1%)	0 (0.0%)
To work (off-campus)	Employee (n=55)	1 (7.7%)	1 (7.7%)	1 (7.7%)	9 (69.2%)	1 (7.7%)
	Student (n=46)	0 (0.0%)	1 (5.6%)	0 (0.0%)	17 (94.4%)	0 (0.0%)
Bar districts (e.g., Northgate)	Employee (n=55)	1 (7.7%)	2 (15.4%)	1 (7.7%)	6 (46.2%)	3 (23.1%)
	Student (n=46)	0 (0.0%)	2 (11.1%)	2 (11.1%)	14 (77.8%)	0 (0.0%)
Around residential areas	Employee (n=55)	4 (30.8%)	5 (38.5%)	0 (0.0%)	3 (23.1%)	1 (7.7%)
	Student (n=46)	2 (11.1%)	5 (27.8%)	3 (16.7%)	8 (44.4%)	0 (0.0%)
Around shopping districts	Employee (n=55)	1 (7.7%)	1 (7.7%)	3 (23.1%)	7 (53.8%)	1 (7.7%)
	Student (n=46)	0 (0.0%)	0 (0.0%)	4 (22.2%)	14 (77.8%)	0 (0.0%)

Researchers then asked bicyclists about bicycling behaviors within the past 90 days (see Figure 6). It was found that almost half of respondents (48.4 percent) reported always or very often bicycling at night with a light on the bicycle, whereas only 12.9 percent of respondents reported always or very often bicycling at night without a light (all of these were students). Interestingly, almost three times as many employees reported always or very often using hand signals compared to students (76.9 percent versus 22.2 percent). A majority of all bicyclists reported always or very often moving to the right when being passed (71.0 percent).

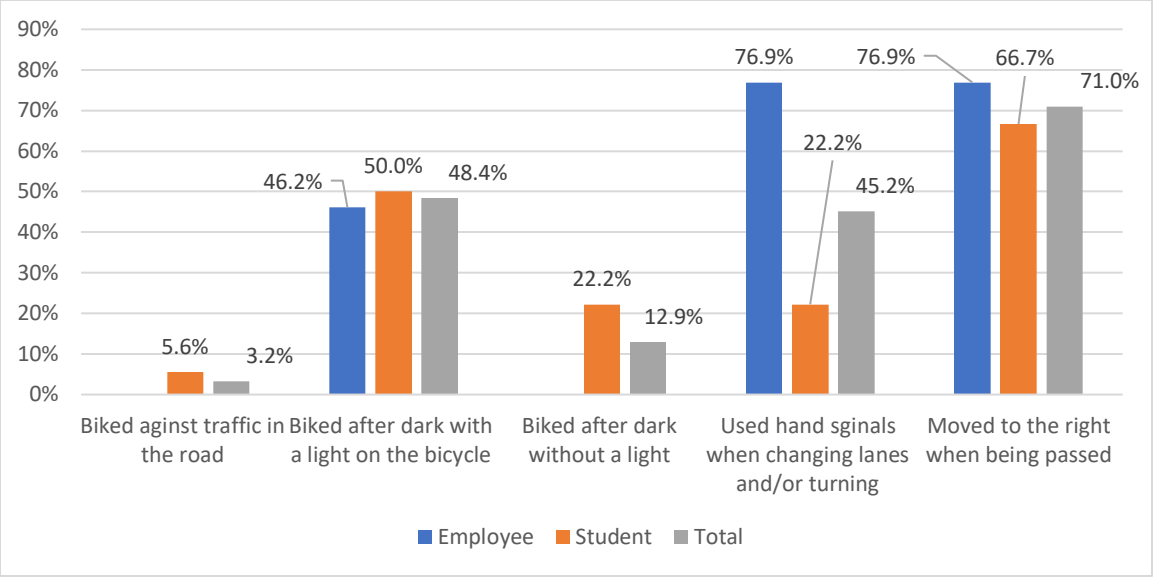

Figure 6. Percent Always or Very Often Reported Bicyclist Behavior by University Classification.

Bicyclists were then asked while bicycling how often motorists performed various behaviors within the past 90 days (see Figure 7). Students reported a higher percentage of motorists always or very often yielding when they turned across their path (38.9 percent versus 30.8 percent). Overall, about half of bicyclists reported that motorists always or very often maintained a safe distance when passing.

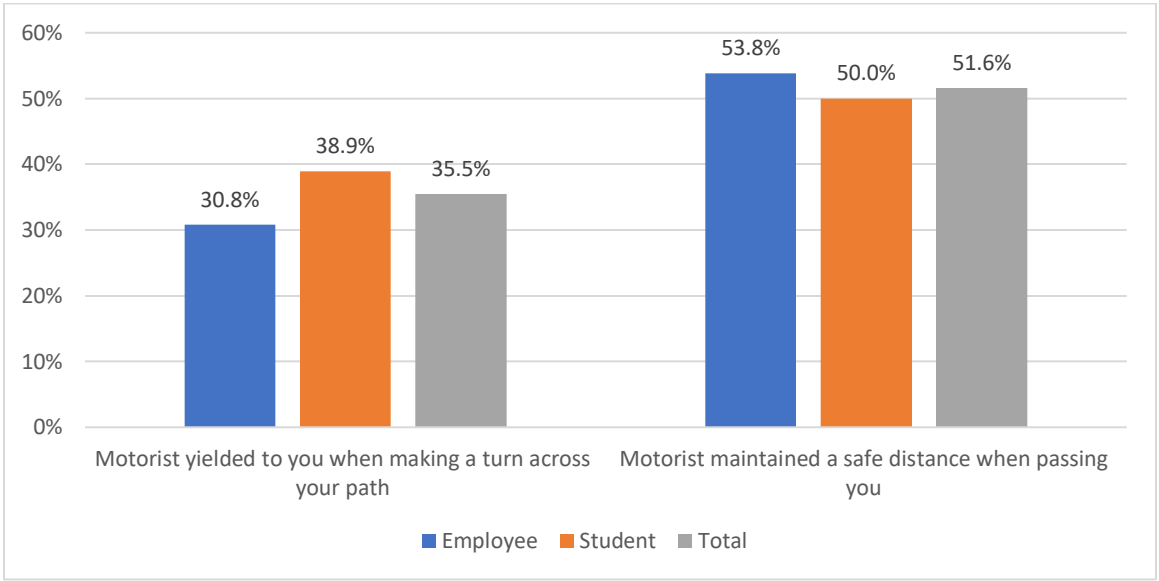

Figure 7. Percent Always or Very Often Reported Motorist Bicyclist Behaviors by University Classification.

Of the bicyclists, 9.7 percent (n=3) reported almost being involved in a crash with a vehicle (data not shown). Of these, all had incidents in the morning and on university property (data not shown). In addition, 2 of 3 reported crashes near university property and involving clear weather (data not shown).

Pedestrian and Bicyclist Activity

Researchers then explored primary reasons individuals walk or bicycle. The top two reasons listed for walking or biking were transportation and exercise (65.8 percent of respondents who reported walking or bicycling) (see Figure 8). Interestingly, there were differences between reasons reported by employees and students. The number one reason reported by employees was for exercise (73.8 percent); whereas the number one reason reported by students was for transportation (85.7 percent). In addition, only employees reported other reasons for walking. The eleven other responses were categorized for work (n=5), cars not allowed/limited to no parking (n=4), for lunch (n=1), and do not own a car (n=1).

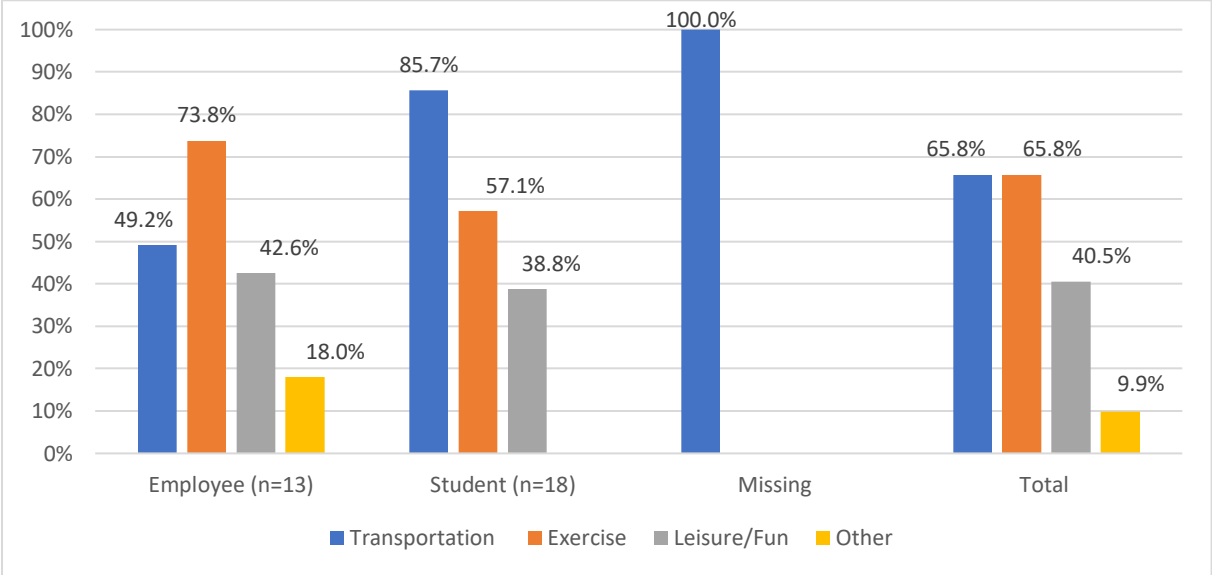

Figure 8. Primary Reasons Reported for Walking and Bicycling.

To determine if there were differences between reasons for walking or bicycling, the responses were further stratified (see Figure 9). For employees, there are higher percentages for riding bicycles for transportation and exercise compared to walking. Among the students' percentages were similar for primary reasons for walking and riding a bicycle. It is important to

note that this survey question does not allow for direct comparison between pedestrians and bicyclists, as the question was answered by anyone who reported walking or riding a bicycle and was not asked separately.

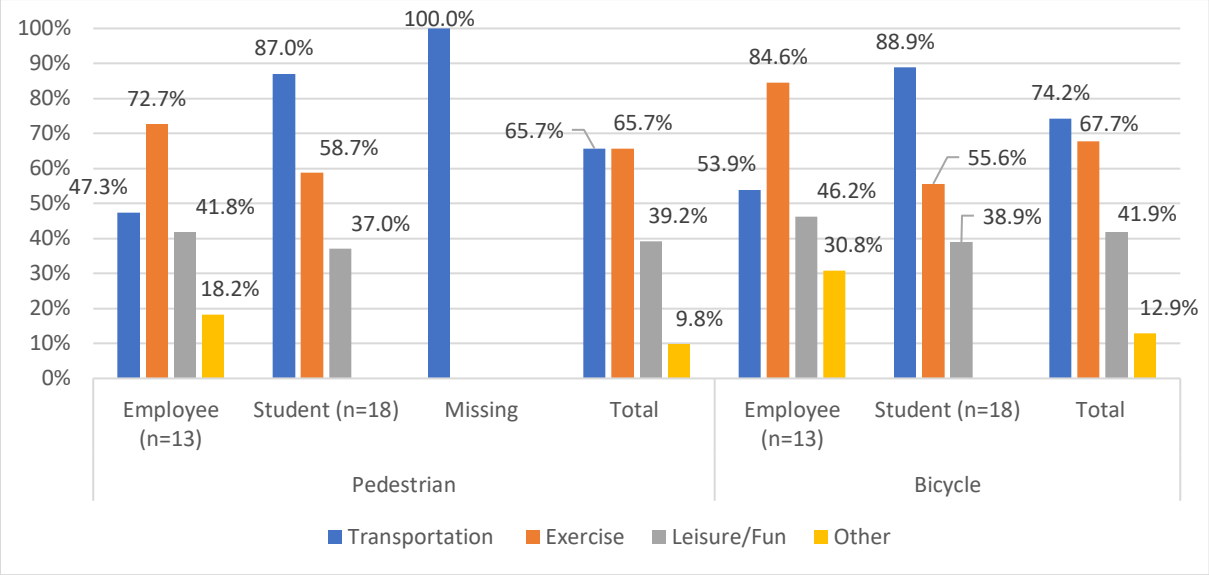

Figure 9. Primary Reasons Reported for Walking and Bicycling by Road User Classification. [1]

[1] Note an individual could be counted on both the pedestrian and bicycle stratifications as the question was asked only once if someone reported either walking or riding a bicycle.

Survey respondents were then asked about when they primarily walk and/or ride a bicycle (see Figure 10). Most activity occurs during the daytime hours with 71.2 percent reporting they walk or ride from 8am to 5pm. Of potential concern is that 2.0 percent of students walk and or ride after 8pm.

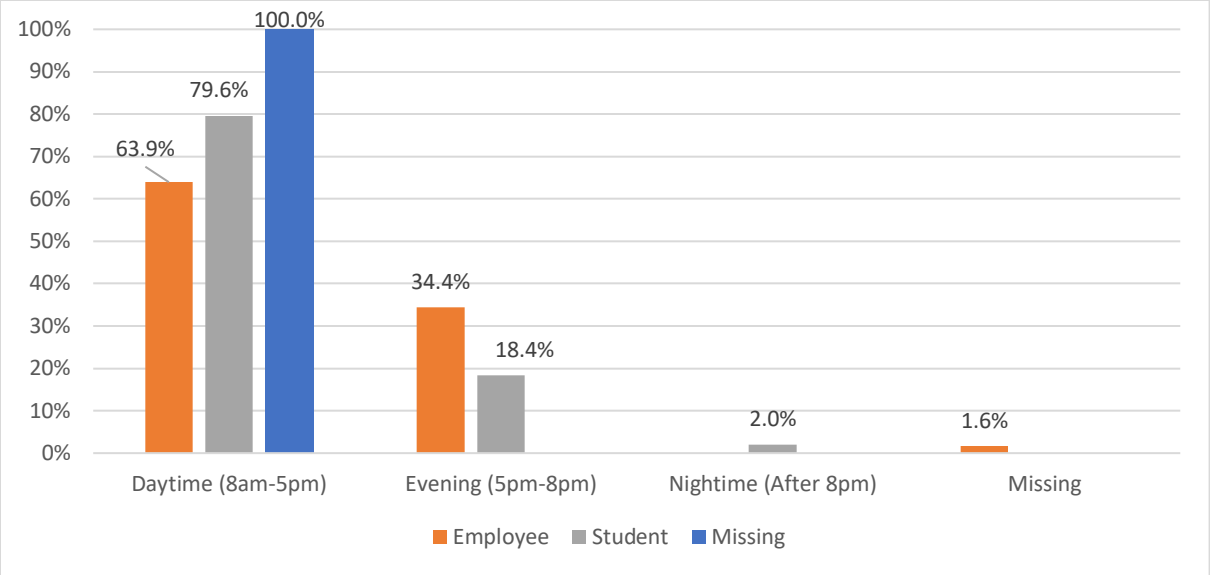

Figure 10. Times Reported to Primarily Walk or Ride a Bicycle.

Motorists

Overall, 88.9 percent (n=96) of employees and 60.0 percent (n=30) of students reported they were motorists. Motorists reported how often they have done certain behaviors within the past 90 days (see Figure 11). Interestingly, employees had higher percentages for always or very often performing every behavior compared to students.

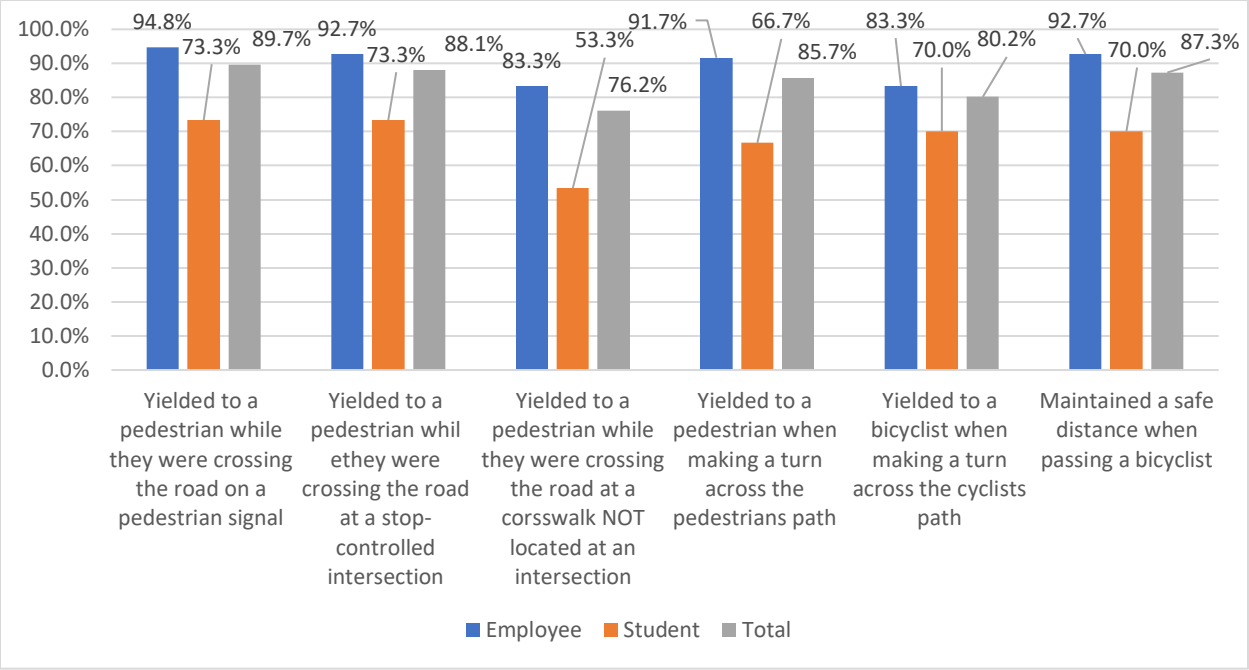

Figure 11. Percent Always or Very Often Reported Motorist Behaviors by University Classification.

Overall 15.9 percent of motorists respondents reported being involved in a crash or almost crash with a pedestrian and/or a bicyclist (see Figure 12). Employees had a higher percentage of almost being involved in a crash compared to students (18.8 percent versus 6.7 percent).

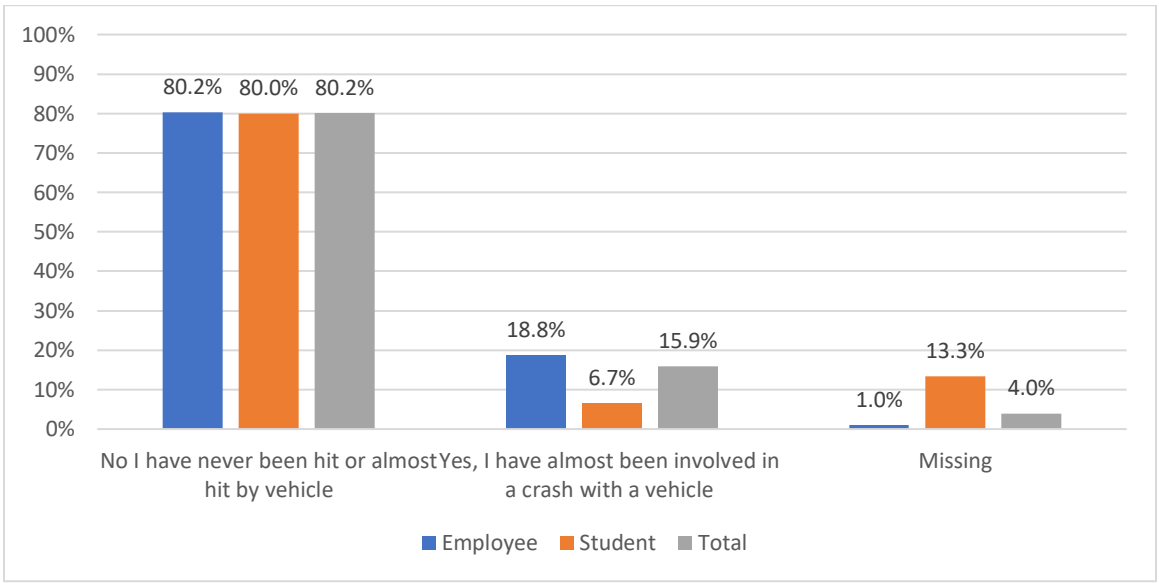

Figure 12. Pedestrian Reported Crash Involvement Over Past 90 Days by University Classification.

Discussion

Pedestrians

Researchers found that more than a quarter of pedestrians reported either being almost hit or involved in a crash with a vehicle in the past 90 days which highlights the need for educational materials to educate pedestrians and motorists on state laws to keep them safe. In addition, the researchers found a few behaviors that could be improved through increased awareness of laws, including:

- 18.6 percent of pedestrians reported always or very often crossing the road at a location other than a crosswalk or intersection
    - Students had a higher percentage compared to employees (26.1 percent versus 12.7 percent)
- 46.1 percent of pedestrians always or very often entered the crosswalk after the pedestrian countdown started
    - Students had a higher percentage compared to employees (52.2 percent versus 41.8 percent)
- 65.7 percent of pedestrians reported motorists always or very often yielded to them when they were crossing at a signal
    - Students had a lower percentage compared to employees (60.9 percent versus 69.1 percent)
- 32.4 percent of pedestrians reported motorists always or very often yielded to them when making a turn into the pedestrians path
    - Students had a lower percentage compared to employees (28.3 percent versus 36.4 percent)

Bicyclists

The survey found that 1 in 10 bicyclists reported either being almost hit or involved in a crash with a vehicle in the past 90 days, again highlighting the important need to increase awareness of pedestrian and bicycle safety laws near campus. The survey also explored behaviors that could be improved through increased awareness of laws, including:

- 22.2 percent of student bicyclists reported always or very often biking after dark without a light
- 45.2 percent of bicyclists reported always or very often using hand signals when changing lanes and/or turning

    - Students had a lower percentage compared to employees (22.2 percent versus 76.9 percent)
- 35.5 percent of bicyclists reported motorists always or very often yielded to them when making a turn across their path
- 51.6 percent of bicyclists reported motorists always or very often maintain a safe distance when passing

Motorists

Approximately sixteen percent of motorists reported being involved in a crash or almost crash with a pedestrian and/or bicyclist. The survey asked about motorist behaviors tied to pedestrian and/or bicyclist safety which found for all reported behaviors student motorist has lower percentages of always or very often performing these behaviors. The lowest always or very often performed behavior was yielding to a pedestrian while they crossed the road at a crosswalk not located at an intersection with 76.2 percent of respondents. Interestingly, only 53.3 percent of students reported doing this behavior compared to 83.3 percent of employees.

Conclusion

The results of the survey suggest that increasing awareness of pedestrian and bicycle safety laws on Texas A&M University/Texas A&M University System campus could result in fewer crashes and injuries. The findings summarized above highlight the need to increase awareness of Texas Transportation Code §552.001 (Traffic Control Signals), §552.002 (Pedestrian Right-of-Way: Control Signal), §552.003 (Pedestrian Right-of-Way at Crosswalk), §552.005 (Cross at Point Other Than Crosswalk), and §547.107 (Method of Giving Hand and Arm Signals). Additionally, since 22.2 percent of student bicyclists reported riding their bike at night without a light, there is a need to educate bicyclists on §551.104 (Safety Equipment) which includes using lights at nights.

While the findings of the survey suggest the need to emphasize traffic safety law awareness, there are limitations that should be considered in lieu of the discovered findings. During the period of time that this evaluation was taking place, COVID-19 played a major role in a reduced student and employee population on the campus of Texas A&M University. As the population levels were below normal, this could explain the low census on response rates obtained.

Second, the response rates for employees was greater than that of students. While the invitation to take part in the survey were the same for both employees and students, the number of responses received differed which could bias the findings based upon a greater slant toward one sample group over another.

Analyzing the responses according to groups (pedestrians, bicyclists, and motorists) also could have contributed to unintended bias especially if one group of respondents were more likely to use one particular mode of transportation over another. One example could include an employee who regularly drives a motor vehicle on or near campus. The driver believes that their mode of transportation is more superior than others, and the driver regularly see multiple pedestrians cross the street at locations other than intersections or crosswalks. Since the driver may regularly observe the traffic law violations of others and also sees their mode of transportation as more superior, their response to the survey may be generated by their negative perception of a violators guilt and their own interpretation of the importance of their selected mode of transportation.

While the findings of this analysis do represent a confidence level within each set of respondents, we must admit that there is a potential for a margin of error when both groups are compared holistically to the point of findings. In short, there may be a tendency of the two samples to over or underestimate the parameter of the survey respondents. This margin of error could affect the level of confidence given the comparison.

Yet while there were some limitations encountered, the findings do suggest the need for educational outreach to inform university students and employees about the importance of following traffic safety laws, especially those that affect our most vulnerable roadway users. Based upon the survey results and our findings and conclusions, there appears to be a strong need to produce and regularly provide traffic law education outreach to the university community. This includes emphasis on right of way, crossing at designated intersections and crosswalks, as well as complying with crossing signalization. Doing so will re-enforce and underscore a continued safety approach that is geared toward eliminating the causes that produce harm to pedestrian and bicyclists on and around university campuses.

References

Loukaitou-Sideris, A., Medury, A., Fink, C., Grembek, O., Shafizadeh, K., Wong, N., & Orrick, P. (2014). Crashes on and near college campuses: a comparative analysis of pedestrian and bicyclist safety. *Journal of the American Planning Association, 80* (3), 198-217.

Appendix: Survey

Q1 You are invited to take part in a research study being conducted by the Texas A&M Transportation Institute (TTI). Please review the attached information sheet to decide whether or not you want to take part.

You may contact the Principal Investigator, Dr. Troy Walden, to tell him about a concern or complain about this research at t-walden@tti.tamu.edu or (979) 317-2526.

Q2 Are you over the age of 18 years old?

Yes (1)

No (2)

Skip To: End of Survey If Are you over the age of 18 years old? = No

Q3 Are you a college student or employee of Texas A&M University/Agency?

Yes (1)

No (2)

Skip To: End of Survey If Are you a college student or employee of Texas A&M University/Agency? = No

Display This Question:

If Are you a college student or employee of Texas A&M University/Agency? = Yes

Q4 What is your relationship with the Texas A&M University/Agency?

Student (1)

Employee (2)

Q5 Would you like to take our survey asking out pedestrian and bicycle laws and activities on college campuses?

Yes (1)

No (2)

Skip To: End of Survey If Would you like to take our survey asking out pedestrian and bicycle laws and activities on colleg... = No

Q6 What is your gender?

Male (1)

Female (2)

Prefer not to say (3)

Q7 How old are you?

18-20 (1)

21-24 (2)

25+ (3)

Q8 What is your ethnicity? Select all that apply.

- ☐ Asian (1)
- ☐ Black or African American (2)
- ☐ Hispanic or Latino (Any Origin) (3)
- ☐ White (4)
- ☐ Other (Please Specify): (5) _____
- ☐ Prefer not to say (6)

Page Break

Q9 Which of the following would you consider yourself to be? Select all that apply.

- ☐ Pedestrian/Walker (1)
- ☐ Bicyclist (2)
- ☐ Motorist/Driver (3)

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Q10 Complete the following table by indicating how often you **WALK**:

	Daily (1)	Weekly (2)	Monthly (3)	Never/Not Applicable (4)
To campus (from off-campus to campus) (1)				
Within campus (from campus to campus) (2)				
To work (off-campus) (3)				
Bar districts (e.g., Northgate, 6th street) (4)				
Around residential areas (5)				
Around shopping districts (6)				

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q11 Complete the following table by indicating how often you **BIKE**:

	Daily (1)	Weekly (2)	Monthly (3)	Never/Not Applicable (4)
To campus (from off-campus to campus) (1)				
Within campus (from campus to campus) (2)				
To work (off-campus) (3)				
Bar districts (e.g., Northgate, 6th street) (4)				
Around residential areas (5)				
Around shopping districts (6)				

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Or Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q12 What are the primary reasons you walk and/or bike? Select all that apply.

- ☐ Transportation (1)
- ☐ Exercise/Health (2)
- ☐ Leisure/Fun (3)

☐ Other (Please specify): (4) _____

☐ N/A (5)

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Or Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q13 When do you primarily walk and/or bike?

Daytime (8am-5pm) (1)

Evening (5pm-8pm) (2)

Nightime (After 8pm) (3)

N/A (4)

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Q14 How often have you done the following in the **past 90 days** while **WALKING**?

	Not Often (2)	Sometimes (3)	Very Often (4)	Always (5)	Never/NA (1)
Crossed the road at a location other than a crosswalk or intersection? (1)					
Yielded to vehicles when crossing at a location other than a crosswalk or intersection? (9)					
Followed pedestrian crossing signals when they are available? (2)					
Entered the crosswalk after the pedestrian countdown started? (4)					
Walked on the roadway when a sidewalk was available? (3)					

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Q15 While **WALKING** how often has a motorist done the following in the **past 90 days**?

	Not Often (2)	Sometimes (3)	Very Often (4)	Always (5)	Never/NA (1)
MOTORIST yielded to you while you were crossing the road on a pedestrian signal? (5)					
MOTORIST yielded to you while you were crossing the road at a stop-controlled intersection. (6)					
MOTORIST yielded to you while you were crossing the road at a crosswalk NOT located at an intersection. (7)					
MOTORIST yielded to you when making a turn across your path? (4)					

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Pedestrian/Walker

Q16 As a pedestrian on or near campus, have you been involved in a crash with a vehicle or almost involved in a crash with a vehicle in the **past 90 days**?

Yes, I have been involved in a crash with a vehicle (1)

Yes, I have almost been involved in a crash with a vehicle (2)

No I have never been hit or almost hit by vehicle (3)

Display This Question:

If As a pedestrian on or near campus, have you been involved in a crash with a vehicle or almost inv... = Yes, I have been involved in a crash with a vehicle

Or As a pedestrian on or near campus, have you been involved in a crash with a vehicle or almost inv... = Yes, I have almost been involved in a crash with a vehicle

Q17 Please select all of the characteristics of the environment in which the crash occurred or almost occurred.

- ☐ Large University Gathering (e.g., football game, graduation) (1)
- ☐ Morning (7am-9am) (2)
- ☐ Evening (4-6pm) (3)
- ☐ Clear Weather (7)
- ☐ Rainy Day (4)
- ☐ On University Property (5)
- ☐ Near University Property (e.g., North Gate) (6)
- ☐ Near a bus stop (8)

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q18 How often have you done the following in the **past 90 days** while **BIKING?**

	Not Often (2)	Sometimes (3)	Very Often (4)	Always (5)	Never/NA (1)
Biked against traffic in the road? (5)					
Biked after dark with a light on the bicycle? (6)					
Biked after dark without a light? (7)					
Used hand signals when changing lanes and/or turning? (9)					
Moved to the right when being passed? (11)					

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q19 While **BIKING** how often has a motorist done the following in the **past 90 days**?

	Not Often (2)	Sometimes (3)	Very Often (4)	Always (5)	Never/NA (1)
MOTORIST yielded to you when making a turn across your path? (3)					
MOTORIST maintained a safe distance when passing you? (2)					

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Bicyclist

Q20 As a bicyclists on or near campus, have you been involved in a crash with a vehicle or almost involved in a crash with a vehicle in the **past 90 days**?

- Yes, I have been involved in a crash with a vehicle (1)
- Yes, I have almost been involved in a crash with a vehicle (2)
- No I have never been hit or almost hit by vehicle (3)

Display This Question:

If As a bicyclists on or near campus, have you been involved in a crash with a vehicle or almost inv... = Yes, I have been involved in a crash with a vehicle

Or As a bicyclists on or near campus, have you been involved in a crash with a vehicle or almost inv... = Yes, I have almost been involved in a crash with a vehicle

Q21 Please select all of the characteristics of the environment in which the crash occurred or almost occurred.

- ☐ Large University Gathering (e.g., football game, graduation) (1)
- ☐ Morning (7am-9am) (2)
- ☐ Evening (4-6pm) (3)
- ☐ Clear Weather (7)
- ☐ Rainy Day (4)
- ☐ On University Property (5)
- ☐ Near University Property (e.g., North Gate) (6)
- ☐ Near a bus stop (8)

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Motorist/Driver

Q22 How often have you done the following in the **past 90 days** while driving?

	Not Often (2)	Sometimes (3)	Very Often (4)	Always (5)	Never/NA (1)
Yielded to a pedestrian while they were crossing the road on a pedestrian signal? (5)					
Yielded to a pedestrian while they were crossing the road at a stop-controlled intersection? (6)					
Yielded to a pedestrian while they were crossing the road at a crosswalk NOT located at an intersection? (7)					
Yielded to a pedestrian when making a turn across the pedestrians path? (4)					
Yielded to a bicyclist when making a turn across the cyclists path? (3)					
Maintained a safe distance when passing a bicyclist? (2)					

Display This Question:

If Which of the following would you consider yourself to be? Select all that apply. = Motorist/Driver

Q23 As a motorists on or near campus, have you been involved in a crash or almost crash with a pedestrian or bicyclists in the **past 90 days**?

Yes, I have been involved in a crash with a vehicle (1)

Yes, I have almost been involved in a crash with a vehicle (2)

No I have never been hit or almost hit by vehicle (3)

Display This Question:

If As a motorists on or near campus, have you been involved in a crash or almost crash with a pedes... = Yes, I have been involved in a crash with a vehicle

Or As a motorists on or near campus, have you been involved in a crash or almost crash with a pedes... = Yes, I have almost been involved in a crash with a vehicle

Q24 Please select all of the characteristics of the environment in which the crash occurred or almost occurred.

- ☐ Large University Gathering (e.g., football game, graduation) (1)
- ☐ Morning (7am-9am) (2)
- ☐ Evening (4-6pm) (3)
- ☐ Clear Weather (7)
- ☐ Rainy Day (4)
- ☐ On University Property (5)
- ☐ Near University Property (e.g., North Gate) (6)
- ☐ Near a bus stop (8)