

2022 Survey of Stakeholders on Pedestrian and Bicycle Safety

Identifying Barriers to Understanding Pedestrian and Bicycle Safety Laws (2022-TTI-G-1YG-0023)

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Introduction

The objective of this survey is to understand how stakeholders who work in the area of pedestrian and bicycle safety view the issue. More specifically, how do the responses from this survey align with feedback received in previous stakeholder focus groups. This survey is conducted as part of the project, Identifying Barriers to Understanding Pedestrian and Bicycle Safety Laws, to identify the barriers regarding the public's understanding of laws related to pedestrian and bicycle safety.

Methods

Survey Development

The survey questions were developed based on feedback from focus groups with stakeholders held in FY 2021 and with the approval of the Texas Department of Transportation (TxDOT). The survey was submitted under Texas A&M University Institutional Review Board (IRB) (IRB2022-0009M), which received an exempt status. Appendix A includes a copy of the approved questionnaire. The survey included questions about the participant's affiliation; what they view as the main concerns for pedestrian and bicycle safety in Texas; what types of messaging, outreach and education they recommend; and the challenges they see in reaching the public with information.

Survey Distribution

The online Qualtrics survey was distributed by providing the link to potential participants. Potential participants include stakeholders that have done work in the area of pedestrian and bicycle safety in Texas. The stakeholders were identified through their affiliations with different agencies and coalition groups in Texas, and emails with the link were sent to the membership of those groups. Additionally, some participants were provided the survey via a direct email message by a member of the project team who has worked with them in the past.

Survey Analysis

There was a total of 35 participants that responded to the survey; however, one respondent was identified as being from Mexico, and that survey was eliminated from the dataset. Therefore, a total sample of 34 participants is included in the analysis. Descriptive analysis (e.g., counts and percentages) of the survey data was conducted for each question and is presented here.

Participant Details

As Figure 1 shows, the respondents came from a variety of backgrounds. The largest group of respondents were from city or town governments (**47.1 percent**), followed by law enforcement (**11.8 percent**) as well as the state department of transportation (DOT), public health, engineering firms and construction services, who were each at **8.8 percent** of the participants.

As Figure 2 shows, the majority of participants worked at the city level (**58.8 percent**) while others worked at the county (**5.9 percent**), district/regional (**20.6 percent**) and state levels **8.8 percent**. Some participants worked at more than one level of geography or within several states.

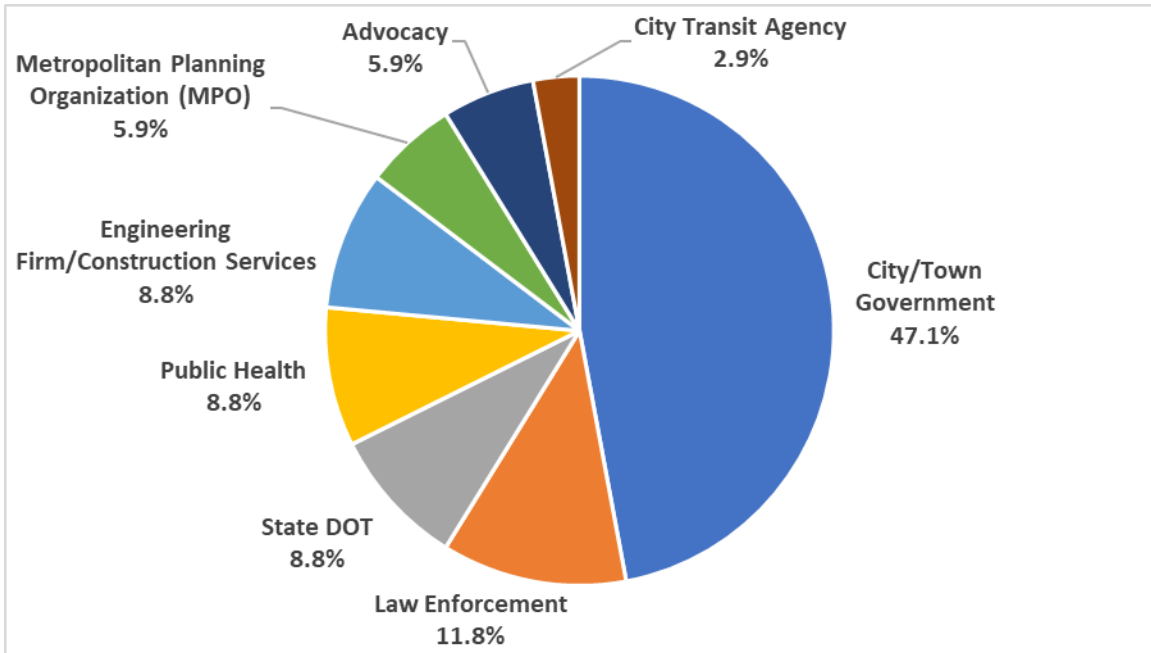


Figure 1. Organizational Affiliation

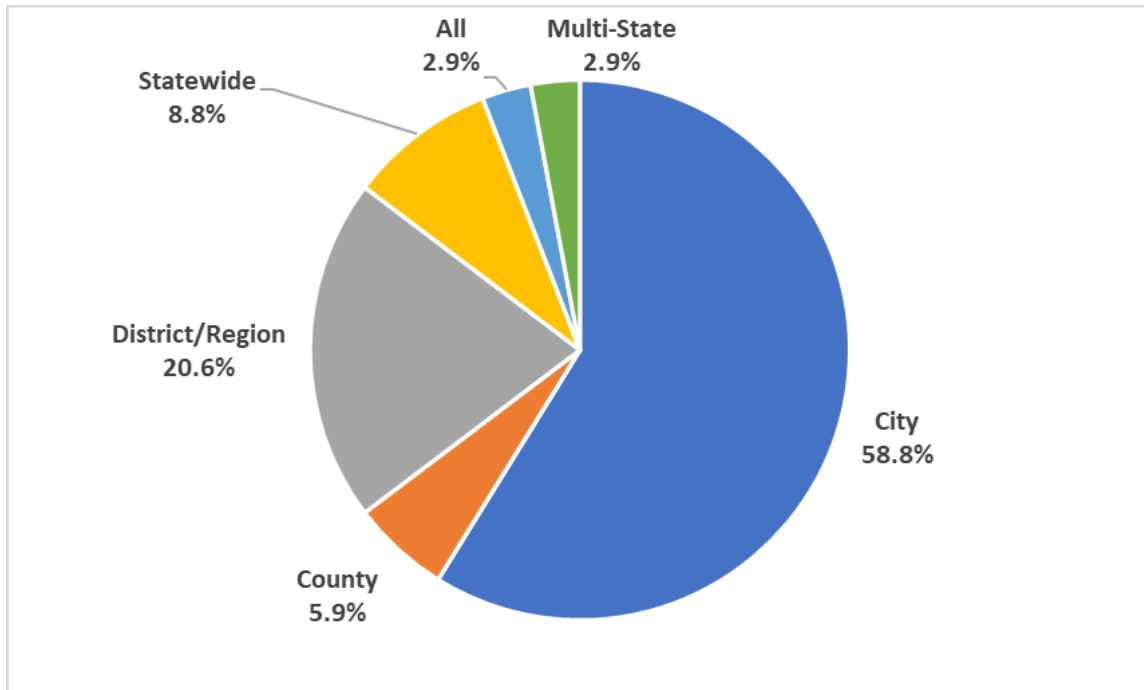


Figure 2. Scope of Work

Figure 3 shows the type of work that respondents reported doing in terms of pedestrian and bicycle safety. Planning (**55.9 percent**) and education and outreach to the public (**47.1 percent**) were the two largest categories. The percentages add up to over 100 percent, since respondents could select multiple options.

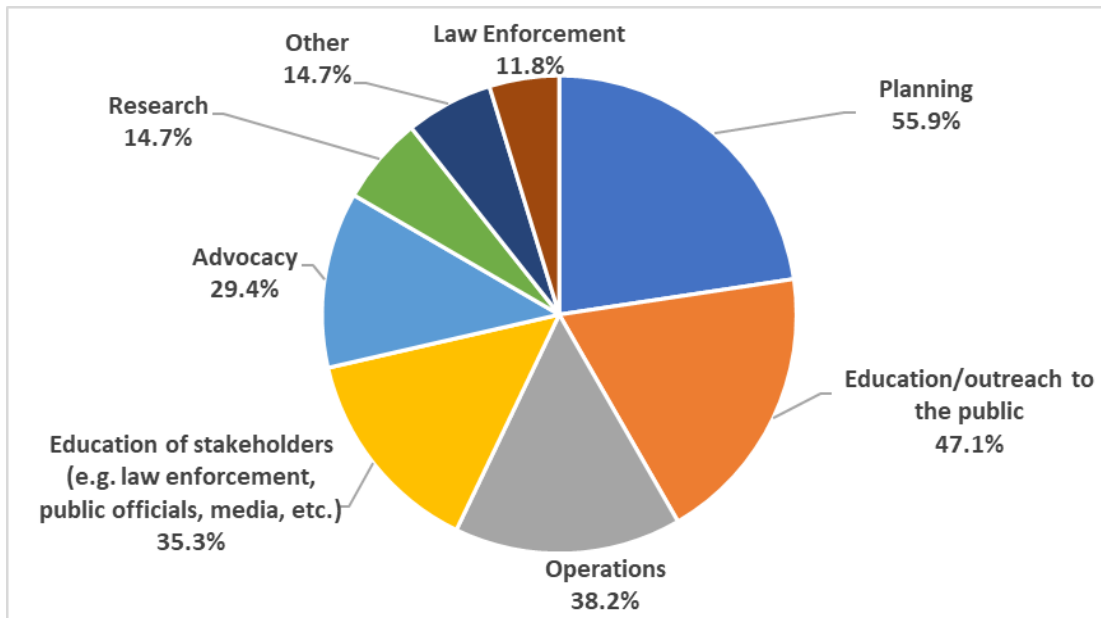


Figure 3. Type of Work

Overall Concerns

Respondents were asked about their level of concern for certain issues concerning pedestrian and bicycle safety. This list was compiled from notes of the FY 2021 focus groups where the participants were asked what they saw as the primary safety concerns for pedestrians and bicyclists. Table 1 shows a list of the issues and how respondents in this survey ranked each issue in terms of level of concern, with 1 being the lowest level of concern and 5 being the highest level of concern. The issue with the highest percentage of respondents ranking it a 5 was driver lack of awareness of pedestrians and bicyclists, at **58.5 percent**. This was followed by roads not built for all users, with **47.1 percent** of respondents ranking this a Level 5 concern. People experiencing homelessness was seen as a lower level of concern by respondents.


Table 1. Overall Concerns for Pedestrian and Bicycle Safety

Issues	<div style="display: flex; align-items: center; justify-content: space-between;"> Low level of concern ←→ High level of concern </div>				
	1	2	3	4	5
Roads not built for all users	2.9%	0.0%	26.5%	23.5%	47.1%
Fast growing cities	5.9%	11.8%	20.6%	41.2%	20.6%
Poor road/sidewalk conditions	0.0%	8.8%	20.6%	47.1%	23.5%
Car-centric culture	5.9%	5.9%	11.8%	35.3%	41.2%
People experiencing homelessness	17.6%	29.4%	23.5%	20.6%	8.8%
Driver lack of awareness of pedestrians and bicyclists	0.0%	2.9%	11.8%	26.5%	58.8%

Pedestrian Behaviors

Then respondents were asked to rank a list of pedestrian behaviors in terms of their level of concern, and Table 2 shows the results. The highest level of concern among respondents was pedestrians walking along high-speed roadways where no sidewalks are present at **44.1 percent** of respondents ranking it a Level 5 concern. Distraction while walking was also of concern to respondents, with **76.4 percent** ranking it a 4 or 5. Pedestrians not following pedestrian signals was ranked as a Level 4 concern by **44.1 percent** of respondents, with another **26.5 percent** ranking it a Level 3 concern. The behavior with the lowest percentage of respondents ranking it a 4 or 5 was pedestrian impairment.

Table 2. Pedestrian Behavior Concerns.




Behavior	Level of concern				
	1	2	3	4	5
Crossing the road at a location other than a crosswalk or intersection	8.8%	11.8%	14.7%	26.5%	38.2%
Not following pedestrian signals	8.8%	2.9%	26.5%	44.1%	17.6%
Walking in the roadway when a sidewalk is available	8.8%	17.6%	8.8%	32.4%	32.4%
Distraction while walking	2.9%	8.8%	11.8%	38.2%	38.2%
Pedestrian impairment (e.g., alcohol or drugs)	11.8%	17.6%	29.4%	26.5%	14.7%
Walking along a high-speed roadway where no sidewalks are present	2.9%	8.8%	17.6%	26.5%	44.1%

Bicyclist Behaviors

Respondents were also asked to rank a list of bicyclist behaviors in terms of their level of concern, and Table 3 shows the results. The behavior with the highest level of concern among respondents was riding on a high-speed roadway where no shoulder or bicycle lanes are present, with **88.2 percent** of respondents ranking it a Level 4 or 5. Other behaviors with high levels of concern from respondents were bicyclists not using a bike light at night and bicyclists not following stop signs or traffic signals. Bicyclist impairment and bicyclist distraction were ranked at a lower level of concern by respondents.

Table 3. Bicyclist Behavior Concerns.



Behavior	Level of concern				
	1	2	3	4	5
Not using a bike light at night	2.9%	5.9%	20.6%	29.4%	41.2%
Not wearing a helmet	14.7%	8.8%	23.5%	20.6%	32.4%
Riding against traffic in the road	8.8%	11.8%	26.5%	29.4%	23.5%

Bicyclist distraction	14.7%	14.7%	29.4%	26.5%	14.7%
Bicyclist impairment (e.g., alcohol or drugs)	14.7%	20.6%	35.3%	11.8%	17.6%
Riding on a high-speed roadway where no shoulder or bicycle lanes are present	2.9%	2.9%	5.9%	29.4%	58.8%
Bicyclist not following stop signs or traffic signals	5.9%	2.9%	23.5%	23.5%	44.1%

Driver Behaviors

Next, the respondents were asked about driver behavior around pedestrians (Table 4) and bicyclists (Table 5). On the pedestrian side, driver distraction was the issue of highest concern, with **97.1 percent** of respondents ranking this a Level 4 or 5. This was followed by drivers not yielding to pedestrians when required and driver lack of awareness of pedestrians, both with **88.2 percent** of respondents ranking the behavior a 4 or 5. The issue of least concern was driver impairment.

Table 4. Driver Behavior Concerns around Pedestrians.

Behavior					
	1	2	3	4	5
Not yielding to a pedestrian where required	0.0%	0.0%	11.8%	29.4%	58.8%
Driver distraction	0.0%	0.0%	2.9%	14.7%	82.4%
Driver impairment (e.g., alcohol or drugs)	2.9%	2.9%	20.6%	20.6%	52.9%
Driver lack of awareness of pedestrians	0.0%	2.9%	8.8%	17.6%	70.6%
Driver not following stop signs or traffic signals	0.0%	2.9%	23.5%	14.7%	58.8%

On the bicyclist side, driver lack of awareness of bicyclists and driver distraction had the highest level of concern by respondents, with **90.9 percent** and **87.9 percent**, respectively, ranking the behaviors a Level 4 or 5. Drivers not following stop signs or traffic signals was of lowest concern to respondents.

Table 5. Driver Behavior Concerns around Bicyclists.

Behavior					
	1	2	3	4	5
Not allowing at least 3 feet when passing a bicyclist (6 feet in a commercial vehicle)	0.0%	6.1%	15.2%	45.5%	33.3%
Driver distraction	0.0%	3.0%	9.1%	24.2%	63.6%

Driver impairment (e.g., alcohol or drugs)	3.0%	3.0%	36.4%	15.2%	42.4%
Driver lack of awareness of bicyclists	0.0%	6.1%	3.0%	27.3%	63.6%
Driver not following stop signs or traffic signals	0.0%	12.1%	18.2%	12.1%	57.6%
Driver passing bicyclist at unsafe speed	0.0%	0.0%	21.2%	24.2%	54.5%

Familiarity with Laws

Then respondents were asked what they think the current level of knowledge of pedestrian and bicycle safety laws is among the general public. Respondents were able to choose from a scale of extremely familiar, very familiar, moderately familiar, slightly familiar, and not familiar at all. As Figure 4 shows, slightly familiar was the most commonly reported option (**63.6 percent**), followed by moderately familiar (**24.2 percent**), and not familiar at all (**12.1 percent**), with no respondents reporting extremely familiar or very familiar.

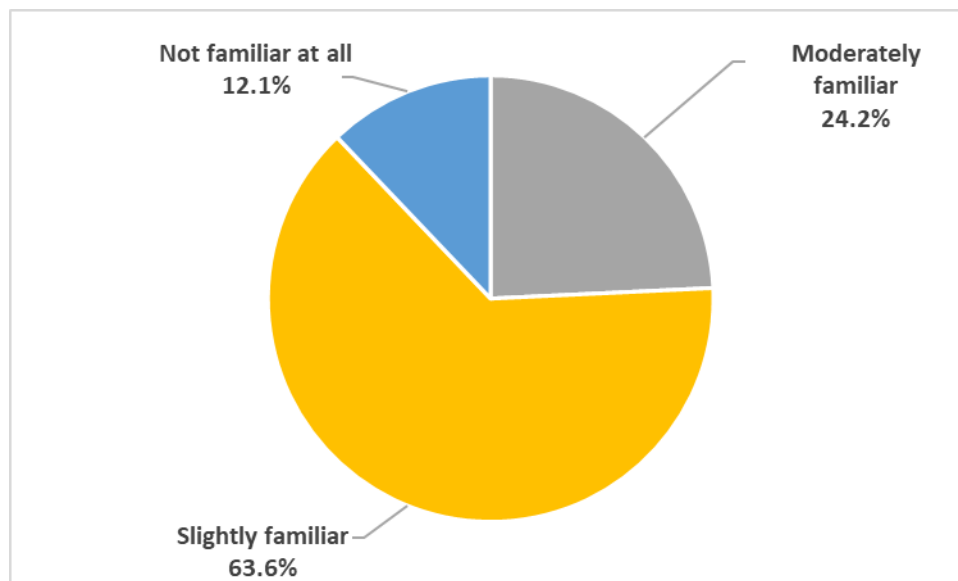


Figure 4. Familiarity with Laws.

When asked why they thought the public was unfamiliar with the laws (see Figure 5), the most common response was that the public does not see pedestrians or bicyclists as a concern (**58.8 percent**). This is followed by the subject not being covered in driver's education curriculum (**52.9 percent**) and no interest on the part of the public (**50.0 percent**). Lack of access was only seen as a reason for not being familiar with pedestrian and bicycle laws by **26.5 percent** of respondents. The total adds up to over 100 percent since respondents could choose multiple responses.

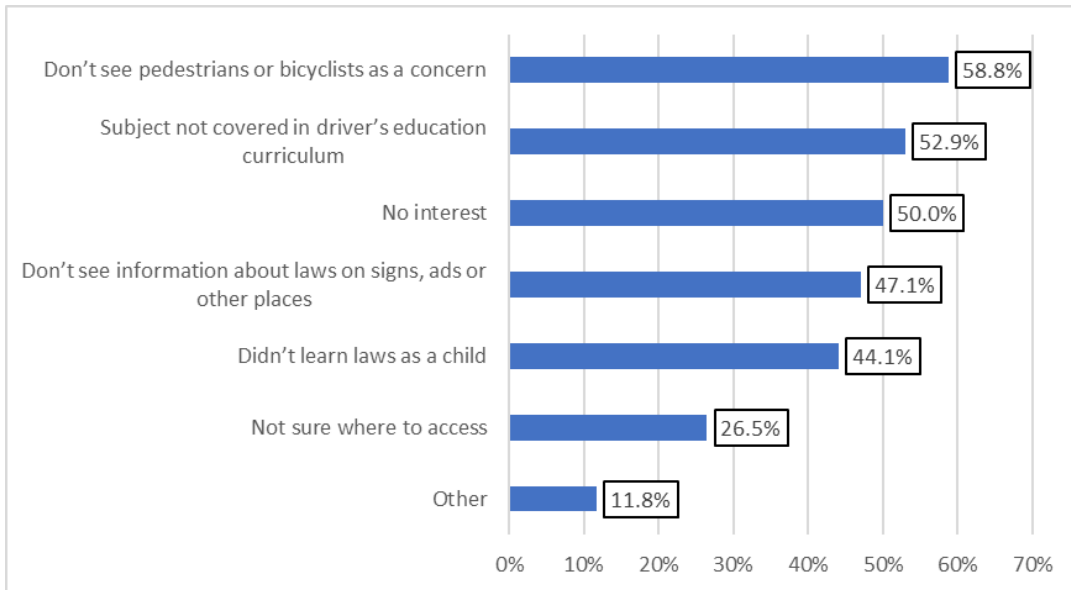


Figure 5. Reasons for Unfamiliarity.

Messaging

The next part of the survey dealt with messaging about pedestrian and bicycle safety laws. When asked what types of messaging would be more likely to grab their attention, Figure 6 shows that animation and humor were reported by the highest percentage of respondents at **55.9 percent** each.

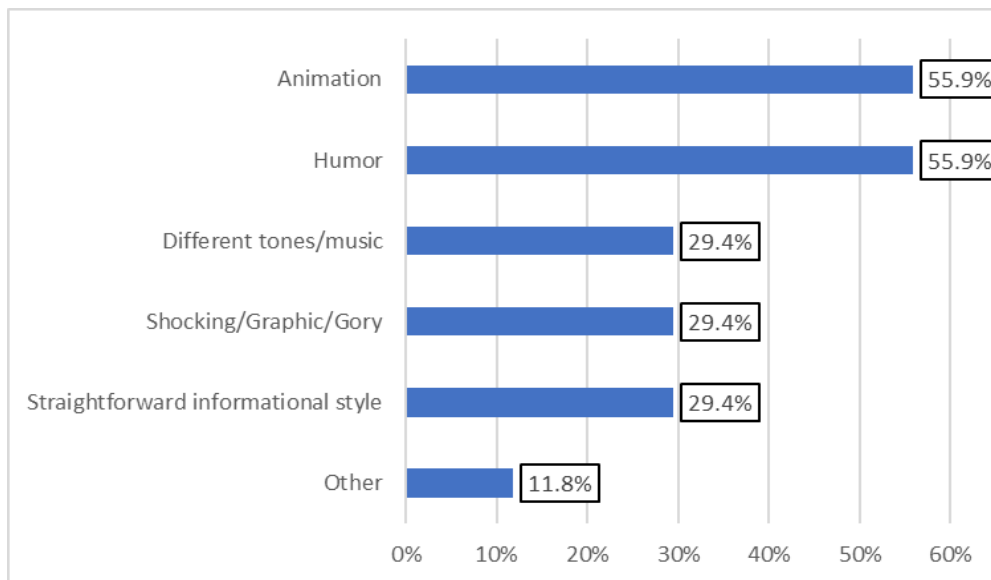


Figure 6. Types of Messaging.

The questionnaire also asked what strategies or approaches the respondents would recommend. As Figure 7 shows, school-based programs were recommended by the highest percentage of respondents (**91.2 percent**). Other highly recommended methods included reaching out to diverse groups (**61.8 percent**), ads on radio or TV (**58.8 percent**) and signs on transit (**50.0 percent**). There were several other write-in suggestions, which included: social media, showing video clips in DPS offices, showing ads in DPS lobbies, more enforcement of laws, attending health fairs with information, educational programs in lieu of traffic violations, and local news.

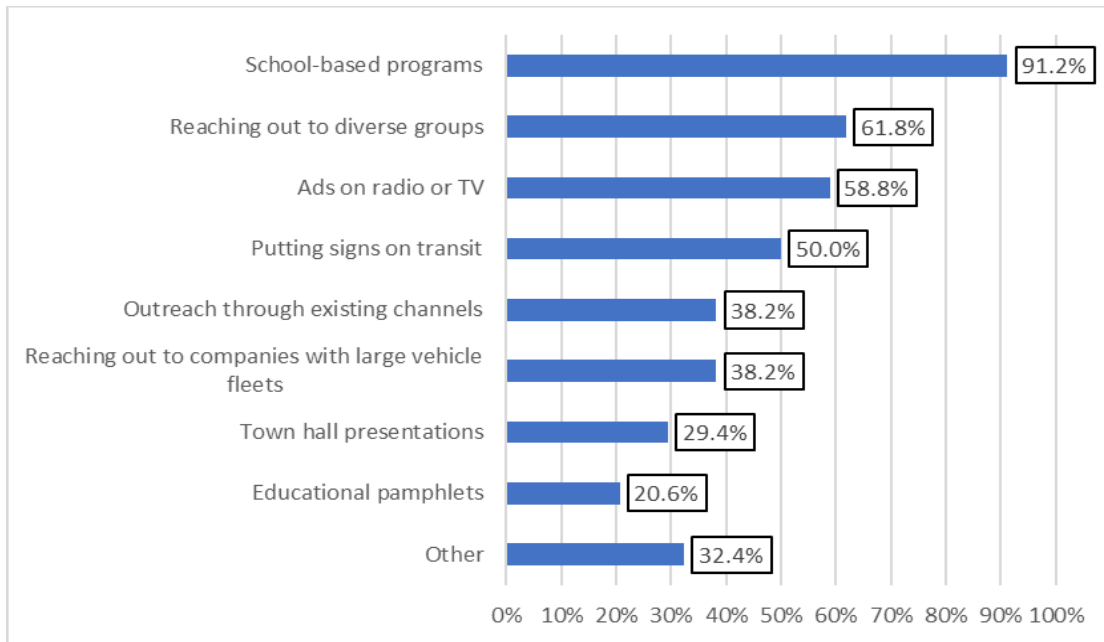


Figure 7. Types of Outreach/Education

Figure 8 shows the digital outreach methods reported by respondents as being effective. As mentioned previously, social media was reported to be effective by **88.2 percent** of respondents, followed by YouTube or Vimeo videos at **73.5 percent**.

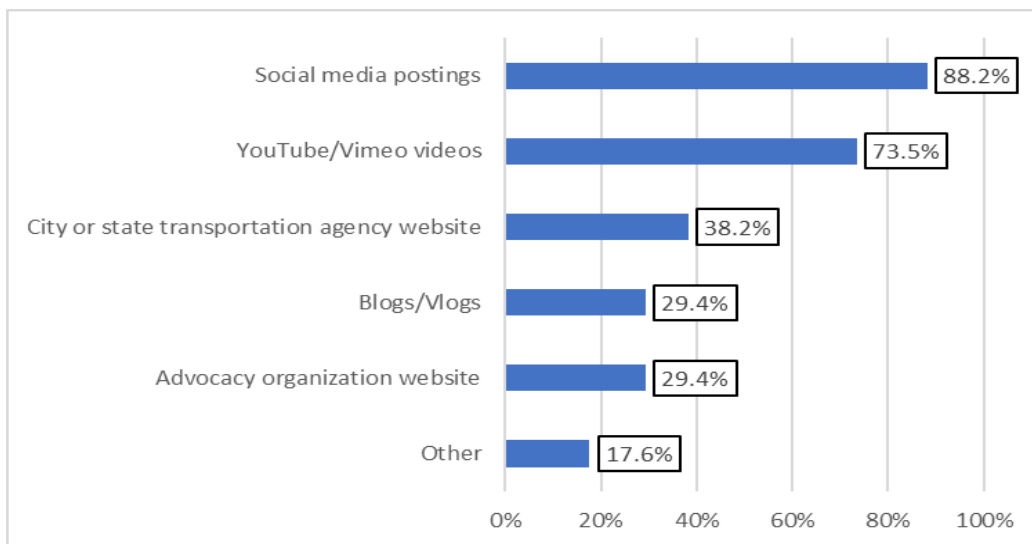


Figure 8. Types of Digital Outreach/Education.

Challenges

Finally, respondents were asked about the challenges to reaching the public with traffic safety messaging. Figure 9 shows the issues reported by respondents. Different interpretations of the laws and people opposed to changes were both cited by at least half of respondents. Cultural differences and language barriers were also identified as key issues.

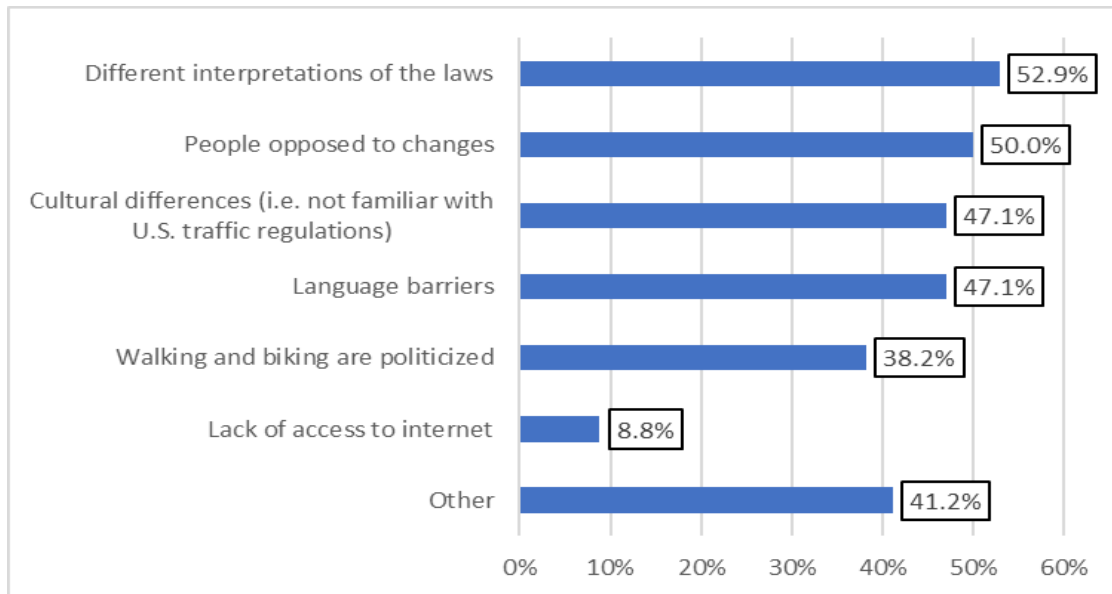


Figure 9. Challenges in Reaching Public.

There were also several write-in responses under “other,” which included the following:

- Apathy or not caring
- No interest or don’t care to learn
- Ignorance
- Car is perceived as more important than other users
- New infrastructure that is changing
- A speed dominated culture
- Drivers perceive that bicyclists and pedestrians don’t pay for the roads
- Not a priority in Texas

Additional Thoughts

At the end respondents were given the opportunity to add any additional thoughts on pedestrian and bicycle safety. Included below are some of the thoughts shared by respondents:

- Educating kids that then educate their parents
- Educate on advocating for safe pedestrian and bike facilities
- Better education when learning to drive
- Talking about real stories about crashes that have occurred
- Start education at an early age

- We need a culture change
- Introduce a bicycle friendly driver program
- Advocating for traffic enforcement
- Victim blaming is counterproductive
- Building walking and biking infrastructure that connects as a system
- Lack of accommodations in work zones for pedestrians

Summary

The respondents cited the driver lack of awareness of pedestrians and bicyclists and roads not built for all users as the predominate safety concerns for people walking and biking. Respondents were also concerned about pedestrians and bicyclists walking or riding along high-speed roadways where no sidewalks, shoulders or bike lanes present, and people not following signals or signs.

In terms of driver behaviors, nearly all respondents ranked driver distractions as a level 4 or 5 out of 5. There was also concern for drivers not yielding when required, and an overall lack of awareness of those who walk and bike.

Respondents said that the public's knowledge of pedestrian and bicycle laws was moderate, at best. The reason for unfamiliarity was reported by respondents as being because of the subject not being covered in driver's education curriculum and that the public does not see pedestrians or bicyclists as a concern.

In terms of messaging, respondents said that animation and humor could be good ways to grab attention. They recommended school-based programs, reaching out to diverse groups, ads on radio or TV and signs on transit. Additionally, social media and videos were seen as good methods to educate.

Challenges to educating included different interpretations of the laws, people opposed to changes, as well as cultural differences (i.e., not understanding or knowing Texas laws, when coming from another state or United States traffic laws when coming from out of the country) and language barriers. Some respondents also mentioned a low level of interest on the part of the public.

Overall, respondents pointed to the need for education and a culture change or shift. Also, one respondent talked about letting people know how they can advocate for better infrastructure in their neighborhoods. Another mentioned that we should not be blaming the victims of pedestrian and bicycle crashes, but looking at some of the larger structural issues that are part of the problem (such as poor infrastructure for people who walk and bike) and the responsibility of drivers. Perhaps it was best put by one respondent, "The best way to reduce motor-vehicle related injuries or fatalities is to make motorists more aware of the potentially lethal weapon they're driving every day."

Appendix A: Questionnaire

Survey of Texas Pedestrian and Bicycle Safety Stakeholders

This survey is being conducted by the Texas A&M Transportation Institute (TTI) for the Texas Department of Transportation (TxDOT) to understand how stakeholders that work in the pedestrian and bicycle safety arena view the issue of pedestrian and bicycle safety and Texans' knowledge of pedestrian and bicycle safety laws.

1. What agency or organization do you represent?
 - a. Fill-in _____

2. What geographic area (e.g., neighborhood, city, county, region, statewide, etc.) does your work cover?
 - a. Fill-in _____

3. What is your role in terms of pedestrian and bicycle safety? (Select all that apply)
 - a. Education/outreach to the public
 - b. Education of stakeholders (e.g., law enforcement, public officials, media, etc.)
 - c. Advocacy
 - d. Planning
 - e. Operations
 - f. Research
 - g. Law Enforcement
 - h. Other (Fill in) _____

4. Give each of the following a level of concern score from 1 to 5 (1 being a low level of concern, 5 being a high level of concern) for pedestrians and bicyclists in Texas?
 - a. Roads not built for all users
 - b. Fast growing cities where rural areas are being urbanized quickly and the infrastructure has not kept up
 - c. Poor road/sidewalk conditions
 - d. Car-centric culture
 - e. People experiencing homelessness
 - f. Driver lack of awareness of pedestrians and bicyclists

5. Please rank these **pedestrian** behaviors in terms of your level of concern for safety.
 - a. Crossing the road at a location other than a crosswalk or intersection
 - b. Not following pedestrian signals
 - c. Walking in the roadway when a sidewalk is available
 - d. Distraction while walking
 - e. Pedestrian impairment (e.g., alcohol or drugs)
 - f. Walking along a high-speed roadway where no sidewalks are present

6. Please rank these **bicyclist** behaviors in terms of your level of concern for safety.
 - a. Not using a bike light at night
 - b. Not wearing a helmet
 - c. Riding against traffic in the road
 - d. Bicyclist distraction
 - e. Bicyclist impairment (e.g., alcohol or drugs)
 - f. Riding on a high-speed roadway where no shoulder or bicycle lanes are present
 - g. Bicyclist not following stop signs or traffic signals

7. Please rank these **driver** behaviors around *pedestrians* in terms of your level of concern for safety.
 - a. Not yielding to a pedestrian where required
 - b. Driver distraction
 - c. Driver impairment (e.g., alcohol or drugs)
 - d. Driver lack of awareness of pedestrians
 - e. Driver not following stop signs or traffic signals
 - f. Other (fill in) _____

8. Please rank these **driver** behaviors around *bicyclists* in terms of your level of concern for safety.
 - a. Not allowing at least 3 feet when passing a bicyclist (6 feet in a commercial vehicle)
 - b. Driver distraction
 - c. Driver impairment (e.g., alcohol or drugs)
 - d. Driver lack of awareness of bicyclists
 - e. Driver not following stop signs or traffic signals
 - f. Driver passing bicyclist at unsafe speed
 - g. Other (fill in) _____

9. What do you think is the current level of knowledge of pedestrian and bicycle safety laws among the general public in your community? (Select One)
 - a. Extremely familiar
 - b. Very familiar
 - c. Moderately familiar
 - d. Slightly familiar
 - e. Not familiar at all

10. What are some reasons the general public in your community may be unfamiliar with pedestrian and bicycle laws? (Select all that apply)
 - a. Not sure where to access
 - b. No interest
 - c. Subject not covered in driver's education curriculum
 - d. Don't see pedestrians or bicyclists as a concern

- e. Didn't learn laws as a child
 - f. Don't see information about laws on signs, ads or other places
 - g. Other (Fill in) _____
11. What types of messaging would be more likely to grab your attention? (Select all that apply)
- a. Animation
 - b. Different tones/music
 - c. Straightforward informational style
 - d. Humor
 - e. Shocking/Graphic/Gory
 - f. Other (fill in) _____
12. What strategies or approaches do you recommend to reach the public? (Select all that apply)
- a. Reaching out to companies with large vehicle fleets
 - b. Town hall presentations
 - c. Reaching out to diverse groups (e.g., race/ethnicity, age, etc.)
 - d. School-based programs
 - e. Outreach through existing channels (e.g., police departments, utility companies)
 - f. Educational pamphlets
 - g. Putting signs on transit (bus, train, stops, stations, etc.)
 - h. Ads on radio or TV
 - i. Other (fill in) _____
13. Which of the following digital methods of making pedestrian and bicycle safety laws accessible do you see as effective? (Select all that apply)
- a. City or state transportation agency website
 - b. Advocacy organization website
 - c. Social media postings
 - d. Blogs/Vlogs
 - e. YouTube/Vimeo videos
 - f. Other (fill in) _____
14. Why do you think it may be challenging to reach the public with traffic safety messaging on pedestrian and bicycle safety laws? (Select all that apply)
- a. Language barriers
 - b. Lack of access to internet
 - c. People opposed to changes
 - d. Cultural differences (i.e., not familiar with U.S. traffic regulations)
 - e. Different interpretations of the laws
 - f. Walking and biking are politicized
 - g. Other (fill in) _____

15. Please add any additional thoughts you have regarding outreach and education on pedestrian and bicycle laws.