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Education on Proper Use Of Seat Belts on School Buses

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16. Abstract The National Highway Traffic Safety Administration sponsored this project to understand how school districts that purchase large school buses with seat belts can maximize their effectiveness and benefit by improving proper usage. The project obtained observational data related to the impact of seat belts on student behavior on buses and on bus driver distraction. This report synthesizes anecdotal data collected from school districts across the United States. Through interviews, surveys, and material collected, the project team examined the common components of the seat belt use policies, such as how policies were carried out by school bus drivers, and consequences for non-compliance, to better understand the factors that can influence seat belt use. In general, the most important factors in successful planning seem to be training, education and enforcement. Most interview and survey respondents said they observed seat belts on school buses contributed to calmer and less distracted environments for school bus drivers. While the opinions about seat belts often varied from driver to driver, the project team heard from drivers and supervisors that those drivers who invested more time and effort into seat belts (e.g., by maintaining and enforcing a consistent seat belt use policy) derived the most benefit.			
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Executive Summary

The National Highway Traffic Safety Administration sponsored this project to understand the impact of seat belts use on student behavior on buses and on bus driver distraction. This report is based on self-reported findings from school bus drivers and transportation directors and synthesizes anecdotal information collected from school districts across the United States.

NHTSA's current policy guidance is as follows: "NHTSA recommends that States and school districts considering seat belts on large school buses carefully consider impacts on school transportation safety overall. Since school buses are already very safe, the added benefit of seat belts on large school buses is small relative to other potential safety measures such as improvements in the safety of child pedestrians as they enter or exit the bus. Seat belts on large school buses could provide an overall safety benefit if their installation does not result in trade-offs with other child safety initiatives and if the added cost does not result in a reduction in the availability of buses."

This project did not look at the factors that States and school districts weighed prior to the decision to implementing seat belt on large school buses. Instead, it looked at ways that States and local school districts can maximize the benefits of that decision. While it is well known that proper seat belt use is necessary to maximize the occupant protection benefits of seat belts, less is known about how proper seat belt usage and seat belt policies impact driver distraction. This project looked at various in school bus use policies and how differences between policies impacted proper seat belt usage. The study also looked at how the policies and proper seat belt usage impacted drivers and student behavior.

The project was performed in the following phases.

1. Identify school districts that have implemented, or are planning to implement, seat belts on school buses, including districts that have not implemented belts on buses.
2. Gather information (via interviews, discussions and a survey) from school districts regarding their seat belt program and the observed impacts of seat belts on bus drivers and student behavior.
3. Analyze the anecdotal data to identify trends, successful strategies, and lessons learned.

When identifying school districts (Phase 1), the project team intentionally sought out school districts that were in different phases of considering or implementing seat belts. Further, the team also sought to involve different categories of implementation, including whether seat belts were required by State law and whether the seat belts were required to be used, either by State law or policy of the local school district.

After receiving initial responses from 384 people, a list of school districts was generated. This list was organized by districts representing a cross-section of geography, implementation experience and legal environments. Districts were prioritized randomly within those groups of similar characteristics. The project team conducted interviews with representatives from 26 school districts in 12 States.

Next, the project team developed and conducted a web-based survey to gather information about self-reported reductions in bus driver distraction as related to student behavior and seat belt use to identify preliminary indicators of whether the use of seat belts has influenced disruptive

behavior. The participants in the bus driver survey included 215 bus drivers in 12 States (Arkansas, California, Delaware, Florida, Illinois, Indiana, Minnesota, New Jersey, North Carolina, North Dakota, New York, and Texas).

The outcome of the discussions, interviews and survey are presented in this report. The majority of interview and survey respondents in this sample communicated that seat belts on school buses contributed to calmer and less distracted environments for school bus drivers. While the opinions about seat belts often varied from driver to driver, the project team heard from drivers and supervisors that those drivers who invested more time and effort into seat belts (e.g., by maintaining and enforcing a consistent policy) derived the most benefit of calmer and less distracted environments.

The improved environment was seen most dramatically for younger grades, as respondents said these students were more likely to use the seat belts. Although most bus drivers expressed that their stress levels decreased because the students are calmer or safer, some drivers expressed that their stress level increased because they now have to monitor the students and constantly remind them to wear their seat belts. With a required use policy, bus driver survey respondents observed that even when students were not wearing the belts, they often did not move around the bus because they did not want to advertise their non-compliance.

Through interviews, surveys, and material collected, the project team examined the common components of the policies, such as how a policy was carried out by school bus drivers and consequences for non-compliance, to better understand the factors that can influence seat belt use. Overall, the policy details, or specifications that had the most impact on use appeared to be the clarity and strength of the:

- Policy purpose,
- Seat belt implementation requirements,
- Passenger use requirements, and
- Enforcement procedures.

In general, the most important factors in successful policy planning seem to be:

- Training and education procedures, and
- Enforcement of passenger use requirements.

While this study outlined a review of school bus seat belt policy, school decision makers can still benefit from further research. Many district leaders shared anecdotal evidence that pointed to the value of school bus seat belt policies but were not able to provide more concrete evidence. There are opportunities to further evaluate the relationship between policy components, such as enforcement and training, with actual outcomes, such as compliance and distraction levels.

Introduction

Background and Motivation

Each day in the United States 25 million students are transported in school buses (Consumer Reports, 2019). NHTSA considers school buses one of the safest forms of transportation in the United States (Hinch et al., 2002). U.S. students are 70 times more likely to get to school safely if they take the school bus instead of traveling by car (ASBC, 2020). The fatality rate for school buses is 0.2 fatalities per 100 million vehicle miles traveled (VMT) compared to a much higher 0.91 fatalities per 100 million VMT for cars.

The impressive safety record of school buses is the result of several distinct built-in vehicle features. Compartmentalization is one such feature and became a requirement for newly manufactured school buses in the 1970s. This protective method consists of strong, closely spaced seats that have energy-absorbing seat backs. In addition to a school bus's larger and heavier size, other safety standards such as joint integrity of the bus body panels and fuel tank integrity requirements also contribute to them being the safest vehicles on the road (Hinch et al., 2002).

A recent paper by Donoughe and Katz (2015) analyzed school bus crashes over a 10-year period using Fatality Analysis Reporting System (FARS) data. Surprisingly, while total fatalities had decreased, the same was not true for school-bus-related crashes. In fact, when normalizing the data with respect to the percentage of school-bus-related crashes to the total number of crashes nationwide, there was a slight upward trend. Over the course of this 10-year period, there were 5,948 people involved in fatal school-bus-related crashes, 1,350 of whom incurred fatal injuries. Of the 1,350 fatal injuries that occurred, 6.2 percent were school bus occupants.

Historically, concerns about installing seat belts include the existing safety features of school buses compared to other vehicles, the need for drivers or aides to enforce wearing seat belts, the additional cost, and other factors. However, there are unique opportunities for other types of benefits as well. The age of the passengers, the energy of the passengers, and the supervision ratio can create a bus environment where noise levels are high and drivers, despite their training and experience, can become distracted.

Project Objectives

The current project sought to examine different school bus seat-belt use policies and how differences in those policies impact seat-belt use rates. The study also obtained observational data related to the impact of seat belts on the level of subjective school bus driver distraction and whether seat belts aid in managing behavior on school buses. This report synthesizes anecdotal information collected from school districts across the country.

Research Approach

The research project was performed in the following phases.

1. Identify school districts that have implemented, or are planning to implement, seat belts on school buses, including districts that have not implemented belts on buses.
2. Gather information via interviews, discussions and surveys from school districts regarding their seat belt programs and the impacts of seat belts on bus drivers and student behavior.
3. Analyze the anecdotal data to identify trends, successful strategies, and lessons learned.

During the first phase, the project team identified school districts using seat belts on their school buses. To identify school districts, the project team used its collective professional knowledge and polled stakeholder organizations for their input. Districts across the country were asked to respond if they were interested in sharing their perspectives and experience.

After a list of school districts was generated, the list was organized by districts representing a cross-section of geography, implementation experience and legal environments. Districts were prioritized randomly within those groups of similar characteristics. Members of the project team performed telephone interviews with school district personnel to learn about their programs. While the interviews were structured to be fluid, conversational dialogues, the project team used an Interview Guide to maintain consistency in the topics covered during the interviews and the questions asked. All interview data was recorded in a spreadsheet to assist with the analysis phase.

In addition, interview participants were asked if they would be willing to distribute an online survey to school bus drivers in their organizations that have experience driving school buses with seat belts. The online survey was made available not only to drivers from these districts, but also from districts whose transportation directors and supervisors learned of the research initiative at national conferences.

All information collected during the interviews and via the online school bus driver surveys was analyzed to determine recurring trends in, policies, student behavior, barriers, and lessons learned.

Figure 1 summarizes the research approach used for this project.

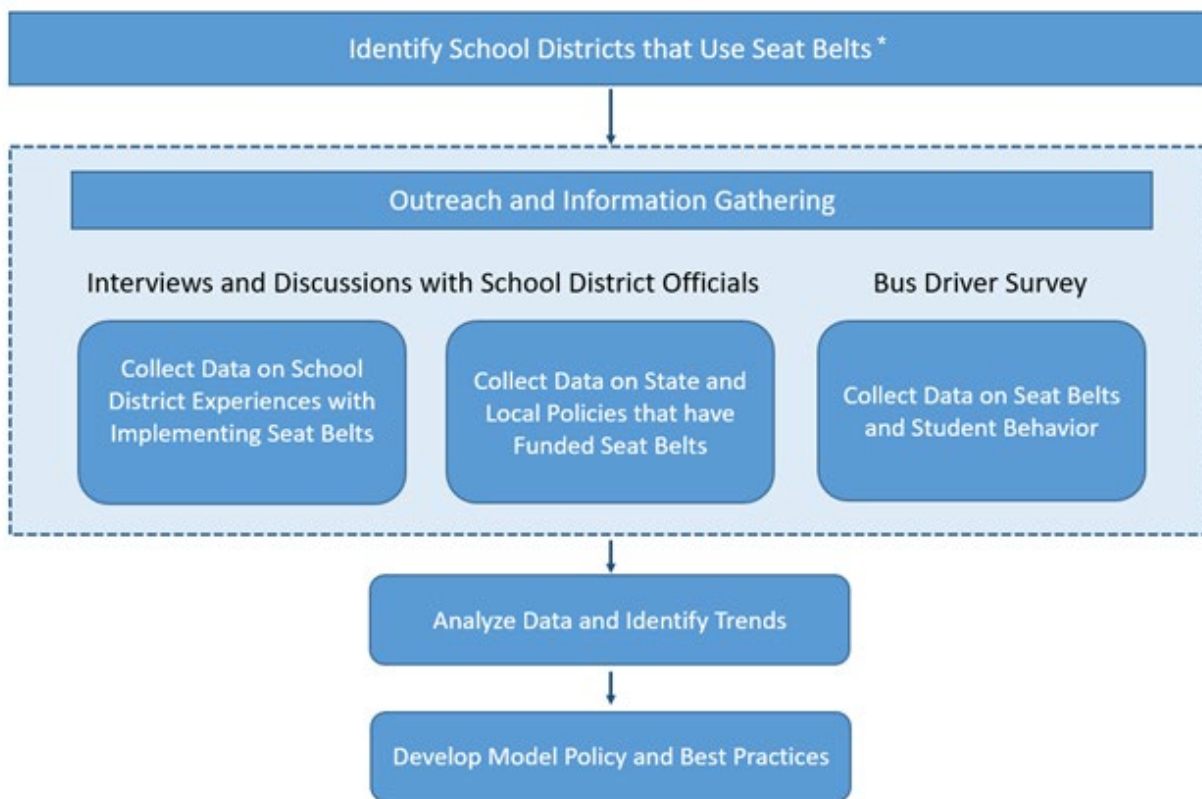


Figure 1. Research Approach

Terminology

Seat belts

This study includes the experiences of school districts with both 2-point lap belts and 3-point lap/shoulder belts – collectively, “seat belts” or “safety belts.” In many cases it will be important to distinguish these two distinct technologies and the project team has tried to be specific as applicable. It is important to note that the team encountered no school districts undertaking new initiatives to implement lap belts on school buses. In general, lap belts are installed on large school buses when required by State law (and often for transporting children with special needs). New State laws and district initiatives are almost exclusively focused on lap/shoulder belts. It should be noted that many in the industry use the term “2-point belts” interchangeably with “lap belts” and “3-point belts” with “lap/shoulder belts.”

School Bus

Throughout the report, the terms “bus” and “school bus” are used. For purposes of this analysis, these terms refer primarily to large school buses, more than 10,000 pounds GVWR. School buses that weigh less than 10,000 pounds are required to be equipped with 3-point lap/shoulder belts and are often used to transport students with special needs. Use of the belts in these vehicles is more commonplace than in large school buses and the requirement to be equipped with belts is on a national scale. This research project focused principally on large school buses.

School District

Throughout the report the term “school district” is used. In many cases, school districts do not own and operate their own school buses. Rather, they partner with school bus contractors who

provide school transportation services and whose buses must conform to State requirements. The decision to go above and beyond State requirements, as related to the implementation of seat belts, usually lie with the districts and is specified in agreements with the contractors. In referencing “school district” in this report, it refers to districts that own and operate their own buses or to districts that contract with school bus companies to provide buses and drivers under terms of written agreements.

Information Gathering and Data Collection

Obtain OMB Approval

NHTSA and the project team requested and received Office of Management and Budget (OMB) approval to conduct informal interviews with State directors of pupil transportation and local school district professionals. These discussions were held to identify policy components that influence 3-point lap/shoulder seat belt use. The project collected information about self-reported bus driver distraction as related to student behavior and seat belt use with the goal of determining whether seat belts, when used properly, influence student misbehavior and/or bus driver distraction. NHTSA and the project team therefore requested and received OMB approval to conduct a web-based survey to gather subjective feedback from bus drivers to investigate the impact of seat belts on student behavior. The OMB Control Number for this information collection is 2127-0737, expiration date June 30, 2022.

Identify School Districts

Objective

The objective of this task was to identify school districts that have seat belt use policies that could help NHTSA understand the impact of these different policies on proper seat belt use, drivers, and student behavior. The school districts identified in this task were entered in a pool of potential participants in subsequent project tasks including interviews, discussions, and a bus driver survey.

Method

The project team sought out school districts that were in different stages of implementation of seat belts and that also varied in State requirements for seat belts on school buses. There are several categories that distinguish school districts regarding seat belt use on school buses. The most obvious is whether the installation of seat belts on new school buses is required by State law. At the beginning of this project, in 2016, there were four States with unfunded mandates requiring seat belts on school buses. Long-standing laws in Florida, New York, and New Jersey require seat belts on new, large school buses. California has specifically required 3-point lap/shoulder belts on all new school buses since 2005. During this project the landscape changed and now Nevada, Iowa, and Texas also require belts on buses, although Texas has an opt-out provision.

Another distinguishing category is whether belts are required to be used, either by State law or by policies of local school districts. New York does not have a required use policy at the State level, but New Jersey, Florida, and California do. Further, while seat belts are not required for school buses in Maine and Arkansas, State law requires the belts be worn in buses so equipped.

Participating school districts were classified using the following categories:

- Districts that are required by State law to install seat belts,

- Districts in States where use by student passengers is required by law,
- Districts that develop their own seat belt implementation and use policies, and
- Districts that are undergoing pilot programs to consider seat belt use.

To identify school districts that have implemented, or have considered implementing, seat belts on school buses, the project team reached out to NHTSA’s industry partners. A letter was sent to each member of the American School Bus Council (ASBC) to introduce the project and request assistance. ASBC is comprised of the three major manufacturers of large school buses and the three school transportation trade associations: The National School Transportation Association (NSTA), the National Association for Pupil Transportation (NAPT), and the National Association of State Directors of Pupil Transportation Services (NASDPTS). The project team provided background on the project and a means for individual school districts to express their interest in providing their perspectives on the implementation of belts on buses – regardless of whether they have any large school buses with seat belts in service.

This generated a significant level of interest. A total of 384 respondents provided initial information in response to the call for interest. Responses came from 27 States; however, 332 of the 384 respondents came from school districts in 9 States: California, Florida, Indiana, Kentucky, Maine, Minnesota, North Carolina, North Dakota, and Texas. See Appendix A for a discussion of State laws affecting seat belts on school buses.

States were placed into one of four categories, or quadrants, as shown in Table 1. These categories were based on whether the State had a law requiring newly purchased buses to have seat belts and whether it had a law to require any seat belts to be used.

Table 1. School District Categories (Quadrants) Used for Interview Prioritization

<i>School District Categories</i>		Seat Belts Required on New, Large School Buses by State Law	
		YES	NO
State Level Required Use Legislation	YES	<u>Quadrant 1</u> FL, NJ	<u>Quadrant 2</u> ME, AR
	NO	<u>Quadrant 3</u> CA,** NY, NV,* IA,* TX*	<u>Quadrant 4</u> All Others

*The State-level requirements for belts on buses in Texas, Nevada, and Iowa came after the data collection for this project.

** While California’s law does not address required use, there are State codes of regulations stating that student passengers in school buses equipped with passenger restraint systems shall use those systems. California could have been categorized in Quadrant 1, but in keeping with the use of State law, was assigned to Quadrant 3.

The project goal was to have discussions with approximately 24 districts, with at least one from each of the four quadrants that had implemented belts, and at least one from each quadrant that had not implemented seat belts on buses, with the obvious exception of Quadrant 1 where there

are no districts that have not implemented belts. Note that because the State-level requirement in Nevada, Iowa, and Texas was new, districts from those States were considered part of Quadrant 3 whether or not they had yet implemented seat belts.

After initial contact was made to introduce the project and request assistance, school district officials provided the project team with basic background information about the status of seat belt implementation. Several common topics and perceptions were repeated in free-form comments provided by the districts. In prioritizing districts to speak with in the interviews, the project team tried to include school districts that could elaborate on these perspectives.

Interviews and Discussions With School District Officials

Objective

The objective of this task was to conduct discussions and informal qualitative interviews with school district representatives. In having these discussions, the project team gathered information on the challenges implementing seat belts on school buses, as well as methods used to overcome those challenges.

Method

The project team worked to contact districts with varieties of perspectives within each quadrant, as shown in **Table 1**. In most cases, multiple districts comprised a quadrant with the characteristics of State law, required use, and experience with implementation. Within quadrants, districts with similar characteristics were sequenced in a random order, the first being categorized as primary contact and the others sequenced as alternate selections based on the number of contacts needed in each quadrant. The team worked with the list of districts that expressed interest in participating in the project, the availability of people and the quadrant categories described above to identify specific people with whom to conduct interviews. The primary contacts from districts consisted of transportation directors, superintendents, or supervisors.

A project team member contacted the primary contact person identified by the district when providing notification that it would share its experiences. A telephone call was scheduled, and an interview was held with each person regarding experience or perceptions regarding the implementation of seat belts on school buses. In some instances, the respondent forwarded the team on to another person at the district who was better equipped to answer the questions. In other instances, more than one person from a district was interviewed. In such cases, all responses from a given district were combined for the purpose of this report. When primary districts or people were not available to participate, the team moved to alternates in the same quadrant category.

District representatives were asked to discuss student compliance, any required use guidance or policy, and reactions/interactions among stakeholders. They were also invited to share any implementation documents with the project team. Finally, participants were asked if they would make an online survey available to bus drivers who are driving buses equipped with seat belts.

The project team conducted interviews with representatives from 26 school districts across the United States, representing each of the categories described previously. A copy of the interview guide can be found in Appendix B.

Bus Driver Survey/Seat Belts and Student Behavior

Objective

The objective of this task was to acquire information about bus driver distraction as related to student behavior and seat belt use. Although some of this information may have been obtained through the interviews and discussions with school district officials, bus drivers are able to provide direct feedback on their experiences related to seat belt use and student behavior. Therefore, this task involved developing and administering a bus driver survey to get a sense of whether (1) seat belts may deter student misbehavior when used properly, and (2) whether school bus drivers report feeling less distracted by student misbehavior when seat belts are used. This anecdotal information is helpful in identifying promising strategies used to encourage compliance by students. NHTSA will use this preliminary information to determine if future research may be warranted to determine whether seat belts deter student misbehavior and whether bus drivers are less distracted as a result.

Method

The project team developed and conducted a web-based survey to gather information about self-reported reductions in bus driver distraction related to student behavior and seat belt use to identify preliminary indicators of whether the use of seat belts has influenced disruptive behavior.

The survey included questions that were useful in providing a full picture of how seat belts may have influenced student behavior on buses. This included questions regarding the bus driver (e.g. the degree to which their perceived levels of stress and distraction have changed, if at all), the students (if/how their behavior has changed, details on the type of behavior, etc.), as well as any important details such as the type of behavior change or any unexpected effects. The questions were structured to gather information not only on whether bus drivers feel that seat belts deter student misbehavior, but also to provide insight into how much of a change there is. Appendix C provides the questions that were included in the Bus Driver Survey.

The survey was developed and administered using Google Forms and a shareable link was generated for online survey distribution. As soon as respondents clicked the link to take the bus driver survey, they were taken to an Informed Consent page that described the purpose of the survey, how the information would be used, and a description of the measures taken to ensure participant confidentiality.

Respondents were told that by taking the survey, they were consenting to be a part of the study. They were then asked to begin the survey if they were comfortable with the information that was provided to them. Respondents were also given the opportunity to request a paper copy of the survey. The survey was designed to take no longer than 15 minutes to complete.

The bus driver survey was shared with school districts that had already participated in the interviews, as well as through attendees at different school transportation trade association meetings and conferences.

Having already identified a variety of school districts during the interview phase, the project team determined that these school districts would also be helpful in identifying differences in bus driver perspectives depending on the type of seat belt use policy features and experiences of their school district. During the interviews and discussions with school district officials, the project team explained the purpose of the bus driver survey and asked participating district representatives if they would be willing to share the survey with their bus drivers. If a school

district agreed to share the survey, the project team provided the survey link via email to the existing district contact within that school district and requested that they distribute the survey to the appropriate bus drivers within their school district.

NHTSA and the project team also provided information regarding the project and bus driver survey at the NASDPTS 2019 Annual Conference and the NAPT 2019 Annual Conference. If people in attendance were interested in sharing the bus driver survey with drivers in their school districts they were also given the link to the survey.

Results and Findings

Interview Findings

In 2018 the project team conducted interviews with 26 stakeholders from 12 States. Twenty-one of the 26 districts had direct experience using seat belts on buses, ranging from operating a few buses in the previous year to decades of experience. Table 2 shows the districts in States of different policy types, including their status regarding implementation of seat belts on buses.

Table 2. School Districts That Participated in Interviews, by Quadrant.

<i>School Districts for Interviews</i> <i>Total = 26</i>		Seat Belts Required on New, Large School Buses by State Law	
		YES	NO
State Level Required Use Legislation	YES	6 Implemented	1 Implemented 1 Not Implemented
	NO	8 Implemented 1 Not Implemented	6 Implemented 3 Not Implemented

The States of the districts that participated in the interviews are shown in Table 3.

Table 3. States of the School Districts That Participated in Interviews

State	Number of Interviews
Arkansas	1
California	3
Florida	4
Indiana	2
Maryland	1
Maine	1
Michigan	1
North Carolina	3
North Dakota	2
New Jersey	2
New York	2
Texas	4
TOTAL	26

District Policy

As indicated in Table 2, 15 (nearly 60%) districts interviewed indicated that they have State-level installation policies (laws), generally applying only to buses purchased after certain dates. None of those interviewed said their policies included a requirement for retrofitting buses. Twenty-one districts indicated that they had experience with seat belts; this included districts both in States that had and States that did not have State-level installation policies. Nine districts reported they had required use policies (as opposed to encouraged use policies) for buses with seat belts installed, while 6 said they did not. The size of the fleets reported by the respondents varied from 8 to 1,350 buses, with a median of 94 buses. Within these fleets, the number of school buses that districts equipped with seat belts ranged from 2 to 1,087 buses, with a median of 51 buses equipped. Ten districts equipped all buses in their fleets with seat belts. All seat-belt-equipped buses were new purchases as opposed to retrofits.

Champions

To have a successful seat belt implementation program, different offices in the district needed to come together, including the transportation department, superintendent's office, and the school board. Only a few respondents said there was a clear leader who championed for a school bus seat belt use policy, although one said that an incoming superintendent made it a priority, which helped smooth the process. Six districts were able to identify a specific person who they said led the effort for a seat belt use policy, but even so they were often part of a collective, generally

composed of transportation staff in discussion with the school board and the superintendent's office.

Once a district began the process of implementing seat belts on school buses, respondents felt it was still important to have buy-in from these various departments in the district. Several respondents noted that if the board and the superintendent are sharing their vision and presenting clear expectations, then that makes it easier for school administrators and the bus drivers themselves to get the students on-board. This is also important for those not directly involved with pupil transportation. More than one respondent said that anyone answering calls from the public might need to clarify the seat belt use policy or explain why some buses did not have them installed.

Policy – Implementation and Enforcement

Fifteen districts said they had simple, straightforward policies regarding seat belt use. In most cases this policy was a variant of "Students must wear seat belts when seat belts are present" and was often included in the student's Code of Conduct Handbook or a similar document. Four other districts said they did not have any policy and 2 districts were developing one. Most developed these policies in-house, although several respondents said they received guidance material from the State to help aid the seat belt use policy development process. Some districts had concerns about creating policies that might be inherently difficult to enforce. Generally, an official seat belt use policy was considered necessary if bus drivers were going to be able to enforce use.

Every district with a seat belt use policy had procedures to enforce seat belt use with verbal warnings and written referrals, at a minimum. However, it was not always clear whether it was merely a policy on record versus a policy that was integrated into standard operating procedures and regularly enforced. Many districts discussed how their drivers are instructed to remind students to buckle their seat belts, and to show them how to do so, particularly at the start of the school year. Most do not require drivers to check on the compliance of all students while on-board, as they indicated that they are often picking up 40 to 50 students or more during a given route. Buses carrying special needs students were an exception due to more stringent transportation requirements. However, drivers were encouraged to do spot checks and, depending upon the driver and the district, students not wearing seat belts are subject to a discipline referral, which would be given to the student's school administration as with other bus referrals.

One respondent stated in this way:

"Enforcement for seat belts is done the same as other bus rules. Drivers remind students to wear their seat belts and give verbal reminders if the students are not wearing the seat belts. If students are not complying, the bus driver can provide a written referral that can result in loss of bus privileges. [As far as the interviewee knows,] no one has ever been suspended from the bus due to noncompliance with the seat belts."

Some respondents relayed concerns from bus drivers who felt that school administrators were not always as supportive of the drivers as they need to be. For instance, some drivers had ceased giving written referrals to students because when they were passed on to the pupil transportation liaison at the school (generally an assistant principal), nothing ever came of it. This concern was not solely limited to seat belt use policy, but it was felt that for an enforcement policy to work successfully, there needed to be consequences of some sort.

Many respondents had relatively new seat belt use policies and were not in a position to share information on the outcomes of the seat belts at the time of the interviews. Others indicated that the rate of seat belt use was difficult to measure accurately, although they indicated that it was easier to estimate general compliance. For most, “compliance” was defined as how much more often students were sitting in their seats compared to buses without belts, or whether they were buckled while on the bus. Most respondents said that compliance rates were highest for elementary children, lower for middle school students, and lowest for high school students. However, several respondents indicated that older students were more likely to use the seat belts if they had been using them since elementary school, as the behavior then became normal.

Overall, most respondents said that the individual driver often had the largest impact on whether the students used the seat belts. Drivers who instituted, explained, and demonstrated clear on-board use policy experienced higher compliance rates (i.e., students sitting in their seats, even if seat belt use could not be verified) and reported better student behavior on the buses compared to the same on buses without belts. Some respondents, however, said that drivers felt that checking seat belts was too burdensome with all the other tasks to be completed. However, many indicated that some of these drivers became advocates after more experience with the benefits of driving a school bus with seat belts.

Training and Education

Three districts spoke about training the bus drivers specifically about the seat belts and the seat belt use policy. Topics included how to explain the use of the seat belts, how to maintain them, how to do spot checks, ways that seat belts can help with discipline (e.g., students who buckle up can choose their own seats), as well as what to do in the case of an emergency (e.g., how to use belt cutters). These districts told the project team when the supervisors were on-board with the policy, they did a better job of training the bus drivers.

In general, the respondents spoke about the importance of training drivers who have a variety of levels of experience and comfort levels. They said it is also important that the bus drivers know what their responsibilities are, given their many other responsibilities. One important issue with training that a few respondents reported was the difficulty of retaining bus drivers, as well as absenteeism. Many bus dispatchers are having to employ substitute drivers on many of their routes each day; these might be regular substitutes but can often include school administrators or even the transportation directors themselves in smaller districts. These substitute drivers may not be trained on the district’s seat belt policy in general and are unlikely to be aware of any specific procedures that the regular driver may employ to increase compliance amongst the riders. The respondents interviewed felt that consistency was key and that was often difficult to maintain when the drivers themselves were inconsistent on specific routes.

To support the driver training efforts, some respondents explained the value of training people in charge of dispatching, training, or supervising bus drivers. They expressed that these supervisors need to understand the policy and its importance, as they can help drivers learn how to best use seat belts. Furthermore, they said that dispatchers need to try to maintain drivers on the same routes as much as possible, to keep procedures consistent for the riders.

Additionally, several respondents discussed the importance of communicating the policy and expectations to parents/guardians and students. The respondents discussed how they send explanatory material home to parents that include information about the seat belts. In some cases, the material was very visual in nature to appeal to the parents/guardians. Some districts

demonstrate the seat belts at open houses at the beginning of the school year to increase both parent/guardian and student understanding. Often, these sessions included presentations as well.

On a similar note, some interviewees said they showed riders how to use the seat belts on the bus in the opening weeks of school, especially for young students. They also instructed students with presentations and visual cards that showed how to properly buckle into a seat, setting the expectation for the behavior expected. At the time of the interviews, no respondents indicated that they had measured the impact of training and education efforts through an evaluation.

Bus Driver Survey Results

The Bus Driver Survey results included observational and anecdotal responses from 215 bus drivers from 50 school districts in 12 States (Arkansas, California, Delaware, Florida, Illinois, Indiana, Minnesota, New Jersey, North Carolina, North Dakota, New York, and Texas), though approximately 71 percent of the respondents were either from Indiana or New Jersey. The following sections provide a summary of the survey findings. A complete list of questions included in the Bus Driver Survey can be found in Appendix C.

Bus Driver Experience

Bus driver experience, based on the total number of years participants have driven school buses, ranged from 0 to 47 years, with a mean of 14 years spent driving a school bus. Because the survey asked bus drivers to report changes that they have noticed since they started driving buses with seat belts (changes in student behavior, changes in bus driver distraction, etc.), survey respondents were also asked to report whether they have ever driven buses not equipped with belts; 77 percent of respondents reported that they have also driven buses without seat belts. The 23 percent of respondents who had never driven buses without seat belts were not asked to answer any questions regarding changes since driving a bus with seat belts.

Among all participating drivers, more respondents reported having experience with 3-point lap/shoulder belts (72%) than with 2-point lap belts (28%). When asked how long they have driven buses with seat belts on it, 76 percent of respondents reported that they have driven buses with seat belts for longer than 6 months (10% reported 1 to 6 months of experience driving a bus with belts and 14% reported less than one month of experience driving buses with belts).

A complete summary of bus driver (respondent) details is shown in Table 4.

Table 4. Summary of Bus Driver (Survey Respondent) Details

Respondent's School District/Agency, by State											
IN	NJ	AR	CA	FL	TX	NC	MN	IL	DE	NY	ND
50.9%	20.6%	5.1%	4.7%	4.2%	3.7%	2.8%	2.3%	2.3%	1.9%	0.9%	0.5%
Grade Levels Transported During 2018-2019 School Year*											
Elementary School	Middle School or Junior High	High School or Pre-College	Other								
87.5%	78.7%	77.3%	7%								

Total Years Respondent Driven a School Bus											
0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	Not provided	
26%	20%	15%	12%	7%	7%	5%	1%	2%	0%	5%	
Ever Driven a School Bus Without Seat Belts											
Yes						No					
77%						23%					
How Long Respondent Has Driven a Bus With Seat Belts											
Occasionally (Sub, Rotational, <1 month)			Regularly (1-6 months)				Regularly (>6 months)				
14%			10%				76%				
Type of Seat Belt Technology Respondent Has Experience With**											
3-Point Lap/Shoulder Belt						2-Point Lap Belt					
72%						28%					

*Drivers were asked to indicate all grade levels that they transported.

**If respondents had driven buses with both type of belt, they were asked to select the type that corresponds to their current bus.

Bus Driver Responsibilities and Training

When asked “As a school bus driver in your district, what are your responsibilities regarding the use of seat belts on the school bus?” respondents were instructed to select all responsibilities that applied to them. As shown in Figure 2, the most common driver responsibilities are providing daily verbal reminders to students to wear their seat belts (78%) and providing initial instruction on belt use (e.g., at the beginning of the school year [66%]). Approximately half of bus drivers are also responsible for conducting walk-throughs before the bus leaves school in the afternoon (53%) or providing periodic instruction or training to the students reminding them how to use the belts (50%). Fewer bus drivers are responsible for enforcing seat belt use via issuing written citations (41%) or via verbal warnings (37%).

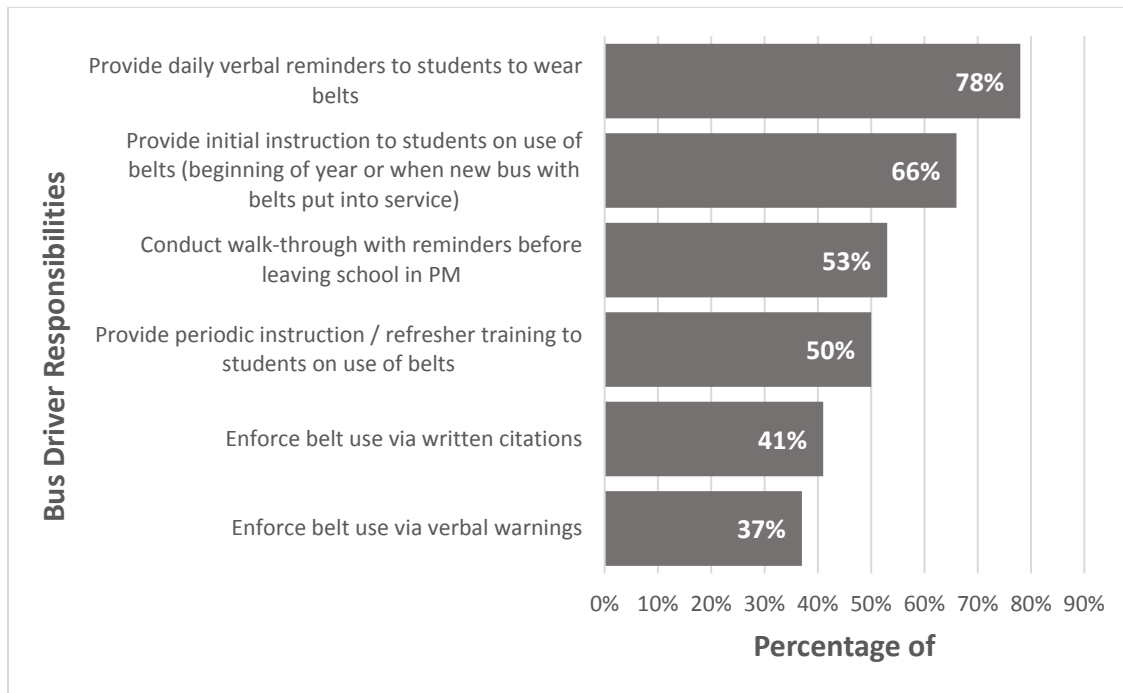


Figure 2. Bus driver responsibilities regarding the use of seat belts on school buses.

When asked how they first learned about what their responsibilities were regarding the seat belts on their buses, 47 percent of respondents reported that they learned about their responsibilities through classroom training or a safety meeting and 32 percent reported that a supervisor explained their responsibilities to them. The remaining respondents either learned about their responsibilities from another driver, through printed material (pamphlet, flyer, etc.) or through electronic communication (email, newsletter, etc.) provided by the district/agency. Only 54 percent of respondents reported receiving additional training or informational updates about school bus seat belts since they first began driving a bus with belts, and 58 percent reported that there has been some type of drills for the students to practice getting out of the seat belts during an emergency evacuation. Drivers did not provide clarification regarding whether these drills were unique to buses with seat belts or were a part of larger evacuation drills scheduled across schools or districts for all types of buses.

Seat Belt Use: Policy, Compliance and Enforcement

To understand how the use of seat belts on school buses may influence student behavior and driver distraction, it is important to understand more about seat belt use (i.e., compliance) as well as how belt use is typically and most effectively enforced.

Therefore, bus drivers were asked “*On average, how many students on your bus per trip wear their seat belts?*” (most, some, or none). Separate response options were provided by grade level (elementary, middle, high) and route time (morning, afternoon) for a total of up to six responses. The results, shown in Figure 3, suggest, based on bus driver observations, that younger students are more likely to use their seat belts than older students.

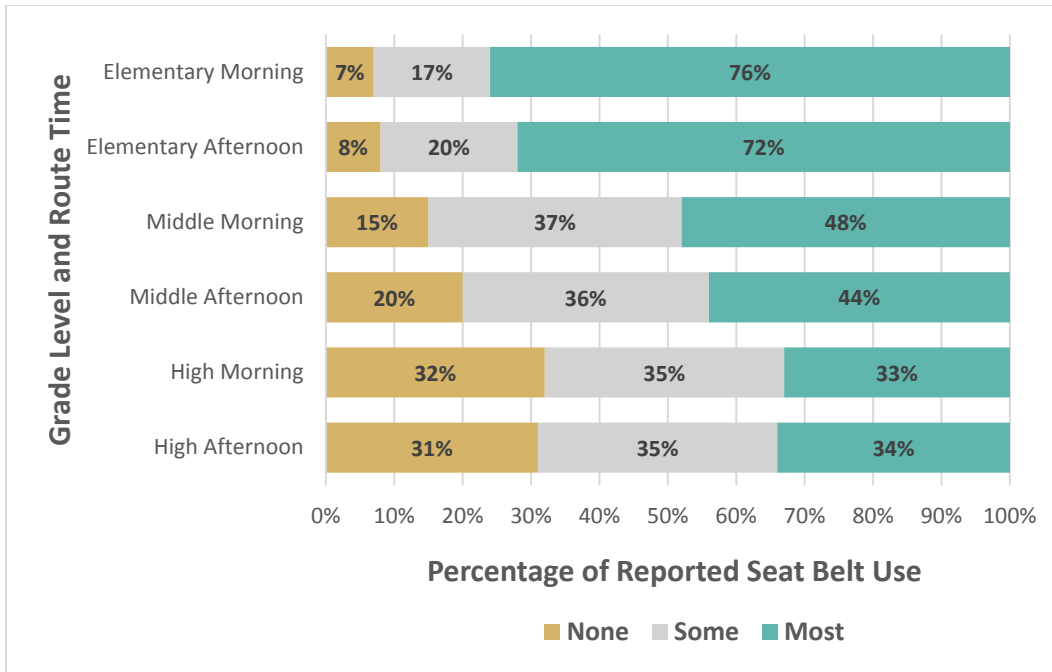


Figure 3. Seat belt use by grade level and route time

Survey respondents were asked to indicate whether their district or agency has a school bus seat belt required use policy – a policy requiring that students use the seat belts. Approximately 72 percent of respondents reported that their school districts did adopt policies that requires students to use seat belts if belts are present. Conversely, 15 percent reported that their school districts had not adopted required use policies, but rather that decisions regarding use are left to the individual driver and/or student choice. Only 8 percent of respondents did not know whether their agencies had a use policy, and the remaining 5 percent gave some other response (e.g., “only special needs buses use belts”).

In order to examine whether having a required-use policy in place influences belt use, responses to the question “On average, how many students on your bus per trip wear their seat belts?” (see Figure 3), were recoded to numerical values between 0 and 2 with 0 indicating a response of “none,” 1 indicating a response of “some,” and 2 indicating a response of “most.” A linear regression was used to estimate seat belt use as a function of a required use policy (yes, no, don’t know).

The findings indicated that reported belt use was significantly greater (mean=1.5) when drivers indicated that there is a required-use policy in place compared to when they indicated that there is no use policy in place (mean=0.87, $p<0.01$) or when bus drivers do not know if there is a use policy in place (mean=0.74, $p<0.01$). Having a required-use policy was associated with higher reported rates of seat belt use (see Figure 4). This is also the case for all combinations of grade levels (elementary, middle, high) and route times (morning, afternoon), as shown in Figure 5.

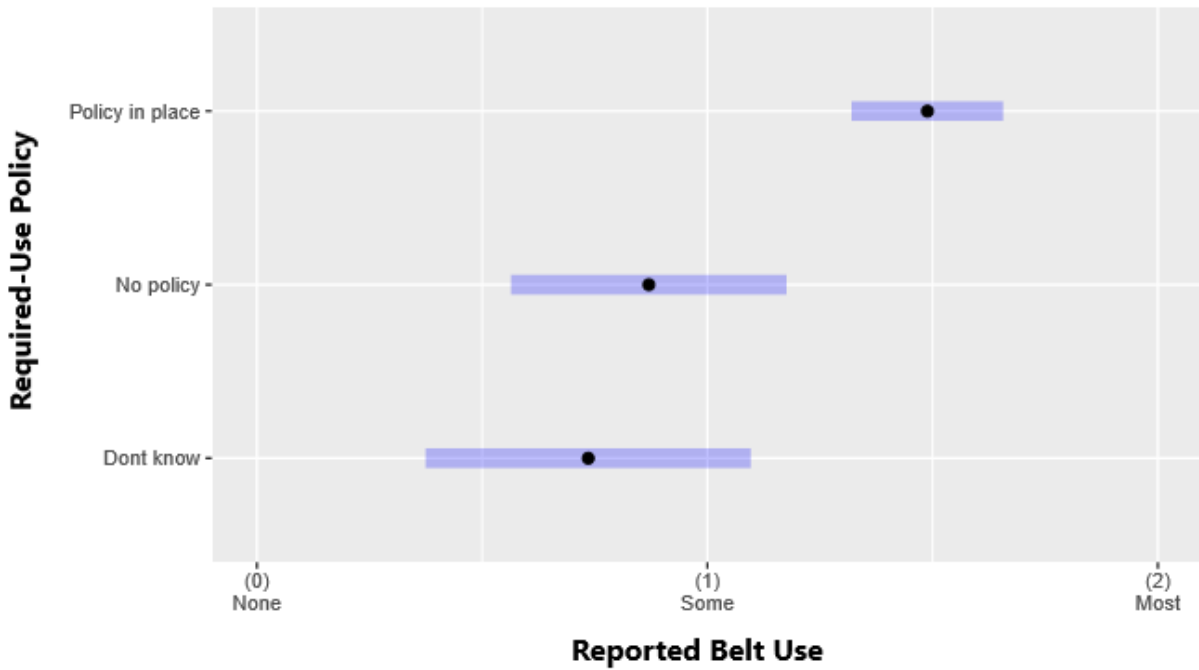


Figure 4. Effect of required-use policy on seat belt use

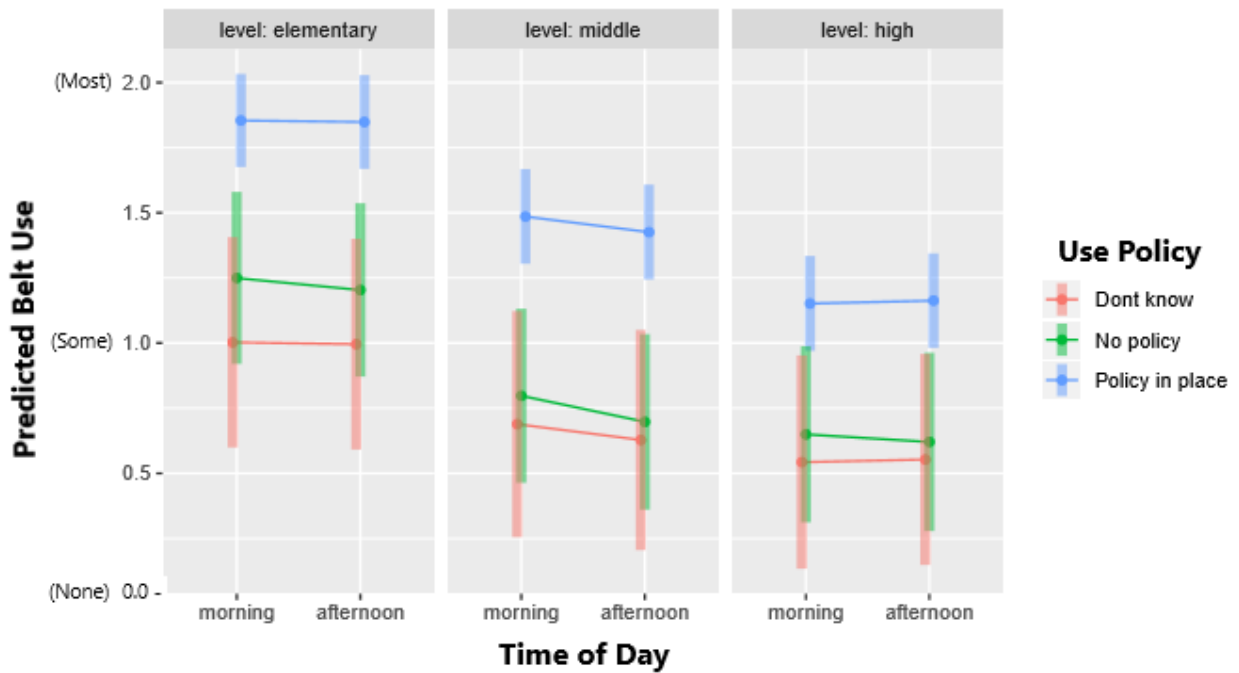


Figure 5. Effect of required-use policy on seat belt use by grade level and time of day

Linear regressions were performed to determine if the type or number of driving responsibilities assigned to a driver (shown in Figure 2) influenced reported seat belt use. There was no significant effect of number of driver responsibilities (count of total responsibilities, ranging

from 1 to 6) on reported seat belt use. When looking at the average number of driver responsibilities (mean=3.4), reported belt use tends to decrease with age, as shown in Figure 6. This is a similar trend to that shown in Figure 3.

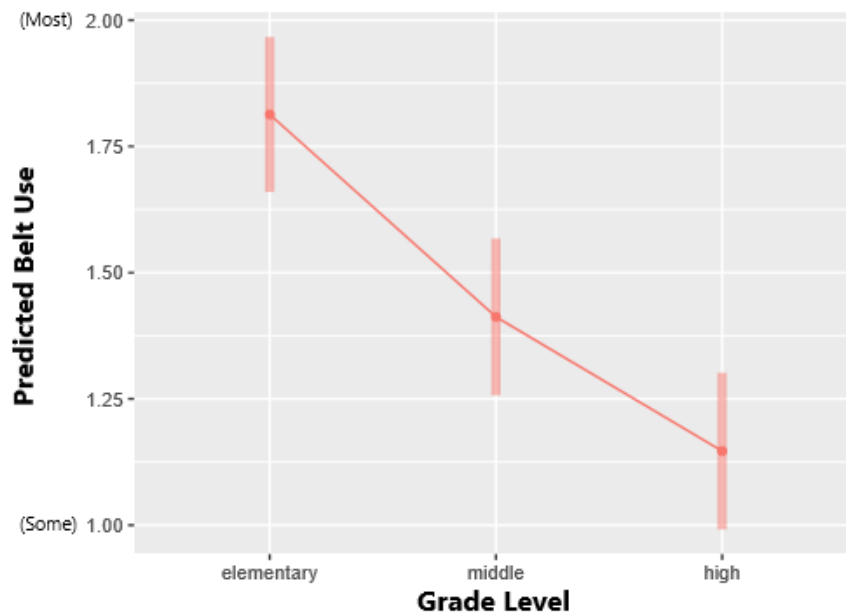


Figure 6. Predicted belt use by grade level for average count (mean=3.2) of driver responsibilities

Similarly, there was no significant effect of type of driver responsibility on reported belt use. This is an interesting finding, given that having a required-use policy *does* apparently influence reported belt use. However, it should be noted that, while neither amount nor type of driver responsibility have a statistically significant effect on reported belt use, it is possible that the way drivers’ responsibilities are being carried out may influence belt use. That is to say, two bus drivers may report that it is their responsibility to give daily reminders to students, but one may do a better job of that responsibility than the other (or one may not do it at all).

When asked if they require their students on *their* buses to wear their belts, the majority (64%) of respondents reported that they do require all their students to wear their belts; 14 percent reported that they require their students to wear belts, but that the requirement varies by grade level; and 11 percent reported that they do not require their students to wear the belts. Of the 11 percent of bus drivers who reported that they do not require their students to wear seat belts, the majority (55%) also reported that their district had not adopted a required-use policy, while the remaining drivers reported that they didn’t know whether their district had a policy (25%) or that their district did adopt a policy (20%). The remaining 11 percent of respondents gave some other written response such as “*I do not have belts on my bus*” or “*there are no belts for the majority of riders.*”

Figure 7 depicts the finding, that bus drivers requiring all their students to wear their seat belts is associated with higher reported rates of seat belt use (when averaged across all grade levels). Furthermore, reported belt use was particularly higher for elementary school students than for middle school or high school students regardless of bus driver requirements (yes – require all to wear belts, yes – requirement varies by grade, or “other”), except when bus drivers reported that

they do not require their students to use belts; in this case, reported belt use was equally poor for all three grade levels. These findings are shown in Figure 8.

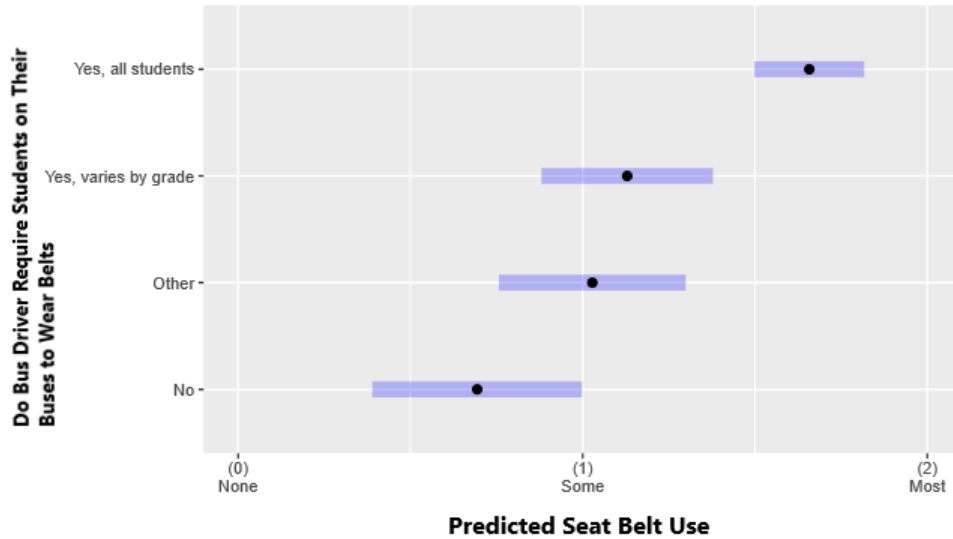


Figure 7. Effect of bus driver requirements of their students on reported belt use

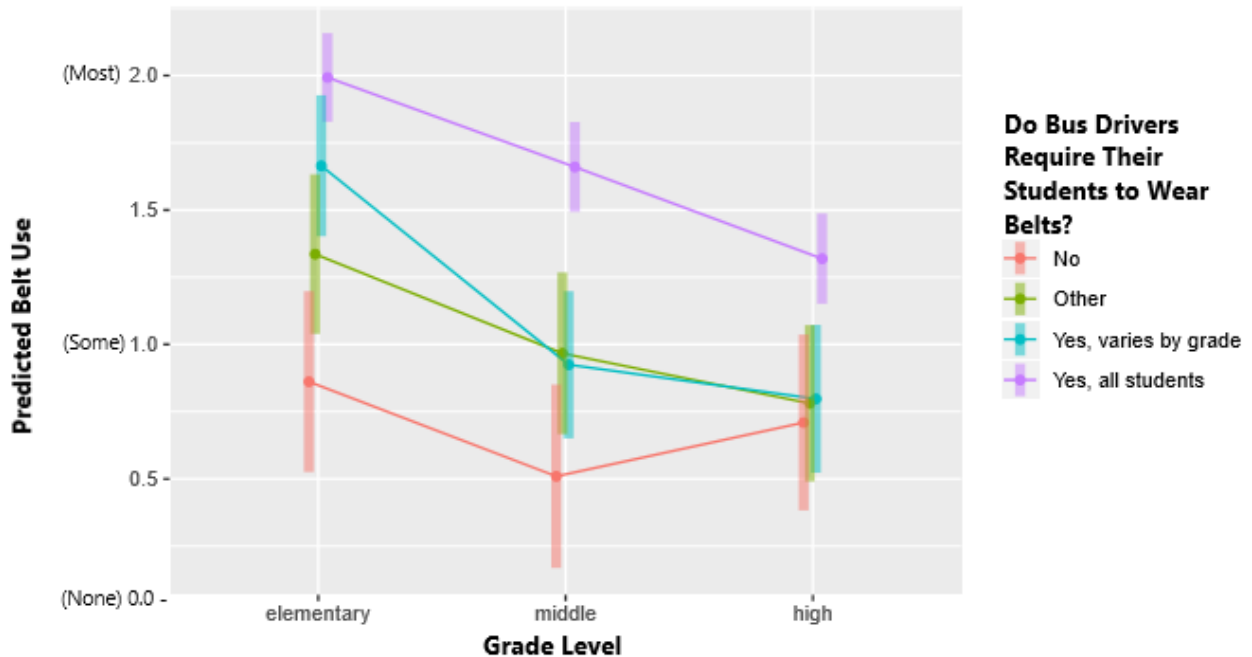


Figure 8. Effect of bus driver requirements of their students on reported belt use by grade level

As shown in Figure 9, respondents reported that the most effective methods for encouraging and enforcing seat belt use are conducting walk-through inspections before leaving the school in the afternoon, verbally reminding students when they board the bus in the morning, and verbally reminding students during the bus route. Approximately half of the respondents reported that they do not use bus aides or monitors, nor do they have parent-signed seat belt agreements, so it is unclear how effective these methods might be. The reported effectiveness of writing up students for not wearing their seat belts appears to vary; almost equal numbers of survey

respondents reported this method as “somewhat effective,” “N/A – do not use this method,” and “extremely effective.”

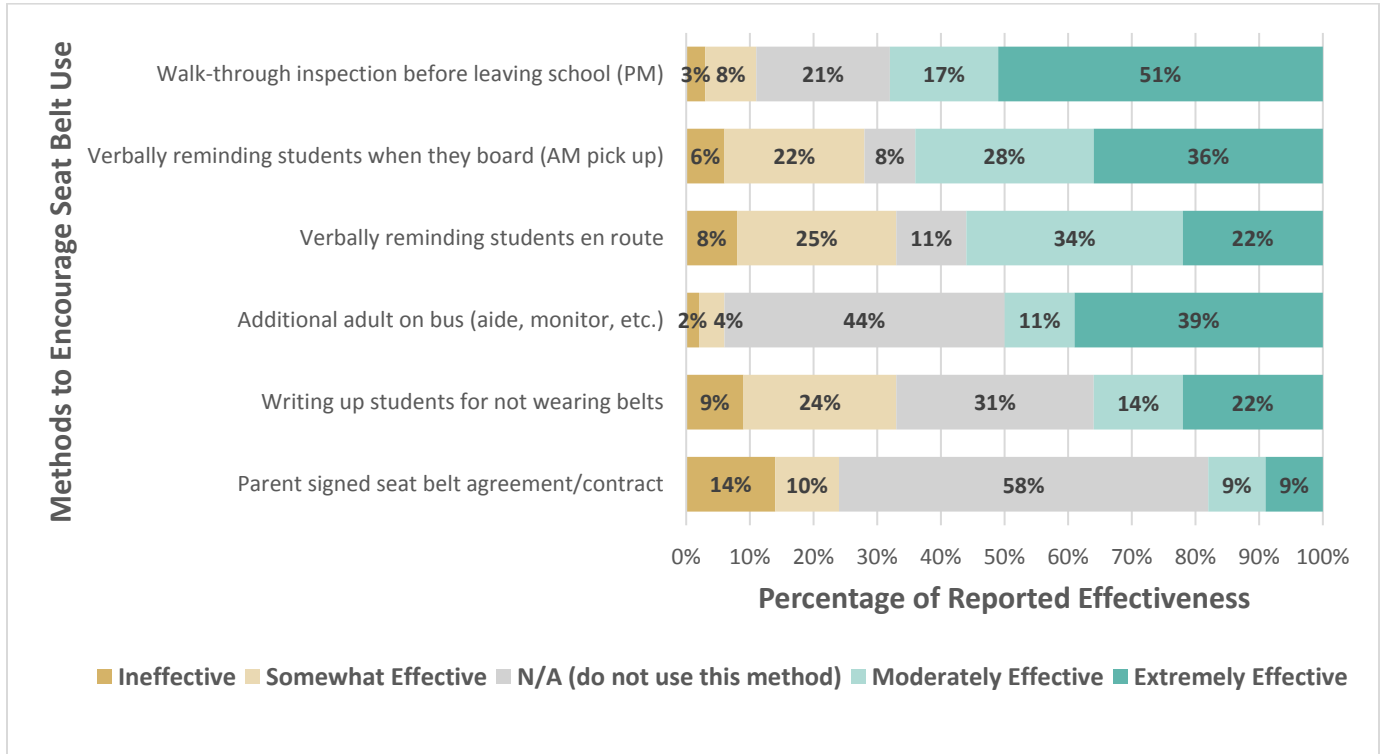


Figure 9. Effectiveness of various methods of getting students to wear their seat belts

Value of Seat Belts

The following sections focus on the survey findings related to the potential effects of seat belts on student behavior and bus driver stress, distraction and concentration.

Student Behavior

As shown in Figure 10, bus drivers largely reported that they observed behavior of students either improved (60%) or remained the same (35%) after they began driving buses with seat belts; very few (5%) reported that student behavior became worse, with some respondents noting that some students argued with drivers about using the seat belts or became aggravated about having to use them. This suggests that the presence of belts alone may have a positive influence on student behavior.

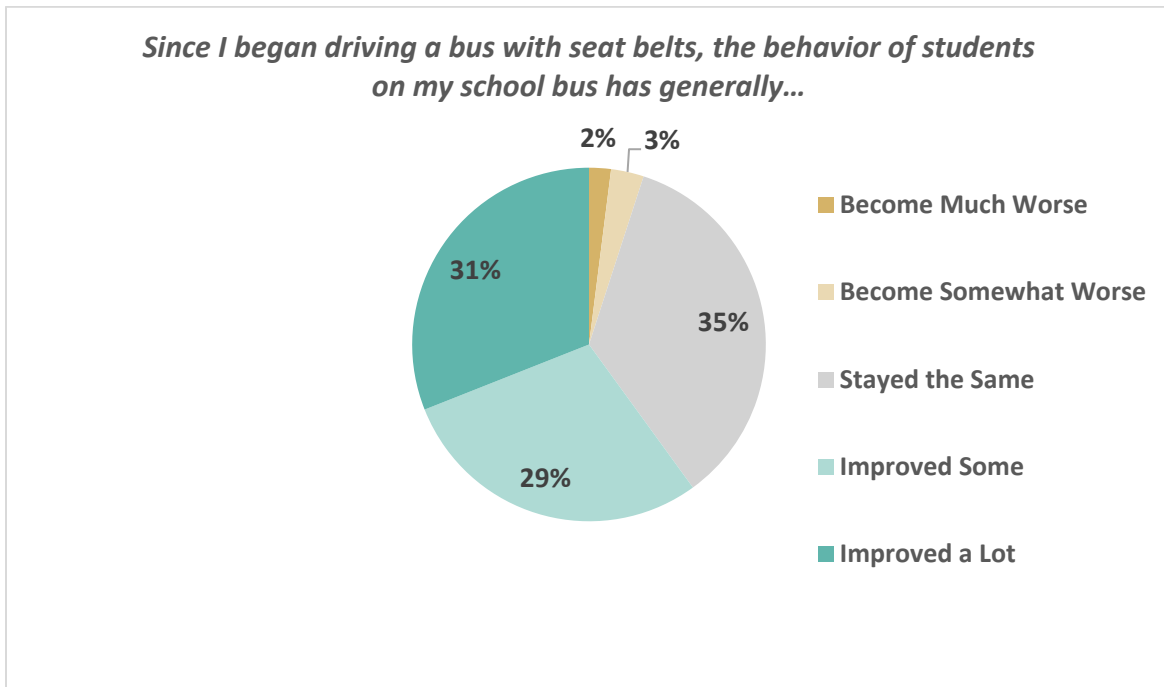


Figure 10. Reported general behavior change of students since drivers began driving buses with belts

The project team was further interested in whether belt *use* influences student behavior. To examine this, responses to the question “*Since I began driving a bus with seat belts, the behavior of students on my school bus has generally...*”, the results of which are shown in Figure 10, were recoded to numerical values between -2 and +2 with -2 indicating that behavior became much worse, 0 indicating that it stayed the same, and +2 indicating that it improved a lot. A linear regression estimated the change in behavior as a function of reported seat belt use (none, some, most), grade level (elementary, middle, high), timing (morning, afternoon), and all two-way interactions (i.e. interactions between two variables).

Survey respondents indicated that behavior was significantly better (mean=1.3) when they also reported that most students wore seat belts compared to when they reported that some (mean=0.79, $p<0.01$) or none (mean=0.39, $p<0.01$) wore their seat belts. Figure 11 depicts this finding, that more reported seat belt use is associated with a greater improvement in general student behavior on buses.

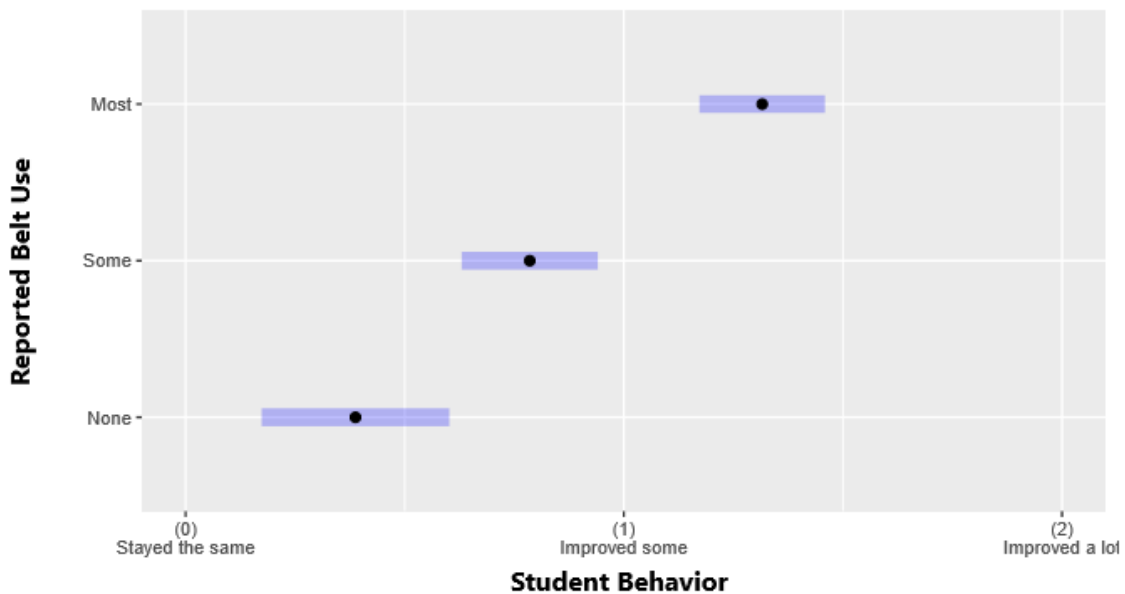


Figure 11. Effect of reported seat belt use on general student behavior on buses

Respondents were given a list of student safety behaviors or potential problems related to seat belts and were asked to report the ones that they have observed while driving a bus equipped with seat belts, the results of which are shown in Table 5.

Table 5. Percentage of Bus Drivers Who Reported Observing Various Student Safety Behaviors or Issues While Driving Buses Equipped With Seat Belts

Seat-Belt-Related Behaviors or Problems Observed	Percent Observed
Students having trouble getting buckled when they first sit down (after the first week of seat belts)	42%
Backpacks or other objects getting tangled in the seat belts	33%
Students hitting each other with the belts	31%
Students having trouble getting out of the belts (after the first week of seat belts)	23%
None – I have not noticed any changes in student behavior or there are no safety problems related to the seat belts	11%

It should be noted that the survey did not ask respondents to indicate the extent to which they observe these behaviors, and therefore the project team was unable to distinguish whether and when these behaviors or problems were observed more frequently (e.g., on a daily basis) or less frequently (e.g., several times over the course of multiple years). However, because many of these issues may be related not only to the belts themselves, but also to belt length and the type of belt (2-point versus 3-point) used, additional analyses were conducted to determine if there were any correlations between the behaviors reported by bus drivers and the type of seat belt with which their buses were equipped. The results indicated that respondents with 2-point lap

belts were 4.63 (95% CI: 2.44, 8.96) times more likely than respondents with 3-point lap/shoulder belts to observe students hitting each other with the belts. Additionally, respondents with 2-point lap belts were 2.02 (95% CI: 1.07, 3.79) times more likely than respondents with 3-point lap/shoulder belts to observe backpacks or other objects getting tangled in the belts.

In a separate question, some other common safety behaviors were identified, and survey respondents were asked to report whether these specific safety behaviors decreased, increased, or stayed the same since they began driving school buses with seat belts. The results are shown in Figure 12. In general, there was a reported decrease in negative behaviors such as students standing or out of their seats while the bus is moving, as well as a reported decrease in the number of written citations. Instances of students hitting each other with their hands or other objects generally stayed the same or decreased. There was no trend regarding student safety (crash, hard braking, sharp turns) as the responses were somewhat evenly split between “decreased,” “stayed the same,” and “increased.” Notably, 32 percent of respondents provided additional feedback on the finding that seat belts decreased student movement and/or standing activities. Respondents reported that this trend helped lead to a reduction in what one respondent called the distracting “popcorn effect,” or the ongoing movement of students up and down in the seats and between seats on the bus.

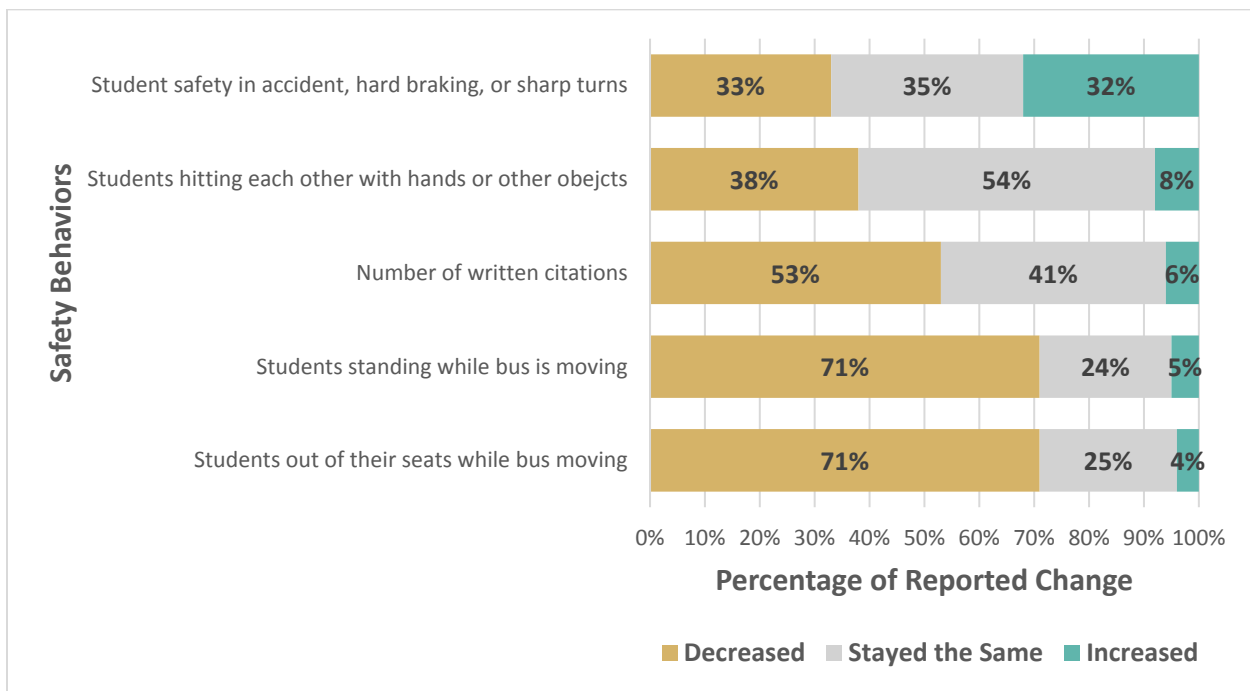


Figure 12. Change in safety behaviors after seat belts were implemented

Bus Driver Stress, Distraction and Concentration

To determine potential effects that seat belts have on bus drivers, survey respondents were asked to report the degree of changes (if any) to their stress levels, distraction levels, and ability to concentrate (both while driving, and while students are loading/unloading) since they began driving a bus with seat belts. Figure 13 shows the findings of each of these questions. It appears that bus drivers’ ability to concentrate tends to remain the same (52 to 68%) after drivers began driving buses with seat belts; for those whose ability to concentrate did change, it appears that

ability to concentrate was more likely to increase (24 to 37%) than it was to decrease (8 to 11%). Bus driver stress levels and distraction levels were more likely to decrease (42% and 46%, respectively) or remain the same (43% and 43%, respectively) after driving buses seat belts, with very few participants (15% and 11%, respectively) reporting that they increased. It should be noted that bus drivers were not provided with a definition of distraction, (i.e., they were free to define what distraction meant to them). Because drivers were not provided with a specific definition of distraction, there is some ambiguity in the interpretation of results as there may have been differences among drivers in terms of what distraction might mean to them individually.

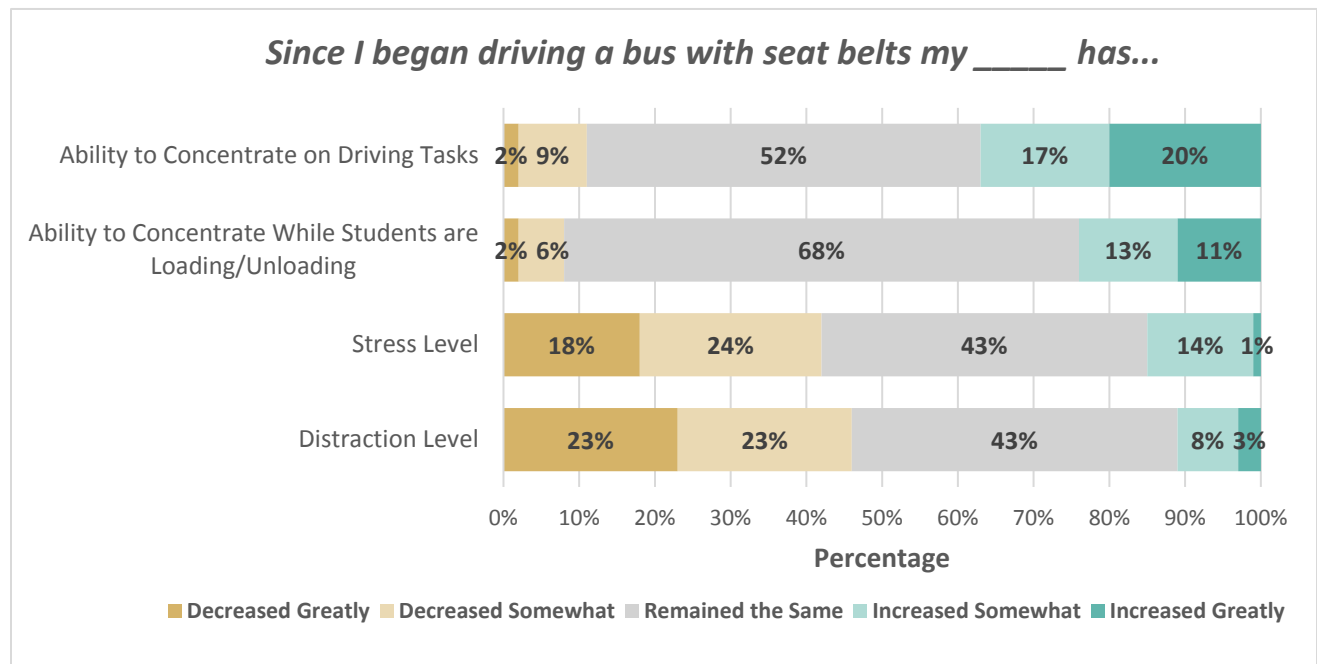


Figure 13. Effects of driving buses with seat belts on bus drivers

When asked to explain why they feel their stress level has changed (if they reported a change), not all participants responded. Those who did either expressed that their stress level increased because they now have to police the students and constantly remind them to wear their seat belts, or expressed that their stress levels decreased because students are calmer, safer, and/or the driver has to spend less time looking in their rear-view mirror and thus can focus more on driving.

The project team was further interested in whether belt use influences bus driver distraction. To examine this, responses to the question “*Since I began driving a bus with seat belts, my distraction level has...*” (see Figure 13) were recoded to numerical values between -2 and +2 with -2 indicating that distraction decreased greatly, 0 indicating that it remained the same, and +2 indicating that it increased greatly. A linear regression estimated the change in reported distraction as a function of reported seat belt use (none, some, most), grade level (elementary, middle, high), timing (morning, afternoon), and all two-way interactions.

Survey respondents indicated that distraction was significantly better, i.e., there was a greater *decrease* in driver distraction, (mean = -0.82) when they also reported that most students wore

their seat belts compared to when they reported that some (mean = -0.24, $p < 0.01$) or none (mean = -0.07, $p < 0.05$) wore their seat belts. Figure 14 depicts this finding, that more reported seat belt use is associated with a greater reported decrease in bus driver distraction.

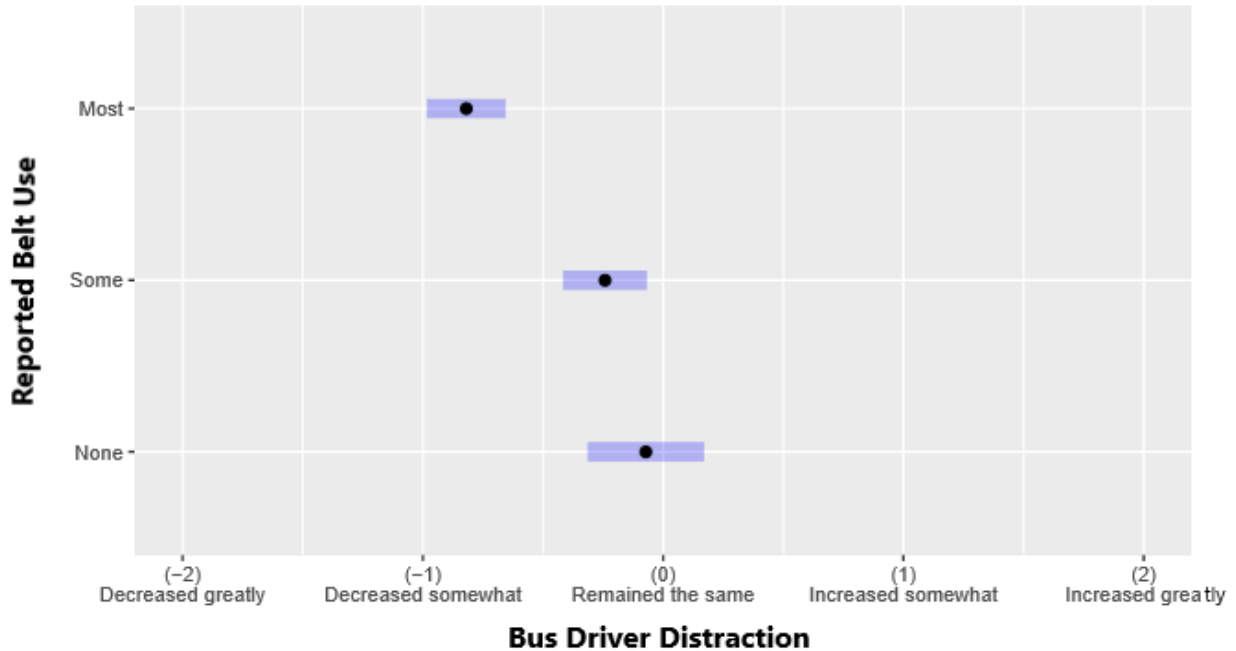


Figure 14. Effect of seat belt use on bus driver distraction

Analyses were also performed to determine if the type or amount of driver responsibilities (shown in Figure 2) influenced bus driver stress. There was no significant effect of amount of driver responsibilities (count of total responsibilities, ranging from 1 to 6) on bus-driver-reported stress. Similarly, there was no significant effect of type of responsibility on bus driver-reported stress. As mentioned previously, it should be noted that these analyses only consider the type and amount of responsibilities that bus drivers reported having, but this does not account for the manner (effort, effectiveness, etc.) in which these responsibilities are carried out by individual drivers.

Final Comments

Before completing the survey, respondents were given an opportunity to provide feedback and final comments, the results of which are summarized below.

Methods for Improvement

Survey respondents were asked “Are there any ways that you think the school bus seat belt program or use can be improved for your district/agency? How would you improve these?” and given the opportunity to provide an open-ended response. Approximately 40 percent of survey respondents provided a response to this question. The responses were reviewed and grouped into common categories, as shown in Table 6.

Table 6. Ways Seat Belt Programs Can Be Improved, as Reported by Bus Drivers

Response Category (type of feedback provided)	Percentage of Question Respondents
Methods for Encouraging the Use of Belts	29%
Need for Aid/Monitor on Bus, or Some Other Way to Monitor Use	16%
Seat Belt Design or Logistics (# students per seat)	15%
Preference for Belts to Be Removed From Buses	15%
Preference for Belts on Buses/Need for Consistency in Application	7%
Preference for 3-Point Lap/Shoulder Belts	7%
Miscellaneous	5%
Funding	3%

Of those who provided a response to the question, 29 percent provided feedback on methods that they thought would be useful in encouraging the use of seat belts (compliance). The majority of this feedback centered around (1) getting parents more involved and (2) enforcing stricter consequences for non-compliance. Respondents noted the importance of obtaining and maintaining parent involvement by keeping them informed about the belts and/or having them sign a seat belt agreement or contract at the beginning of the school year. Bus drivers also felt that it was important to have a use policy requiring the use of belts, and that the policy has specific and strict consequences (e.g., written citations or revocation of bus-riding privilege). Though by restricting bus privileges it could have a more profound effect by (1) removing the safest way for a student to get to school and (2) if the school bus is the students only mode of transportation their education and school attendance could be negatively impacted. Some respondents further specified the importance of support and reinforcement from school administration on the application of stricter consequences. Some other methods mentioned included explaining to students the value and importance of the seat belts, or even showing them example crash videos with and without the belts and providing regular (even daily) reminders to the students to wear their belts. Some respondents also expressed the importance of consistent enforcement from bus drivers throughout the district.

In addition to the 29 percent of question respondents who provided feedback on methods for encouraging belt use, an additional 16 percent indicated that there should some other method of indicating when the seat belts are not in use. Nearly all these respondents indicated that there should be a bus aide or monitor to ensure belt use. A few respondents suggested the addition of a visual (e.g., light) or auditory indication when belts are not in use, like the auditory indication in passenger vehicles when someone is not wearing their seat belt. These suggestions may not only increase compliance but could also take some of the burden of monitoring belt use from the driver.

Of the 15 percent of question respondents who provided comments on the design of the seat belts, nearly half commented that *retractable* 3-point belts should be used. One respondent indicated that belt latches with plastic components or push-button releases should be banned in favor of the highest quality buckles. This same respondent also indicated that belts should not be

installed 3 rows from the front or back exits in order to give first responders a chance to save passengers (the implication being that students may be trapped in the belts). The question respondents further indicated that seat belt use should be optional, with a provision for parents to opt out of belt use for their children. Some respondents used the opportunity to express their opinion that seat belts should be removed from school buses (15%), while other expressed their preference for seat belts on school buses (7%) with some indicating a specific preference for 3-point lap/shoulder belts (7%). A couple of respondents (3%) indicated the importance of consistency in implementation by having all buses equipped with seat belts and/or having seat belts throughout the entire bus. Some respondents (3%) commented on funding, with one respondent indicating that additional funding was needed from the State, and another indicating that the cost spent on seat belts could be put to better use such as better pay for substitute drivers or adding intercoms to buses to improve communication between bus driver and student passengers.

Additional Comments – Positives and Negatives of Using Seat Belts

Survey respondents were asked *“Please provide any additional comments here, especially related to what you believe are the positives and negatives of using seat belts on school buses. Please also indicate if you have any comments about school district policy, or if you notice any differences in belt use or enforcement by grade-level”* and given the opportunity to provide an open-ended response. Approximately 30 percent of responded to this question. The responses to the open-ended questions are assumptions and are not evidence-based. The responses were reviewed and grouped into common categories, as shown in Table 7.

Table 7. Additional Comments from Bus Drivers

Response Category (type of feedback provided)	Percentage of Question Respondents
Negatives of Using Seat Belts on School Buses	45%
Positives of Using Seat Belts on School Buses	22%
General Recommendations	14%
Comments About School District Policy	12%
Differences in Belt Use or Enforcement by Grade Level	11%
Miscellaneous	8%

Of the 30 percent who responded to this question, nearly half commented on one or more perceived negative aspects regarding the use of seat belts on school buses. The most reported perceived negative aspect of using seat belts on school buses was the inability of the driver to get all students unbuckled in an emergency. It should be noted, however, that the respondents who reported negative aspects of seat belts made up approximately 13.5 percent of the total survey respondents. Many of these drivers conceded that while seat belts may have certain benefits, they perceived belts would be detrimental in an emergency (e.g., crash, fire, smoke, water) as a single bus driver could not be able to help all students get unbuckled in time before the situation becomes fatal. A few respondents indicated that, because of this, if seat belts are required on

school buses then an aide should also be placed on the bus to help evacuate children in emergencies. The next common negative aspect cited by respondents was the general difficulty in managing belt use, including added stress on bus drivers and students getting tangled in the belts or using them to hit each other. Some less commonly reported negative aspects of seat belts included that 2-point lap belts tend to loosen themselves anyway, that the buckles can be stiff and difficult, and that bus drivers are concerned about who would be held liable in the case of a crash.

Fewer (22%) question respondents reported positive aspects of having seat belts on school buses. Those who did commonly cited an increase in students remaining in their seats and general better behavior on the buses. Other positive aspects that were reported included general peace of mind that students are safer, general support for the belts, and one respondent indicated a decrease in noise levels on the bus.

Question respondents who provided general recommendations (14%) primarily commented on methods for improving compliance such as a parent/student-signed contract, providing aides/monitors on buses, and providing a safety video explaining the seat belts (similar to what is done on an airplane).

The question respondents who commented on school district policy (12%) primarily stressed that, not only does use of the seat belts need to be required, but the use policy needs to be enforceable. One respondent reported that bus drivers in the district are not allowed to write the students up solely on the basis of the belts not being used. Some enforcement recommendations included using cameras as bus monitors, or having the parents sign seat belt policy enforcement forms. One respondent indicated that they felt the district was doing a fantastic job implementing the mandatory seat belt program.

Respondents who commented on difference by grade level (11%) tended to report that compliance was better for the younger students. One respondent indicated that lower-grade-level administration will help bus drivers enforce the belt use requirements, whereas high-school-level administration does little to enforce the requirements.

Discussion and Conclusion

State laws and district initiatives are often designed with a goal of improving the safety of students being transported on school buses. However, a school bus seat belt use policy can achieve this goal only if the belts are used consistently. For this reason, the interviews, school bus driver survey, and material collected through this study included an investigation into use requirements and enforcement activities that support seat belt use compliance.

Anecdotal evidence collected through this study points to the positive indirect effects of seat belts (especially 3-point lap/shoulder belts) on school bus safety. Such effects include improved on-bus behavior and reduced school bus driver distraction. The interviews, school bus driver survey, and material collected through this study aimed to capture information on the potential benefits as well as how districts and drivers capitalized on them through activities like training and standard procedures.

The findings of this research are outlined in the following sections.

Benefits of Improving Seat Belt Use on School Buses

While the benefits of seat belts for occupant protection are well-known, there are also unique opportunities for other types of benefits from proper seat belt usage on school buses. The age of the passengers, the energy of the passengers, and the supervision ratio can create a bus environment where noise levels are high and drivers, despite their training and experience, can become distracted.

Drivers report that, without belts, some student passengers are inclined to move from one seat to another. This kind of behavior can be distracting to the driver and is also dangerous to the student who, when out of his or her seat, is not afforded the crash protection offered by compartmentalization. Interestingly, the majority of interview and survey respondents in this sample communicated that seat belts on school buses contributed to calmer and less distracted environments for school bus drivers.

While the opinions about seat belts often varied from driver to driver, the project team heard from drivers and supervisors that those drivers who invested more time and effort into seat belts (e.g., by maintaining and enforcing a consistent policy) derived the most benefit. Multiple interviewees said that some drivers who were initially against seat belts became “believers” after using them.

The improved environment was seen most dramatically for younger grades, as respondents said these students were more likely to use the seat belts. The drivers felt that students sat in their seats more and moved around less on buses equipped with seat belts. This resulted in fewer direct distractions for the drivers and tended to cut down on interactions between students, leading to fewer fights and other infractions.

The improved environment, and correspondingly reduced stress, was not, however, universal. Some school bus drivers expressed that their stress level increased because they now have to monitor the students and constantly remind them to wear their seat belts. Most, however expressed that their stress levels decreased because students are calmer, safer and/or the drivers spend less time looking in their rear-view mirrors and thus can focus more on driving. It should be noted that the analyses described in this study do not account for the manner (effort, effectiveness, etc.) in which these responsibilities are carried out by individual drivers.

With a required use policy, bus driver survey respondents said that even when students were not wearing the belts, they often did not move around the bus because they did not want to advertise their non-compliance. While it is ideal that all students wear their seat belts, district leaders noted that the indirect benefits of the seat belts were similar regardless of actual use because students moved around and stood up less, causing less distractions for the driver. Therefore, while being properly belted maximizes crash protection, the presence of belts and a required use policy may also result in improved safety during a crash, even for unbuckled passengers, as students were more likely to stay within the safety zone offered by compartmentalization.

Large school buses provide crash protection to passengers through compartmentalization. This requires that the interior of large buses protect children without the use of seat belts. Through compartmentalization, children are protected from crashes by strong, closely spaced seats that have energy-absorbing seat backs. In addition, large school buses are heavier and distribute crash forces differently than passenger cars and light trucks do. Because of these differences, bus passengers generally experience much less crash force than those in passenger cars, light trucks, and vans.

Policy Components

Through interviews, surveys, and material collected, the project team examined the common components of the policies, such as how a policy was carried out by school bus drivers and consequences for non-compliance, to better understand the factors that can influence policy effectiveness. Overall, the policy details, or specifications that had the most impact on seat belt use appeared to be the clarity and strength of the:

- Policy purpose,
- Seat belt installation requirements,
- Passenger use requirements, and
- Enforcement procedures.

In general, the most important factors in a successful policy implementation seem to be:

- Training and education procedures, and
- Enforcement of passenger use requirements.

Passenger Use and Enforcement

Of the policy specifications, implementation and enforcement were identified as most essential to an effective school bus seat belt program. For the purposes of this study, there are two types of use policies that are embedded in seat belt policies: passenger use requirements, which mandate that students must use seat belts when they are present on buses, and passenger use encouragement, which do not specify that a student is required to use a seat belt when present. While not all of the respondents in this study had policies with a passenger use requirement, most consistently reinforced the importance of such a mandate, especially if the benefits of a policy are to be realized.

Most respondents also emphasized the importance of enforcing a use policy. Numerous school districts include, in the job responsibility of a bus driver, the need to remind students to wear the belts as each student boards the bus in the morning. Another common practice in the afternoon is for the driver to walk to the rear of the bus to ensure compliance before leaving school. These practices, along with reminding students mid-route, comprise the top three most effective methods for encouraging and enforcing belt usage based on driver feedback.

While the study gathered no evidence that the amount or type of driver responsibility has a statistically significant effect on belt use, it is possible that the way drivers' responsibilities are being carried out may influence belt use. For example, two bus drivers may report that it is their responsibility to give daily reminders to students, but one may do a better job of that responsibility than the other (or one may not do it at all). While study responses indicated that many drivers have concerns about liability, the project team found no instances where the school district or school bus operator explicitly held the driver responsible for the actual use of belts by student passengers.

The value of policy related to bus driver enforcement is supported by the project findings indicating that belt use was significantly greater when bus drivers reported requiring all their students to wear the seat belts. All districts with passenger use requirements enforced compliance via verbal warnings and citations/write-ups at a minimum. Bus drivers urged that action beyond these activities is needed to gain majority compliance, especially in the case of teenage students

who they noted are less likely to comply. However, very few States had laws that specifically said that drivers would not be held responsible, and interview respondents stated that drivers were sometimes concerned that they might be held responsible in legal settings, even if not by their districts.

Both school transportation officials and bus drivers noted that elementary students used the seat belts more consistently than high school students, regardless of the presence of a use policy. While this should not suggest that elementary and high school students should be addressed differently in district policy, this finding may help school districts that are implementing belts prioritize the assignment of buses with belts when resources are limited. When bus drivers require all the students on their buses to use their seat belts, as opposed to requiring none or varying the requirement by grade level, higher belt use rates are reported. Although the link between having a required-use policy and a driver's individual enforcement of seat belt usages was not examined in this study, these findings suggest that drivers with knowledge of a use policy are more likely to require their students to wear seat belts.

Importantly, many drivers commented that school administrators can support compliance by following through with consequences when students were referred for incompliance and suggested measures such as a signed student-parent policy agreement would also increase compliance.

Limitations and Recommendations

While this study outlined a review of school bus seat belt use policy, a limitation of the current investigation was that information on student behavior and bus driver distraction was based on drivers' recollections and are only anecdotal. A collection of base rates of student misbehaviors and changes associated with seat belt introduction would be needed to better define the benefits of seat belts. Many district leaders shared anecdotal evidence that pointed to the value of school bus seat belt policies but were not able to provide more concrete evidence. There are opportunities to further evaluate the relationship between policy components, such as enforcement and training, with actual outcomes, such as compliance and distraction levels.

Another limitation is the potential for skewed data. The first is that more than 50 percent of the bus drivers interviewed came from Indiana and 71 percent of the respondents were either from Indiana or New Jersey. Also, 76 percent of respondents indicating they have driven school buses with seat belts for six months or greater, is high considering most buses don't have seat belts. Therefore, the information provided could be considerably skewed to one point of view and experience.

It is also unclear which training methods are most effective for stakeholders, especially school bus drivers and student passengers. Assessing the effectiveness of on-bus training versus written educational material, for example, could help districts better understand how to best apply limited resources. The role of parents and guardians in helping ensure compliance can also be clarified to better equip districts and schools to communicate with this group.

NHTSA recommends that States considering seat belts on large school buses carefully consider impacts on school transportation safety overall. Since school buses are already very safe, the added benefit of seat belts on large school buses is small relative to other potential safety measures such as improvements in the safety of child pedestrians as they enter or exit the bus. Seat belts on large school buses could provide an overall safety benefit if their installation does

not result in trade-offs with other child safety initiatives and if the added cost does not result in a reduction in the availability of buses.

It is important to ensure that requiring seat belts on school buses can be implemented in a way that does not decrease the overall safety of school related transportation considering the full range of implications of pupil transportation decisions -- including possible unintended consequences resulting from the increased costs to buy and operate a school bus with seat belts -- to ensure that undesirable trade-offs do not occur.

In all these cases, a study focused on evaluating seat belt use policy approaches with a sample of districts and schools could provide beneficial tools to the school and safety communities alike. For example, changes in student behavior and driver distraction could be analyzed using video footage as well as documented incident reports. Furthermore, driver stress and satisfaction could be examined under conditions of buses with and without belts to more concretely assess the impact of school bus seat belts. Ultimately, there are opportunities to explore the different effects of school bus seat belts and different policy arrangements that have the potential to improve safety. This study is merely anecdotal data. Much more work needs to be done to assess the use of seat belts on school buses.

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Appendix A – State Laws Addressing the Implementation of Seat Belts on School Buses

The project team surveyed pending and enacted State legislation. During the course of this project, many States had proposed legislation, most of which has since failed to move forward, but some of which has resulted in new requirements in some States. The team found some longstanding requirements in State statute (e.g. Alaska, Maine, and Arkansas) that addressed use or training even in the absence of a requirement for implementation. Most State laws relevant to this study, however, focused on a requirement for belts to be installed on new school buses.

State laws addressing seat belts on school buses are summarized below.

Arkansas

Arkansas State law requires a local school board to put on the ballot a levy to fund the additional cost of adding lap-shoulder belts to school buses, if signatures are brought forth by at least 10 percent of the local electorate. As of this writing, there are no known instances where this provision has been invoked. Arkansas law requires seat belts on school buses and to be worn by school bus passengers and the driver when being transported on a school bus so equipped.

California

In contrast to some other states, California does not require districts to transport students who live far from school. Instead, state law allows the district governing board to provide pupil transportation “whenever in the judgment of the board the transportation is advisable and good reasons exist therefor.” Generally, the state grants districts discretion over which students they will transport and how many school bus routes they will operate. California State law (Vehicle Code Section 27316) requires that all school buses leased or purchased after July 1, 2005, be equipped with 3-point lap/shoulder belts. It also states that a person, district or organization shall not be charged with a violation of this code if a passenger fails to use, or improperly uses, the passenger restraint system. Further, *California Code of Regulations*, Title 5 (5 CCR), Section 14105, requires that all student passengers on a school bus equipped with a passenger restraint system as prescribed above must use the passenger restraint system.

Florida

Florida Statute 316.6145 requires that any school bus purchased new after December 31, 2000, must be equipped with safety belts (or any other restraint system approved by the Federal government). It also states that each passenger riding on a bus so equipped must wear a properly adjusted and fastened safety belt at all times while the bus is in operation. The law stipulates that employees of a district or operator, and other named entities, may not be held liable for injury caused solely by a passenger’s use or non-use of a seat belt in an unsafe manner.

Iowa

State administrative rules adopted by the Iowa State Board of Education requires, effective October 2, 2019, that 3-point lap-shoulder belts be installed on all new school buses owned by a school or school district.

Louisiana

A 1999 law required that every school bus used for transporting students to be equipped with an occupant protection system by 2004, but only if funding is made available for that purpose. And funding has never been designated for that purpose. (LA Rev Stat § 17:164.2)

Nevada

Nevada State law requires that all new school buses purchased by a school district after July 1, 2019, must be equipped with a shoulder-harness-type safety belt. (Nev. Admin. Code § 386.837)

New Jersey

New Jersey had a long-standing law requiring school buses to be equipped with lap belts and required students to use belts on buses so equipped. In early 2019 a revision to this law took effect requiring the belts on new school buses to be 3-point lap-shoulder belts.

Each passenger is required to wear the belt and owners/operators of school buses are explicitly not liable for a student's failure to properly adjust and fasten a belt. NJ Rev Stat § 39:3B-11 (2015)

New York

New York Vehicle and Traffic Law, Title 3, Article 9, Section 383, requires that every bus manufactured for use in New York on or after January 1, 1987, be equipped with seat safety belts.

Texas

Texas requires each bus purchased by a school district to be equipped with 3-point seat belts for passengers. There is an opt-out provision for school board that, by vote in a public meeting, state that their budget will not permit new buses to be so equipped.

OTHER STATE LAWS ADDRESSING SEAT BELTS ON SCHOOL BUSES

In reviewing State laws regarding school buses and occupant protection, the project team found two other instances (in addition to Arkansas, referenced above) of State-level laws, although neither dealt with a requirement for belts of any kind on school buses.

In Alaska, State law (Title 14 -14.09.030) requires that the school district provide training on the operation of seat belts if school children are transported on a vehicle so equipped.

In Maine, State law (Title 29-A) requires safety seat belts to be worn by drivers and passengers on vehicles so equipped.

Some other State laws mention school buses by "name" in a list of vehicles excluded from the State's occupant protection law. Other States, though, have the same exclusion, although they may reference vehicles not required to have seat belts for passengers, not singling out the category "school bus."

Appendix B – Interview Guide

Interview Guide – State/District Transportation Leader

Interviews are intended to occur as a fluid, conversational dialogue. Therefore, this document is designed to serve as a guide to ensure that all critical topics/areas are covered. The document is organized by general topics that should be discussed during the interviews. Each topic includes high-level bulleted notes (left column) and examples of questions (right column) to help prompt the interviewer, keep conversation flowing, and ensure that the most important information is gathered.

INTRO	DIALOGUE GUIDANCE/QUESTIONS:
Summary and Consent	<p><i>Under the Paperwork Reduction Act, a Federal agency may not conduct or sponsor, and a person is not required to respond to collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control number. The OMB Control Number for this information collection is 2127-0737 (expiration date: 06/30/2022). The average amount of time to complete the screening is 5 minutes. All responses to this collection of information are voluntary. If you have comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden send them to Information Collection Clearance Officer, National Highway Traffic Safety Administration, W51-312, 1200 New Jersey Ave, S.E., Washington, DC, 20590.</i></p> <p><i>Thank you again for participating in this study, as described in the email and consent form you received, the overall goal of this project is to gain a better understanding of the decisions that districts and agencies face when considering school bus seat belt implementation and use.</i></p> <p><i>IF WE HAVE SIGNED CONSENT: I see that you have read the study description we sent and we have received your signed informed consent document. Thank you for sending that.</i></p> <p><i>IF WE DO NOT HAVE SIGNED CONSENT: It appears that we have not received the informed consent, so we need to take a moment before we begin to make sure you agree to the interview before proceeding. Have you read the study overview document we sent? If not, would you like me to read through the overview to ensure you feel comfortable with the interview. (Read overview if participant has not read it).</i></p> <p><i>Having heard/read the project overview, do you, _____ (interviewee name), agree to participate in this study with the understanding that you may withdraw at any time without penalty?</i></p> <p><i>IF YES: Thank you.</i></p> <p><i>IF NO: Thank you for your time. We will not proceed with the interview.</i></p>
District Policy	<p>Based the information provided us by _____, we understand that your district HAS/HAS NOT CONSIDERED implementing or ordering school buses with seat belts and IF HAS CONSIDERED, DECIDED TO or DECIDED NOT TO implement or order buses with belts. Verify or correct.</p>

	<ul style="list-style-type: none"> ● HAS NOT CONSIDERED – Please explain why ● HAS CONSIDERED BUT DECIDED NOT TO – PLEASE EXPLAIN WHY. (Interviewer fill in check box of reasons – all that apply) ● HAS IMPLEMENTED/ORDERED BUSES. <ul style="list-style-type: none"> ▪ IF YOU HAVE IMPLEMENTED BELTS, ARE THESE LAP BELTS, LAP/SHOULDER BELTS or SOME OF EACH? ▪ IF YOU HAVE IMPLEMENTED BELTS, IS THERE A DISTRICT POLICY THAT ADDRESSES WHETHER OR NOT STUDENTS MUST USE THE BELTS? IF SO DESCRIBE. ▪ DESCRIBE INSTRUCTIONS TO THE DRIVERS TO ENFORCE THE POLICY INCLUDING ANY DISCIPLINARY ACTIONS FOR NOT FOLLOWING THE RULES.
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THEME	DIALOGUE GUIDANCE/QUESTIONS:
Motivation	
<ul style="list-style-type: none"> ● Brief recap of our intent ● Motivation for implementing belts ONLY FOR THOSE THAT IMPLEMENTED 	<ul style="list-style-type: none"> ● Was there a specific event or series of events that prompted the district to decide to implement or not implement seat belts on school buses? ● What factors may have influenced this decision? Local champion, parent concern...
Context (ask only for those who implemented)	
<ul style="list-style-type: none"> ● Relevant background info 	<ul style="list-style-type: none"> ● About how many regular route buses does your district operate? ● How many of those buses have seat belts? How long have you had them? ● Did you phase in seat belts or implement them all at once? ● Do you have plans to implement additional seat belt-equipped buses?

THEME	DIALOGUE GUIDANCE/QUESTIONS:
Policy – Implementation and Use (ask only for those who implemented)	
<ul style="list-style-type: none"> ● Requirements ● Use ● Enforcement 	<p>Implementation</p> <ul style="list-style-type: none"> ● Let’s talk a little bit more about the policies that are in place that require the implementation and/or use of seat belts on school buses. <ul style="list-style-type: none"> ○ What are the specific district policies regarding installation of belts on school buses? ○ Are seatbelts mandated on retro-fit buses? ○ Are the policies mandated by State statute or law? Are there statutory funding mechanisms in place? ○ What types of buses are mandated to have belts (Type A, Type B, Type C, Type D)? ○ What can you tell me about how your district developed your policies regarding installation of belts? ● Who proposed the implementation of belts on buses? ● Did they reference other school districts or legislation? <p>Use</p> <ul style="list-style-type: none"> ● Only if they have a use policy: Please describe how your required use policy is enforced? ● Do you have participation in use requirement from all levels within the district (school board, superintendent, principals, bus drivers)? <ul style="list-style-type: none"> ○ Which of these received information about the implementation of belts? Describe, including any results. ○ Which of these received training about the implementation of belts? Describe, including any results.

THEME	DIALOGUE GUIDANCE/QUESTIONS:
Funding (ask only for those who implemented)	
<ul style="list-style-type: none"> ● Methods/sources of funding <ul style="list-style-type: none"> ○ Federal safety grants? ● Cost/Scope ● New/retrofit ● Barriers and resistance to acquiring funding 	<p><i>We are interested in identifying the different policies, strategies and sources used for funding seat belts.</i></p> <ul style="list-style-type: none"> ● Please describe the sources of funding used to purchase new or replacement school buses. ● What is the process for purchasing new school buses in your district? ● Please describe how the district has or plans to fund the additional cost of seat belt installations. <ul style="list-style-type: none"> ○ What is that additional cost? Were the additional funds provided by the school district? ○ Did you consider Federal safety grants? ○ Did you have to use any creative/unusual approaches to fund the seat belts? ● What were your experiences, positive and negative, with acquiring funding for school bus seat belts specifically? ● What types of barriers or resistance did you face when trying to get funding? How did you overcome those barriers? <ul style="list-style-type: none"> ○ Did you seek any sources of funding that didn’t work out? ○ What aspects of your purchasing regulations made the process more or less difficult?

	<ul style="list-style-type: none"> ● Did you acquire new buses with seat belts, or retrofit them in existing buses? <ul style="list-style-type: none"> ○ If retrofit, did it include replacing the entire seat or just the seat back?
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THEME	DIALOGUE GUIDANCE/QUESTIONS:
Experiences with Stakeholders & Best Practices	
<ul style="list-style-type: none"> ● Reactions/Interactions with Multi-Sector Stakeholders: <ul style="list-style-type: none"> ● Inside the Institution <ul style="list-style-type: none"> ○ Transportation Directors ○ School Administration ○ Teachers ○ Bus Drivers ○ School Board ● Outside the Institution <ul style="list-style-type: none"> ○ Media ○ City Councils ○ Parents, PTA/PTSA ○ Local Safety Groups ● Students ● Achieving Buy-in ● Public awareness/outreach 	<p><i>We are interested in the reactions of and interactions with various stakeholders regarding the acquisition and implementation of seat belts. Stakeholders may include individuals/groups inside your organization (e.g. transportation directors, school administration, teachers, bus drivers, school board), outside of your organization (e.g. media, city councils, parents, PTA/PTSA, local safety groups) and students.</i></p> <ul style="list-style-type: none"> ● When thinking about these various stakeholder groups, would you say that people were generally supportive of the implementation of seat belts or against it? ● Are there any reactions of or interactions with stakeholders that particularly stand out to you? <ul style="list-style-type: none"> ○ Did you receive push-back from any of these individuals/groups in particular? Please describe. ○ Were any of these individuals/groups particularly supportive or helpful? Please describe. ● Did you take any steps ahead of time to achieve buy-in from various stakeholder groups? If so, what actions were taken? ● Was any media/outreach used to inform people of the seat belts and/or encourage compliance? (e.g. news articles, letters to parents, assemblies, etc.)

THEME	DIALOGUE GUIDANCE/QUESTIONS:
Compliance & Student Behavior (ask only for those who have implemented) I think we will have covered a lot of this earlier in the interview.	
<ul style="list-style-type: none"> ● Usage & enforcement ● Student behavior 	<ul style="list-style-type: none"> ● Do you have a usage policy in place to require students to wear the seat belts? If so, how is it enforced? ● Have you used any other methods to encourage compliance? (e.g. reminders/referrals from bus drivers, letters to parents, etc.) ● What methods do you think have been the most effective in encouraging compliance? ● In general, do you think that the seat belts have influenced student behavior on the buses? <ul style="list-style-type: none"> ○ Have you collected any data or video to track this potential influence? ○ What type of feedback have you received from the bus drivers? ○ Do bus drivers write referrals on the bus? If so, are these tracked? (<i>before/after belts</i>) <ul style="list-style-type: none"> ○ Are the referrals supported/acted on by school administrators?

Bus Driver Survey	
	<p><i>We are also interested in getting a better understanding of bus driver distraction related to student behavior and seat belts to see if the use of seat belts has impacted student behavior on buses. We have an online survey that asks bus drivers about topics like distraction, stress, and student behavior.</i></p> <p><i>We do not ask for names of bus drivers, and only ask them to name their school district for tracking purposes; <u>we will not indicate which survey responses came from which school district.</u> I can provide you with a hard copy of the survey questions first, if you'd like. Then would ultimately send a link that the bus drivers could use to complete the survey.</i></p> <p><i>Would you be willing to share this survey with your bus drivers?</i></p>

THEME	DIALOGUE GUIDANCE/QUESTIONS:
Barriers & Lessons Learned	
<ul style="list-style-type: none"> ● Barriers/resistance regarding funding, implementation, or enforcement ● Lessons learned and advice for other jurisdictions 	<p><i>(Note: We ask about resistance/push-back when discussing funding and stakeholders, so at this point we will likely have already covered barriers in the various other sections. May just want to wrap up by asking if there are any other hurdles/barriers that haven't been discussed yet.)</i></p> <ul style="list-style-type: none"> ● Are there any other issues or barriers that you faced that we haven't discussed yet? ● What are the most important "lessons learned" or advice that you think would be useful to jurisdictions that are considering implementing seat belts on their buses?

Appendix C – Bus Driver Survey

School Bus Driver Survey Text

Under the Paperwork Reduction Act, a Federal agency may not conduct or sponsor, and a person is not required to respond to collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control number. The OMB Control Number for this information collection is 2127-0737 (expiration date: 06/30/2022). The average amount of time to complete the screening is 15 minutes. All responses to this collection of information are voluntary. If you have comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden send them to Information Collection Clearance Officer, National Highway Traffic Safety Administration, W51-312, 1200 New Jersey Avenue SE, Washington, DC, 20590.

Intro

Thank you for taking the school bus driver seat belt survey. This survey should take around 15 minutes of your time, and is part of the Education on Proper Use of Safety Belts on School Buses study funded by the National Highway Traffic Safety Administration (NHTSA). Your feedback may help school districts and agencies with their decision-making processes related to school bus seat belts. As part of this study, you will be asked to share your experiences with seat belts and student behavior from your perspective as a school bus driver that has experience driving a bus with seat belts.

Confidentiality

By taking this survey, you are consenting to be a part of this study. We will not ask for your name or contact information, and will not report which survey responses are associated with a school district. Because it is possible that you may feel sensitive about sharing these experiences, the research team will report survey information generally with other responses. If you feel comfortable with this information, please begin to take the survey. To instead receive a paper copy of the survey questions, or to ask a question, please contact Bryan Katz at [redacted] or bryan.katz@toxcel.com. Thank you for your help!

Driver Details

Q1. Name of Your Employing District/Agency

Q2. Name of the U.S. State of Your District/Agency <select from drop down box>

Q3. Grade levels you have transported during 2018-2019 School Year for this District/Agency? (Select all that apply)

- Elementary
- Middle School or Junior High
- High School or Pre-College

Q4. How many total years have you driven a school bus? <text box>

Q5. Have you driven a school bus **without** seat belts on it?

- Yes
- No

Q6. How long have you driven a bus with seat belts on it?

- Occasionally (Substitute, Rotational, Less than One Month)
- Regularly (1-6 Mos)
- Regularly (6 Mos - 24 Mos)

Q7. Which type of seat belt technology do you have experience with? (If both, please select the type that corresponds to your current bus. Please answer the remaining questions from the perspective of the type of seat belt that you select below.)

- Lap Belt
- 3-Point Lap/Shoulder Belt

Seat Belt Policy

Q8. Please select which option best describes whether your district/agency has a school bus seat belt required use policy:

- School district adopted a policy that requires students to use seat belts when present.
- School district has not adopted a required policy; usage decisions are left to the individual driver and/or student choice.
- Don't know.

Training

Q9. As a school bus driver in your district, what are your responsibilities regarding the use of seat belts on the school bus? (Select all that apply)

- Provide initial instruction to students regarding use of the belts (at the beginning of the school year, or when a new school bus with belts is put in service)
- Provide periodic instruction/refresher training to students regarding use of the belts
- Provide daily verbal reminders to students to wear the belts
- Enforce seat belt use via verbal warnings
- Enforce seat belt use via written citations (“write up”)
- Conducting a walk-through with reminders before departing school in the afternoon
- Please use the provided text box to elaborate on your responsibilities, if necessary: <text box>

Q10. How did you first learn about what your responsibilities were with seat belts on the school bus?

- Classroom Training/Safety Meeting
- My supervisor explained it to me
- Another driver explained it to me
- Printed material (pamphlet, flyer, etc.) provided by district/agency
- Electronic communication (email, newsletter, etc.) provided by district/agency
- Other: _____
- I did not receive information regarding the seat belts on the school bus

Q11. Have you received any additional training or informational updates about school bus seat belts since installation?

- Yes
- No

Q12. Have there been any drills for the students to practice getting out of the seat belts during an emergency or evacuation?

- Yes
- No

Seat Belt Enforcement

Q13. As a school bus driver, do you require your students on your school bus to wear their seat belts?

- Yes – I require all students on my buses to wear their belts
- Yes = but my requirement varies by grade level
- No – I do not have a requirement policy for any students
- Other: <text box>

Q14. From your experience, which ways are the most effective to get students to use the seat belts?

	Extremely effective	Moderately effective	Somewhat effective	Ineffective	N/A (I/we do not use this method)
Verbally reminding the students when they board (AM Pick Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verbally reminding the students on route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk through inspection before leaving school (PM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parent signed seat belt agreement/contract	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Writing students up for not wearing their belts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Adult on Bus (E.g. Attendant, Aide, Monitor/Matron)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER (please enter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you said OTHER, please explain: <text box>

Q15. On average, how many students per bus load wear their seat belts (N/A if you don't drive that grade level)?

	AM	PM
Elementary School	<drop down> (Most/Some/None/N/A)	<drop down> (Most/Some/None/N/A)
Middle School	<drop down> (Most/Some/None/N/A)	<drop down> (Most/Some/None/N/A)
High School	<drop down> (Most/Some/None/N/A)	<drop down> (Most/Some/None/N/A)

Value of Seat Belts

Student Behavior

Q16. Have you noticed any changes in student behavior on your school bus since the seat belts were installed?

- Yes
- No
- If YES, please explain the changes in student behavior that you have noticed: <text box>

Q17. Since the safety belts were installed, students on my school bus are generally:

- | | | | | |
|--------------------------|----------------------------|------------------------------|----------------------------|--------------------------|
| Much more well-behaved | Slightly more well-behaved | The same as they were before | Slightly less well-behaved | Much less well-behaved |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q18. Please indicate which of the following student safety behaviors that you have observed since the seat belts were installed. (Select all that apply)

- Students hitting each other with the belts
- Backpacks or other objects getting tangled in the safety belts
- Students having trouble getting buckled when they first sit down (more than the first few days)
- Students having trouble getting out of the belts (more than the first few days)
- Other: <text box>
- None (I have not noticed any changes in student behavior or there are no safety problems related to the seat belts)

Q19. The following table lists some safety behaviors that may have changed since the seat belts were installed. Please read through each behavior and indicate whether that behavior has decreased, increased, or stayed the same since the safety belts were installed.

	Increased	Stayed the same	Decreased	N/A
Students hitting each other with their hands or other objects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students standing (rather than sitting) while the bus is moving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students out of their seats while the bus is moving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of written citations				
Student safety in a crash or during a hard braking event or sharp turns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER (please enter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you responded OTHER, please explain the details: <text box>

Stress & Distraction

Q20. Since I began driving a bus with seat belts, my stress level has:

Decreased greatly	Decreased moderately	Decreased slightly	Remained the same	Increased slightly	Increased moderately	Increased greatly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q21. If you feel that your stress level has changed, please explain how/why you feel it has changed: <text box>

Q22. Since I began driving a bus with seat belts, my distraction level has:

Decreased greatly	Decreased moderately	Decreased slightly	Remained the same	Increased slightly	Increased moderately	Increased greatly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q23. If you feel that your distraction level has changed, please explain how/why you feel it has changed: <text box>

Q24. Since I began driving a bus with seat belts, my ability to concentrate on driving tasks has:

Decreased greatly	Decreased moderately	Decreased slightly	Remained the same	Increased slightly	Increased moderately	Increased greatly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q25. If you feel that your ability to concentrate on driving tasks has changed, please explain how/why you feel it has changed: <text box>

Q24. Since I began driving a bus with seat belts, my ability to concentrate while students are loading/unloading has:

- | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Decreased
greatly | Decreased
moderately | Decreased
slightly | Remained
the same | Increased
slightly | Increased
moderately | Increased
greatly |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q25. If you feel that your ability to concentrate while students are loading/unloading has changed, please explain how/why you feel it has changed: <text box>

Final Comments

Q26. Are there any ways that you think school bus application or use can be improved for your district/agency? How would you improve these?

Q27. Please provide any additional comments here, especially related to what you believe are the positives and negatives of using seat belts on school buses. Please also indicate if you have any comments about school district policy, or if you notice any differences in belt use or enforcement by grade level.

Completion Notice

Thank you for completing the survey! Your feedback is very helpful. Please contact Bryan Katz at [redacted] or bryan.katz@toxcel.com with any questions.

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U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

