

How Safe is School Bus Transportation?

By DIANA NAUSS
CAP TIMES CONTRIBUTOR
DSN5008@PSU.EDU

School buses are ranked seven times safer than any motor vehicle on the road that is less than 10,000 pounds. In the United States, approximately 450,000 public school buses travel over 4.3 billion miles. Pennsylvania accounts for over 300 million of the miles traveled in one year by school buses.

School buses are safer compared to small motor vehicles because of size, design, compartmentalization, and they are one of the only motor vehicles that have a personal traffic control system. This includes features such as the stop sign, swing arm, fog light, and emergency door. Compartmentalization is the only reason that allows school buses to not have seat belts.

Pennsylvania only requires seat belts on school buses less than 10,000 pounds, unlike neighboring states New York and New Jersey that require seat belts in every school bus, no matter what size. Every year in the United States, there are over 815 fatalities related to school transportation. Seventy-five percent of all school transportation related fatalities are due to vehicle transportation of students, not from school buses, 22 percent of fatalities are due to accidents involving students walking or bicycling, and 2 percent of fatalities are due to school bus transportation.

School buses are ranked seven times safer than any motor vehicle transportation on the road, including cars, vans, small trucks, and motorcycles. In the United States, approximately 450,000 public school buses travel over 4.3 billion miles to transport over 23.5 million children every year. Pennsylvania accounts for over 300 million of the miles traveled in one year by school buses. School buses are a multi-use vehicle that transports students not only to and from school, but to sports, games, camps, competitions, and other activities. They are one of the most widely used vehicles in the world.

Many important features on a school bus that attribute to the safety of passengers include the stop sign located on the side of every bus, automatic swing arm in front of the bus, fog light on top of the bus, and emergency exit on the back of the bus. School buses are literally a large vehicle with its very own traffic control system. Unlike cars, vans, small

buses, trucks, and other light motor vehicles less than 10,000 pounds, which still require a seat-belt, a full length school bus has compartmentalization.

Compartmentalization refers to the distribution of crash forces experienced by passengers. This is a vital feature that makes the safety standards of buses better than other motor vehicles and be without the requirement of having seatbelts and booster seats for children under 8 years old. School buses of many different sizes and styles are crash tested by the NHTSA, National Highway Traffic Safety Administration, every couple of years into barriers at different angles with crash dummies, just like crash tests performed on cars. These tests have concluded that seatbelts on a school bus would not help passengers significantly. With the strong energy absorbing seat backs, all of the seats closely-spaced, height specific, and padding specific, a seat belt was concluded through testing to be an unnecessary safety feature.

"In a head-on collision, a seat belted child in a school bus is thrown forward, but the lap belts hold the lower torso in place, forcing the upper body to pivot around the belt. This puts the brunt of the impact on the head and neck as they strike the rear of the seat in front of them. The backlash of the collision then forces the head and neck to snap backward. Conversely, an unbelted child strikes the padded seat in front with their entire body and the crash forces are spread out over a larger part of the body," said Danielle Klinger, Community Relations Coordinator for the Pennsylvania Department of Transportation.

"Compartmentalization is the ideal protection for our children because it provides a passive protection for each passenger. But for compartmentalization to be in effect, students must be seated at all times when the bus is in motion," said Klinger. Children like to turn sideways to engage in conversation with friends, switch seats while the bus is in motion, lean partially in the aisle, stand up on school buses, sit without their feet on the floor, and more.

If Pennsylvania required seatbelts on all school buses, like neighboring states New York and New Jersey, there would be a great amount of money needed. There would be a need for more buses, bus drivers, money for maintaining seatbelts, and fees for seatbelt installation. Seatbelts would also limit the amount of students

sitting on school buses two passengers per seat. Seatbelts, unlike compartmentalization, would help save passengers if a bus was to roll over.

A lot of mixed controversy surrounds the issue of safety belts inside the school community. While talking to parents from Saint Catherine Laboure School and Lawton Elementary School in Swatara Township, many different reactions were received when asked if seatbelts should be installed on all school buses in Pennsylvania. Lauren Dancer, 28, felt it would benefit her daughter Mia, 6, who is riding a school bus for her first year.

"Unfortunately, in today's world there are enough dangers and threats, even just in elementary school. I don't see why taking this extra precaution in keeping our children safe could hurt although the cost to do so, as well as to budget this money, I would think that the seatbelts would be money better spent. She's so tiny and I just feel she would be better with a seatbelt. Her feet can't even touch the ground yet sitting in a seat" said Dancer.

"I agree for the most part (if seatbelts should be on school buses), I mean that would be a lot of money spent on seatbelts. That money could go toward other things for the school like books and equipment. I wouldn't be against it if the State decided to put seatbelts on, but just don't think they really need it yet being that I never hear anything about school bus crashes really. You hear more about students getting shot in schools. The money I think should go towards something else for my kids," said Chris Dooley, parent of two children, Mason, 5, and Natalya, 9, who both ride the school bus. Both schools feature all day kindergarten. The range of students on school buses in Pennsylvania can range from kindergarten through 12th grade.

"The money would be better spent on classes advising or teaching kids about exiting school buses and getting on school buses safely. That is where majority of the fatalities take place in school bus related incidents. It's when the child is getting on or off the bus," said Sam Richie, Regional Program Manager for the National Highway Traffic Safety Administration. Every year in the United States, there are over 815 fatalities that are related to school transportation. Out of the 815 fatalities, 75 percent of fatalities are from passenger car transportation to and from school, 22



Photo courtesy of Laughparty.com

percent due to students walking or bicycling, and 2 percent are due to school bus transportation. The average amount of fatalities due to school bus transportation is less than 16 fatalities per year.

The NHTSA believes the improvement of loading zones for passengers of school buses is where improved safety measures are really necessary. Majority of fatalities occur outside of the school bus are most commonly due to motorists not obeying traffic laws and happen within 15 feet of the school bus. In Pennsylvania it's a law while driving to stop when a school bus has made a stop. The number of school bus related fatalities in loading zones continues to increase as drivers of motor vehicles fail to stop and illegally drive past. Many children are also killed because of bus drivers not able to see students fully around the outside of the bus. Children climb under the bus to retrieve fallen items that have rolled under the bus, or run up along side of a bus in the school bus driver's blind spot, an area referred to by drivers as a place out of sight, or behind the bus. Safety classes have featured tips for educating children about school buses.

American Red Cross features seven tips for school bus safety that have been featured in many school bus safety programs. First, line up facing the school bus door, not along the side of the school bus, 2nd Don't play in the street while waiting for the school bus, 3rd carry your belongings in a backpack or book bag, 4th never reach under a school bus to get anything that has fallen under the bus, 5th after exiting the school bus move immediately onto the sidewalk, out of the way of traffic, 6th, wait for a signal from the bus driver before you cross the street, and 7th walk at least ten

steps in front of the bus driver can see you, and never cross the street behind the school bus.

Since 1997, Penn DOT has practiced Operation Safe Stop once a year, every third week of October during National School Bus Safety Week, to help increase the safety of loading zones around school buses. During this time contractors, law enforcement, school transportation directors, and school bus drivers come together as a team to report violations of motor vehicles not obeying the school bus stop law.

The witnessing of a motor vehicle failing to stop for school buses are reported to law enforcement, investigated, and then issued a citation. Out of the citations written, 70 percent of the drivers are convicted as charged. Over 1,000 convictions occur each year aided by Operation Safe Stop in Pennsylvania. Drivers charged with a conviction must then pay a \$250 fine, serve a 60 day mandatory driver's license suspension with no allowance for an occupational limited license, and five points added to their driver's license. "Though this seems kind of harsh, a continuous raise in the price of a fine for violating the School Bus Stop Law could maybe help to lower the amount of drivers illegally passing stopped school buses," said Michael Martin, Executive Director for the National Association for Pupil Transportation. The \$250 fine amount increased from \$100 in the past four years.

The School Bus Stopping Law, though it is the greatest contributing factor for the number of fatalities in school bus-related incidents, factors based on the actions of school bus drivers and contractors has also raised an issue among many years for the U.S. Department of Transportation.