



The Drive to Improve Safety

Bruce Buchanan

*With more than
25 million
students riding
a school bus each
year, everyone
must work
together to make
sure disasters
do not occur*

As any school board member can attest, it is difficult to overestimate the importance of transporting students safely. Every single school day, tens of thousands of buses drive millions of miles—down interstate highways, city streets, and back country roads. Every year, more than 25 million American students ride at least once on a school bus.

Given these demands, bus manufacturers constantly strive to produce safer and more comfortable student transportation. But school boards and district administrators also play key roles in providing safe school buses. Districts across the country are finding ways—some cutting edge, others tried-and-true—to improve bus safety.

School leaders also must provide the most important element for safety—a conscientious bus driver. But as is the case with many school-level positions, finding and retaining quality drivers has been a struggle for many districts, leading some to take innovative steps to keep the seats filled.

Buses built for safety

A 2002 study by the National Academies confirmed conventional wisdom: School buses are the safest way to transport children. Researchers examined 800 traffic fatalities where children died going to and from school. Only 20 of those deaths, or 2 percent of the total, were school bus related. The other 98 percent involved passenger vehicles, pedestrians, or bicyclists.

“A disproportionate share of these passenger vehicle-related deaths (approximately 450 of the 800 deaths, or 55 percent) occur when a teenager is driving,” the report noted.

Similarly, when National Academies researchers examined 152,000 non-fatal injuries to students traveling to and from school, they found that only 4 percent involved school buses.

That data doesn't surprise John O'Leary, president and CEO of Thomas Built Buses, Inc., the nation's largest bus manufacturer. The High Point, N.C.-based company builds approximately 15,000 buses every year.

“The school bus safety record is quite extraordinary,” O'Leary says.

Design is a big factor in that safety record, he continues. Buses are among the largest vehicles on the road, and their bodies are ribbed with a web of heavy steel. Plus, they are taller than the typical car or truck, so if they are in a collision, the point of impact generally is below the passenger compartment. The bright yellow exteriors make it easy for other drivers to see buses coming.

The interior of a school bus is built with safety in mind. Straight-backed seats are heavily padded and designed to absorb the shock of a collision—within the industry, this is referred to as “compartmentalization.” The padding, plus the narrow spaces between seats, protects passengers much like eggs in a Styrofoam carton.

Seat belts still are relatively rare, although the Chicago public schools, for example, have mandated seat belts on school buses since 1975. Five states, including Florida, also require school bus riders to use seat belts.

Some experts say that lap belts can be more dangerous than helpful, particularly for small children. During a sudden stop, a child's head and neck may whip forward if he or she is restrained by a lap belt. However, three-point lap-and-shoulder belts like the ones found in automobiles may provide greater protection. Some newer buses are equipped with lap-and-shoulder belts, although they can add thousands of dollars to the cost of a bus. In Australia, the federal government recently announced plans to spend \$40 million to equip school buses with seat belts.

Manufacturers are continuing to improve on their already successful formula. O'Leary says recently developed mirrors allow the driver a better range of visibility all around the bus. The United States and Canada, he notes, are two of only a handful of nations that transport students via yellow school buses.

“The message U.S. and Canadian parents have sent is, ‘We want our kids to be safe going to and from school and we are willing to pay for it,’” he says.

Taking the next safety step

While buses have a long, established track record of safety on the road, some districts are taking additional steps to ensure that students are safe en route to school.

The Mattoon School District in east central Illinois is turning to technology to improve safety. Starting in February, the district began installing GPS systems—devices that track a vehicle's movement via satellite.

“Our people wanted to be proactive,” says Mark S. Nelson, the district's transportation director. “We decided that we can either do this when someone makes us do it, or we can lead the pack and be a pioneer. It wasn't a hard sell at all.”

Each GPS device costs around \$850, plus a small monthly fee for the tracking service. Mattoon, which has 33 buses, now owns the devices and can move them to newer buses in future years.

Nelson says the real benefit of GPS technology is its archiving capability. The district tracks and records speeds, stop times, and stop locations for all buses. If there is a dispute involving a bus—for example, someone complains about a bus speeding or says the bus didn't run its regular route—Nelson and his staff have real evidence to resolve the problem.

In the not-too-distant future, Nelson says, GPS technology will allow districts to disable a bus remotely. He believes more states and districts will adopt GPS technology as they become more aware of its many benefits.

Vermont's Mount Anthony Union schools tried a more old-fashioned approach—hiring bus monitors to ride with students.

“This didn't come about because of fights or huge problems, but we didn't want those kinds of problems,” says Superintendent Wes Knapp. “If the climate on the bus isn't good, that can have an effect on the rest of the school day.”

This fall, Mount Anthony shifted sixth-graders to the district's new middle school. Some parents expressed concerns about the students riding the bus with older classmates, so Knapp and his staff devised the bus monitor plan to alleviate those worries. So far, feedback from parents has been extremely positive, he says.

The bus monitors aren't new employees. Instead, the district paid teacher assistants extra to ride the bus before and after school.

“It's only about an hour added to the work day,” he says, so the budget impact has been minimal, and the additional hours give employees a chance to make some extra money.

Bus monitors simply ride to and from school and ensure that students behave. Knapp says the driver shouldn't be expected to maintain order from the front seat—his or her job is to safely drive the bus, and Knapp says drivers don't need distractions from that important task.

Knapp sees the bus monitors as a logical extension of putting video cameras aboard buses, which he did in the early 1990s as a superintendent in New York State. Many districts now use on-board cameras to deter disruptive behavior, but Knapp says human monitors are even more effective because they can address bad behavior as it occurs, not just

record it for future punishment.

Comfort also a consideration

While safety is always the number one transportation consideration for any school board, school leaders increasingly are demanding more comfortable buses for their students.

Over the past decade, the start of the school year has gotten earlier and earlier in many districts, as schools try to pack as much instructional time in before state-mandated accountability tests. This has pushed the school start date to early to mid-August in many states.

But the August heat and cramped buses without air-conditioning can be a miserable combination for passengers. So air-conditioning is increasingly becoming a standard feature for new buses, particularly in the Sun Belt states. More buses also are being equipped with tinted windows to reduce the heat.

In addition, today's newly manufactured buses are equipped with air-ride suspensions for a smoother ride. Some buses even come with CD players and multiple sound speakers, so drivers can play music to make the long rides a little more pleasant.

Also, O'Leary says, modern school bus engines are much cleaner and more efficient than their predecessors. That is good news to children with asthma and allergies. "As far as overall comfort goes, it is much better today," he says.

State transportation directors, large private contractors, and school boards are increasingly sophisticated when shopping for new buses, O'Leary says. Many are asking for greater levels of comfort.

"There's a lot more information these days," he says. "There's a much freer exchange of information."

Staffing a concern

Of course, bus safety begins and ends with the person behind the wheel. All of the technological advances in the world won't protect students if a district cannot hire competent, responsible drivers.

And that has been a problem for many school boards. They often have trouble filling bus driver positions, which come with stringent background checks but little in the way of pay or benefits. The job can be hazardous, too: In September, a 16-year-old Battle Creek, Mich., student allegedly fired five shots at an occupied school bus in what police describe as an apparent gang-related incident.

California's Tracy Unified School District certainly faced a staffing problem. The district filled only about half of its more than 40 driver positions for the start of the 2006–07 school year. The biggest problem Tracy officials faced was that the bus driving jobs didn't offer enough hours for employees to qualify for benefits. Even after a bus driver was hired, the employee quickly left after landing full-time employment elsewhere. It got so bad that parents and even central office administrators had to drive bus routes to fill in the gaps.

"We were talking about, 'How do you take a part-time job and make it a full-time job to make it more attractive?'" says Casey Goodall, Tracy's associate superintendent for business.

The answer: "bus-todians"—drivers who work as custodians when they aren't driving a school bus. These bus driver/custodians receive a full-time salary and benefits, plus the district will train them to get a commercial driver's license.

As a result, the 16,500-student district had filled all but three of its vacancies when the 2007–08 school year started. Goodall says that the next step is another hybrid job: the bus driver/custodian/groundskeeper.

Kentucky's Fayette County Schools recently hired a recruiter to ensure that they had the 200 drivers they need to operate its fleet of buses. Other districts are opting to leave the driving to others, rather than go through the headaches of finding, hiring, and keeping a full roster of drivers.

Outsourcing of school transportation services is a long-standing, but growing, practice that can be found in urban, suburban, rural, and small-town districts alike. It is particularly popular in the Northeast and upper Midwest, although it remains rare in the South. Roughly one-third of American school bus passengers now ride on privately contracted buses; the largest contractors operate in multiple states and transport hundreds of thousands of students daily.

"The primary reason school districts do this is usually fiscal," says Robin Leeds, an industry specialist for the National School Transportation Association, an organization representing private bus carriers.

The rising cost of labor is one factor, Leeds says; the cost of replacing an aging fleet of buses is another. Leeds says private carriers typically can provide transportation more cheaply than a district-run department. Perhaps just as importantly, she says, outsourcing removes a large set of worries from a school board's crowded plate.

"It allows the school district to concentrate on its core function, which is educating children," she says.

Of course, hiring outside contractors to drive buses may cause safety concerns for some board members and parents. Leeds says that privately employed bus drivers must pass the same background checks and meet the same state requirements as any driver employed directly by a district. Furthermore, she says that boards can negotiate additional safety standards with the company hired to run the transportation system.

"It can be as specific as (board members) want it to be," she says. ■

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The police were on the scene before dawn on a cold January morning in New York, responding to a frantic call from a motorist who said two bodies were in the northbound lane of the four-lane highway. To get to their bus stop, two girls had had to cross a highway with no crosswalk or pedestrian signal and had been struck by a car.

In Michigan, a first-grader darted between two cars that were parked illegally to cross the street in front of the school. To his mother's horror, he was struck and killed by an SUV. The principal knew the illegal parking created an unsafe condition and had contacted the police to ticket drivers waiting for their children after school.

Injuries to students and tragedies such as these are becoming more common. According to the Nationwide Personal Transportation Survey, school bus service accounts for approximately 25 percent of trips and 28 percent of student-miles traveled during normal school travel hours. Passenger vehicles represent 60 percent of trips and 66 percent of student miles traveled.

Numerous elements make up the total picture of student transportation. Any one factor, when modified, can change another in terms of student safety. How and where you assign bus stops are factors that, with careful scrutiny, can reduce accidents.

What causes these accidents?

According to the Pupil Transportation Safety Institute, bus stop safety is a growing concern in many school districts. This increasing concern may be attributed to several factors, including the following:

- School bus accident statistics indicate that children are most at risk not when riding on the bus, but at the bus stop.
- The bus stop is the most safety-critical link in the school transportation chain.
- Parents and school officials worry about the vulnerability of children to abductions, sexual predators, other types of criminal activities, peer bullying, and harassment at bus stops.
- Many communities are faced with more traffic congestion and increasing numbers of impatient, aggressive drivers.
- Budget constraints have led to increased time pressures and potentially increased safety problems on bus routes.

Too often, the assignment of bus stops is based on a student's residence and the closest distance to an existing stop that has not had a safety evaluation. Disregard for the fact that students must cross busy streets or that blind spots exist for other motorists is often overlooked in the pursuit of the "cheapest way out."

Determining the safest location for a bus stop is seldom



The Right Stop

Edward F. Dragan

How to reduce student accidents and injuries

a black-and-white decision. No ready-made formula exists for quickly deciding exactly where to locate a bus stop or for determining when a stop change is warranted. However, by following a few procedures, districts can help to protect students from injury and the school system from the possibility of litigation.

The best way to ensure a high degree of bus stop safety is to treat each stop as unique. Directly observe the various options before deciding where to place a stop, and subject each stop assessment to a system of objective safety standards. No stop should be chosen if it does not meet those standards.

Criteria for selecting bus stops

The Pupil Transportation Safety Institute has four key elements for selecting and maintaining bus stops. They are:

■ **Written criteria:** This needs to be realistic and enforceable. All student transportation personnel should be involved in developing the criteria, which should answer the question of how a bus stop will be assigned and how it can be changed.

■ **Receiving and assessing stop change requests:** This should be handled in a consistent manner. When a bus stop is in dispute, the individual with the final authority to change the stop must observe the students at the stop, look at the condition of the location, and make a decision.

Hazards need to be assessed and options must be considered. Firsthand observation is the best way to achieve this goal.

■ **Evaluating the safety of all stops:** Yearly evaluations of bus routes and bus stops are a must, but the Pupil Transportation Safety Institute says few school districts or bus companies do them in a systematic fashion. Districts must develop an efficient, objective, and credible system for evaluating bus stops. For example, bus drivers should complete a route safety evaluation form after the initial practice run before the beginning of the school year.

■ **Staff roles:** Identify who is responsible for gathering and confirming initial student data, and assign a person to actually observe the physical environment at each newly proposed or changed stop. Also, you should assign a person to periodically observe and evaluate existing stops and monitor drivers to ensure routes and stops are not changed without authorization.

All of these are sound, logical steps that every district should take to avoid tragedies. They will help make your school bus stops safe places for students and can protect your district from costly litigation. ■

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