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CHANGING THE WORLD ONE CHILD AT A TIME—Elementary-School Kids Learn About Driver Safety

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PRE-DRIVER’S EDUCATION

DRIVER TRAINING IN FIRST GRADE?

All indicators tell us we need to start young

BY J.P. VETTRAINO PHOTOS BY TAMI KELLY-POPE AND JARED C. TILTON

Common sense and research concur: The younger you start, the better your chops. Racers know that the most competitive up-and-comers started in their single-digit years, learning car control in karts long before they were of legal driving age for the road. If early learning yields an advantage for competitive driving, why wouldn't the same hold true on the road, where the stakes are much higher for all? Apparently, it does. The cabal of insurers, regulators and self-appointed safety gurus finally may be starting to recognize a position this publication has long advocated: Skills training should be the norm for new drivers. Yet a growing movement among academics, researchers and other advocates suggests that skills-based training is only one educational prong in a rational approach to reducing carnage on our highways. Another is starting them young, giving them experience in thinking about driving and behavior long before they take the wheel.

As this thinking goes, in a society as mobile as ours, mobility-safety training should start almost as soon as formal education does. Clemson University’s Cruisers curriculum, introduced in South Carolina’s public schools, is becoming a model for such programs nationwide. Cruisers is research-based road safety instruction that begins in first grade. It’s designed to equip students with skills required to approach driving more responsibly and make appropriate decisions. One national transportation official has called it “the most innova-
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tive and creative lesson plan for traffic safety in this country."

Think of it as quarter-midgets or racing karts for those who will never race but will be driving for most of their lives. With nutrition, health, sex and basic consumer education now standard in most elementary-school curricula in the United States, one wonders why a program like Cruisers is not.

"Three million people have been killed in crashes since the advent of the car in this country," says Kim Alexander, director of Clemson's Automotive Safety Research Institute (ASRI). Every year, there are 110-plus fatalities a day—the equivalent of 110 people killed in an airplane crash every day, 365 days of the year—and we call them accidents. "Accident" implies a lack of responsibility.

"So why are we waiting until kids get behind the wheel to introduce them to traffic safety? Youth traffic-safety interventions should be designed for both elementary and middle school, to promote appropriate attitudes and behavior before children become novice drivers. That's when children are evaluating their environment, forming impressions and making important choices. That's where we can instill values that underlie a 'lifestyle of safety.'"

Alexander, to be sure, has a personal axe to grind. The Cruisers program is a product of ASRI, an institution she's helped forge from her own drive and ambition. Even more to the point, she suffered spinal-cord injuries in a car crash as a teenager (see sidebar) and has used a wheelchair since. Last but certainly not least, as ASRI's executive director, Alexander considers the sobering toll that poor driver preparation takes on our roads every day.

You've seen the statistics in detail here and elsewhere, but it bears repeating: Traffic crashes are the leading cause of death for all age groups through age 24. Not gun violence or drug abuse or sexually transmitted diseases—traffic crashes. That does not account for economic cost, serious injuries or the young people whose lives are immeasurably altered, as was Alexander's. The crash rate per mile driven among 16-to-19-year-olds is four times higher than it is for older drivers. We are failing our children and failing ourselves.

That realization moved Alexander, along with a discovery that "there was no program at the K-12 level doing justice to traffic safety." By the time she earned her master's degree in 1992, Alexander was thinking about a structured curriculum for an ongoing program in public schools. In 1994, while working for Clemson's Family and Youth Development cooperative extension, she applied for and received a $450,000 grant from NHTSA to develop a national model for a teen driver safety program.

Cruisers rolled out in four South Carolina high schools in 1997, because the grant so mandated and because it would reach those most immediately affected first. The goal was reducing teen highway deaths and injuries, which in South Carolina typically exceeded the national average by 50 percent or more, but Cruisers took a different tack. The curriculum was geared toward developing teen opinion shapers who might guide and influence their peers and carry rational approaches to

SAFE RACETRACK

tions are in place. The quarter-midget is now a state-of-the-art safety vehicle, with fire-suppression systems, ABS brakes, and a fuel-injection system that eliminates need for a manual firewall. The race track is designed to accommodate such cars, equipped with hand controls, manual clutches and, in some cases, even a brake paddle. So any one of us can participate in the sport, whether on the sidelines or in the driver's seat.
KIM ALEXANDER WAS
a model teen in Salem, South Carolina, population 125, but she started her last
day of high school sobbing at the injustice in the world. What fol-
lowed might be described as a fleeting lapse of judgment—some-
thing all of us have suffered dozens of
times—but this lapse cost
Alexandery dear. It also gave us
one of our most passionate, ded-
cated teachers and researchers in
the field of highway safety.

Alexander woke up eager that
morning in 1979, excited to be
graduating with 26 other seniors in
Salem. She’d earned good grades
and won a basketball scholarship
at a junior college, where she
hoped to continue wearing No. 13
and to enhance her on-court reputa-
tion as “Lightning in a Jar.” Then
her father told her that she wouldn’t
be able to use the family car that
day, and she got angry.

As she rode off with the girl-
friend who picked her up, she
made what would have been an
unthinkable choice just the night
before. She’d join some friends for
Senior Skip Day and head to a
local lake to party. And when one
of those friends suggested they get
something to celebrate with—at 18,
Alexander had reached what was
then the legal drinking age—she
found herself buying cheap wine.

The lapse lasted a few sips. Not
so angry, Alexander rethought her
situation and insisted that her
friends take her back to school.
It’s impossible to know if the small
amount of alcohol consumed con-
tributed to what happened next, but
the road was twisty, and it started
to rain. Alexander was belted into
the back seat of the Dodge Omni
when it hydroplaned about 25 feet
and spun backward into a tree.

There was no blood. No one in
the car seemed seriously hurt, but
the smell of gasoline was intense,
and when Alexander didn’t get out
of the potential deathtrap fast
enough, her friends dragged her
out. She was picked up from the
road by emergency workers and
at some point realized she couldn’t
move. She’d broken her neck.

“That night, I lay immobile in
the hospital, thinking. ‘This is your
graduation ... this is your life,’ ” she
says. “Those were the conse-
quences of the choice I’d made.
When you play the odds, even for
a brief moment, you never expect
you’ll be the one to lose.”

What followed was recovery,
therapy to help regain control of
her arms and three years of voca-
tional rehab. Two years into the
process, Alexander’s father was
killed in an alcohol-related car
crash, and when she finished
rehab, it was just Alexander and
her mother.

“I tried to find a way to fit in,
always wondering how I was going
to compete, and at some point, I
decided I had to do it and
enrolled at Clemson,” she says. “I
didn’t have an electric wheelchair,
because to use one, you needed a
van, and we couldn’t afford one. My
mom had to work full time, and her
shift started at seven a.m., so she
would take me to Clemson at six
in the morning, and I’d stay there
until she could come and get me.”

Custodial staff at the university
took a shine to the ever-present girl
in the wheelchair. They helped her
make it to her classes and cleared
“office space” for her in a supply
closet, running an extension cord
from the hallway so she’d have a
light to study by. As her studies
progressed, Alexander’s confi-
dence returned. Before she earned
her bachelor’s in marketing, she’d
won the Ms. Wheelchair South
Carolina title, and she’d been
asked to make her first motivational
speech.

Alexander graduated from
Clemson in 1988, nine years
after the car crash. By then, she’d
developed a presentation called
“Keeping in Motion,” based on her
personal experience, and was
sharing it with students and parents
throughout the South, urging peo-
ples to use their talents and seize
opportunities: “To survive, you have
to keep your eyes open and your
options alive and realize that you
may not always get a second
chance.”

In 1990, Alexander found a
position with Clemson’s cooperative
extension and began work on a
master’s in counseling and guid-
ance services. Shortly thereafter,
she successfully applied for her
first federal grant and launched
what would become the Cruisers
program. With more grants, she
joined forces with associate Philip
Pidgeon and established the
Center for Safety Research and
Education at Clemson. When
the university created its Interna-
tional Center for Automotive
Research in 2004, Alexander’s safety
center was endowed as the Automotive
Safety Research Institute.

“People tell me I overcompens-
bate because I’m in this chair, like
getting all A’s working on my mas-
ter’s and Ph.D.,” she says. “I don’t
know if that’s true. I would have
done something with my life, but in
all honesty, I don’t know that it
would be as meaningful. It gave me
my issue. I can’t think of one that
needs more attention, given the
carnage and the consequences of
what we’re dealing with.”

Alexander still lives in Salem,
about 20 miles from the Clemson
campus. Most of her energy is
directed toward ASRI, but she still
gives her “Keeping in Motion” pre-
sentation to Clemson’s freshmen
each fall, and she recently worked
with the National Institute for Driver
Behavior to establish a measurable
standard for accrediting commer-
cial driver-training courses.

She sees nothing remarkable
in her journey, and she’s aware that
her achievements would not have
been possible without her mother’s
commitment, the Clemson custodi-
al staff and the other students who
pushed her to class. But she’s also
proud of those achievements, de-
scribing ASRI as “a personal com-
mitment that became a program
and then an institute.”

“I have a knowledge base, part
of which can only be gained by ex-
perience, and it’s been a long curri-
culum,” she says. “If I look back at
where this started, it was with a
high-school senior not realizing the
life consequences of actions she
was taking. At one point in my life,
I made a choice that led me to be
sitting here, and I realize conclu-
sively that life doesn’t happen. We
create it.

“I want to leave the world a bet-
ter place than I found it, and I’m for-
tunate to know the one area I want
to focus on. I’m still excited that I can
be, somehow, contributing.” —JPV

safety and lifestyle decisions into adul-
thood. Initial success helped Alexander
ac-
quire more grants, and her research rein-
forced her assessment that “we are better
served starting at a younger age, where
there’s more willingness to adjust lifestyle.”

The program spread to middle schools
and then elementary schools, where the
curriculum might have its longest-lasting
impact. Cruisers focuses less on driver
skills and more on driver attitudes, knowl-
edge and decision making, through the de-
velopment of “life skills”: respect for self
and others, communication, responsibility,
self-awareness, assessing consequences
and problem solving. An interdisciplinary
approach allows it to be taught in several
classes, including health education, sci-
ence, math, computers, geography, art and
traditional driver’s ed programs.

The benefits were apparent early. At
every grade level, students who participat-
ed more quickly recognized high-risk traf-
ic situations and were more confident in
their ability to respond. In elementary
school, Cruisers kids embraced the idea of
being good passengers and respecting
the driver and increased their awareness
of potential threats to pedestrians and
bicyclists. Cruisers was certified as an
accepted curriculum in South Carolina
public schools. The state Department of
Transportation endorsed it, and the pro-

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The number of Cruisers lessons varies with grade level. Elementary topics include safety as passengers, pedestrians and bicyclists, as well as work-zone safety and understanding traffic-control measures. Instruction incorporates small-group discussions, behavioral rehearsal, role-play and simulations. Students might write the script for a public-service announcement addressing a traffic or pedestrian problem and then film a commercial.

Specifics of the curriculum matter less than the process, which is designed to imbue students with a rational, consistent approach to recognizing and solving problems and allow them to carry that approach to the driver's seat.

It's not just about driving, either—schools don't need yet another separate program layered atop the rest. The lifestyle-of-safety approach carries through to most aspects of student life. Data suggest that Cruisers students improve their scores on standardized tests. Fourth-grade students at Clemson Elementary, near the university, posted the highest scores in the district on English and writing tests, and scores have risen for each of the four years the school has participated. Older students demonstrate an appreciation of their responsibility and care about their leadership roles with younger ones.

The fourth-grade teacher says the program fires the students' interest in all
forms of learning by connecting the school curriculum to the mobile lives they lead outside the classroom. They also come to understand that their teachers are interested in them as individuals and care about their lives beyond school.

Billy Crank, community relations manager at nearby Michelin North America, which supports Cruisers, says he's seen remarkable improvements in participants' self-esteem: "The empowerment component seems to motivate these students. It brings them out and develops their leadership potential."

As Clemson launched its International Center for Automotive Research and Alexander's efforts through the cooperative extension evolved into ASRI, she and Philip Pidgeon, ASRI's assistant director for research, considered prospects to expand the safety curriculum's reach. The result was e-Cruisers, which enhances the Cruisers curriculum with up-to-date technology such as podcasts, blogs, Comic Life and iMovie.

Pidgeon says the objective is "a dynamic Wikipedia for traffic safety," using technology "as a vehicle that adds relevance and makes Cruisers boundless." The centerpiece will be a Virtual Conference Center connecting students with instructors and instructors with their peers around the country.

In October 2006, with support from Michelin, Apple and other sponsors, ASRI opened the first e-Cruisers Instructional Design Laboratory at Clemson Elementary. Similar centers are planned at schools in three adjacent counties. Students at Clemson use state-of-the-art laptops and iPods to study the Cruisers curriculum and share their work, including podcasts, with students at other schools. To date, 620 students have participated.

E-Cruisers is "approaching critical mass," says Pidgeon, and ASRI is busy seeking funding to take it national. But the basic objective—improving teen drivers out of the box and ultimately reducing traffic deaths and injuries—hasn't changed.

"I have the opportunity to speak to students and adults nationwide, offering them a look at the consequences of poor judgment," Alexander says. "I tell students my story and how a decision made in just a few moments can change your life and the lives of everyone around you. Their feedback and my research have convinced me that we need better training in two areas.

"First, we need to address lifestyle, motivation and attitude factors, starting with programs like Cruisers. Second, we need to focus on driving errors—skill deficiencies that contribute to teen crashes, such as anticipating hazards, overreacting or reacting too slowly."

Which brings us back to racers and that two-pronged approach. In March, ASRI announced a joint venture with the Richard Petty Driving Experience intended to exploit each organization's strengths. The National Safe Driving Program applies best practices in both classroom instruction and car control. ASRI has developed a curriculum emphasizing appropriate attitude and problem solving. Petty teaches skid management, two-wheels-off recovery technique and crash avoidance.

Equally important, ASRI will track results in an effort to convince insurers and regulators of the value of such programs. About 2500 teens will participate in the Safe Driving Program this year at 25 to 30 events. Petty executives say they could reach 100,000 teens a year through five school locations if resources were available.

Still, Cruisers demonstrates that teaching can start long before a new driver sits behind the wheel. In Alexander's view, laying the foundation for safe driving in elementary school is as important as reading, writing and arithmetic.

"A program like Cruisers should be required in every elementary school, just like the three R's," she insists. "We're finding that Cruisers is developing the three R's by giving students topical material that has relevance and meaning. A common thread for all students is that we live in a mobile society, and the ability to utilize the three R's is diminished if kids don't have skills to guide them safely through a world that can be dangerous."