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Evaluating the acceptability and feasibility of the I Promise Program: a driving program for families with young new drivers.

Votta E, MacKay M. *Inj Prev* 2005; 11(6): 369-72.

OBJECTIVES: To evaluate the acceptability and feasibility of the I Promise Program (IPP), a driving program developed for families with young new drivers (YNDs). **Design, setting, and SUBJECTS:** The IPP consists of a contract between parents and YNDs and a rear window decal (sticker). Program acceptability was assessed through four focus groups with 40 young new drivers (YND), two with 19 parents of YNDs, and two with 15 community members. To determine whether the program's design, materials, and procedures were working as planned, 51 families participated in a six month pilot project. Telephone and in-person interviews were conducted at months 1 and 6, respectively.

RESULTS: Participants had problems with the acceptability of the program's underlying message; content, format, and language of the materials; program cost; and proposed participant incentives. Thirty eight (75%) families completed the six month pilot. Most YNDs (75%) and parents (85%) identified the contract as a useful communication tool. Despite positive initial reactions, 50% of YNDs did not recall the content of the contract after six months. Sixty eight percent of families had problems with the decal (for example, did not stay affixed, colors faded) and only 17% of YNDs reported a lasting impact on their driving. Only 20% of families chose to continue in the program after the pilot.

Conclusions: These results highlight the importance of formative and process evaluation in the development of a new prevention strategy to assess a strategy's acceptability and feasibility. In response to participants' feedback, revisions made to the program's materials and delivery model included making its two key components—the contract and decal—available online, independent of each other, and free of charge.

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SSI Ad



Risky driving and lifestyles in adolescence.

Bina M, Graziano F, Bonino S. **Accid Anal Prev** 2005; ePub: ePub.

Several studies have shown that risky driving is especially prevalent among young drivers and recent research has pointed out that driving in adolescence should be investigated in the more general context of adolescent development. The first aim of this contribution was to analyze involvement in risky driving in a normative sample of 645 Italian adolescents, boys and girls, aged 14-17, through a self-report questionnaire. A second aim was to evaluate the association between risky driving and lifestyle, defined as involvement in other health risk behaviors and leisure activities. The main results showed that many adolescents drove cars and motorcycles without the required driving license and the most frequent offences were speeding and failure to maintain a safe braking distance. Gender and age differences were also investigated. Results concerning the association between risky driving and lifestyle showed that risky driving was not an isolated behavior. Boys who displayed risky driving practices were more likely to adopt a lifestyle characterized by high involvement in antisocial behaviors, tobacco smoking, comfort eating and time spent in non-organized activities with friends. Girls involved in risky driving were more likely to be involved in other risk-taking behaviors, antisocial behaviors and drug use.

Sleep-related car crashes: Risk perception and decision-making processes in young drivers.

Lucidi F, Russo PM, Mallia L, Devoto A, Lauriola M, Violani C. **Accid Anal Prev** 2005; ePub: ePub.

The aim of the present study is to analyse factors affecting worries, coping strategies and decisions of young drivers regarding the risk of sleep-related car crashes. Furthermore, the study also analyses whether framing the same information about sleepiness in two different linguistic forms influences: (1) the evaluation of the level of risk associated to a specific level of drowsiness (Attribute Framing problem); (2) the willingness to enact strategies to "prevent" sleepiness before night-time driving (Goal Framing problem); (3) the choice between two different ways, both of equal expected efficacy, of lowering drowsiness (Risky decision-making Framing problem). Six hundred and ninety-five young drivers [(57.6% females, 42.4% males); mean age 20.85 years (S.D.=1.2)] answered questions on drive risk perception and sleepiness, on nocturnal driving experience and on the strategies to deal with driver sleepiness, responding to one of the two different versions of the framed problems. A sub-sample of 130 participants completed the framed problems in both versions. The results show that experiences of sleep attacks and nocturnal driving frequency in the past 6 months affect both risk perception and the preventive strategies adopted. Furthermore, the manipulation on two out of the three problems (attribute and risky decision-making frames) significantly affected the respondents' evaluation.

Death and injury from motor vehicle crashes a tale of two countries.

Richter ED, Friedman LS, Berman T, Rivkind A. **Am J Prev Med** 2005; 29(5): 440-9.

OBJECTIVE: To determine why road deaths dropped by 33.9% in the United Kingdom, compared to 6.5% in the United States, between 1990 and 1999. **METHODS:** Deaths per billion vehicle kilometers traveled (D/BVKM), and case fatality rates (CFR) in the United States and the United Kingdom were tracked. Time trends in CFR can be used to track the direct effects of speed of impact. CFR is a crash-phase outcome that is independent of exposure, and varies approximately to the fourth power of the speed of crash impact. Joinpoint regression analysis was used to analyze changes in time trends of CFR.

RESULTS: In the 1990s, the decrease in deaths in the United Kingdom was attributable mostly to the 29.6% drop in the CFR. In the United States, the CFR dropped by only 6.6%. The United Kingdom introduced speed cameras and an array of speed-calming measures. By contrast, in the United States, use of speed cameras was extremely rare, and speed limits and speeds increased in 32 of the 50 states, mostly in 1995 and 1996, after which CFR actually rose ($p < .0001$). Intercountry differences in time trends in seat belt use, trauma care, vehicle kilometers traveled, congestion, and driving under the influence of alcohol (DUI), along with massive increase in use of higher-risk sports utility vehicles in the United States, did not account for the contrasting trends in deaths through the 1990s. But increases in DUI in the United States after 1997 may have contributed to increases in speed-related crashes.

CONCLUSIONS: The reductions in CFR, probably from small drops in speed of impact account for the disproportionately greater drop in death tolls in the United Kingdom compared to the United States. The temporal fit between drops in CFR and deaths following the introduction of speed cameras in the United Kingdom and increases in speed (speed creep), CFR, and deaths in the United States following raised speed limits suggests that diverging changes in speeds of impact accounted mainly for these changes. Use of D/BVKM to correct for exposure concealed the lack of progress after 1990 in the United States, since falling time trends in D/BVKM reflect increases in congestion. If the United States had implemented United Kingdom-type speed control policies and not raised speed limits, there would have been an estimated 6500 to 10,000 (approximately 16% to 25%) fewer road deaths per year during the period following speed-limit increases (1996 to 1999), including many DUI-related deaths. Reductions of up to 50% are now achievable based on newer population-wide strategies for speed control.



Cannabis intoxication and fatal road crashes in France: population based case-control study.

Laumon B, Gadegbeku B, Martin JL, Biecheler MB. **BMJ** 2005; ePub: ePub.

OBJECTIVES: To evaluate the relative risk of being responsible for a fatal crash while driving under the influence of cannabis, the prevalence of such drivers within the driving population, and the corresponding share of fatal crashes. **DESIGN:** Population based case-control study. **PARTICIPANTS:** 10, 748 drivers, with known drug and alcohol concentrations, who were involved in fatal crashes in France from October 2001 to September 2003.

MAIN OUTCOME MEASURES: The cases were the 6,766 drivers considered at fault in their crash; the controls were 3006 drivers selected from the 3,982 other drivers. Positive detection of cannabis was defined as a blood concentration of Delta(9)tetrahydrocannabinol of over 1 ng/ml. The prevalence of positive drivers in the driving population was estimated by standardising controls on drivers not at fault who were involved in crashes resulting in slight injuries.

RESULTS: 681 drivers were positive for cannabis (cases 8.8%, controls 2.8%), including 285 with an illegal blood alcohol concentration (≥ 0.5 g/l). Positive cannabis detection was associated with increased risk of responsibility (odds ratio 3.32, 95% confidence interval 2.63 to 4.18). A significant dose effect was identified; the odds ratio increased from 2.18 (1.22 to 3.89) if $0 \leq 5$ ng/ml. The effect of cannabis remains significant after adjustment for different cofactors, including alcohol, with which no statistical interaction was observed. The prevalence of cannabis (2.9%) estimated for the driving population is similar to that for alcohol (2.7%). At least 2.5% (1.5% to 3.5%) of fatal crashes were estimated as being attributable to cannabis, compared with 28.6% for alcohol (26.8% to 30.5%). **CONCLUSIONS:** Driving under the influence of cannabis increases the risk of involvement in a crash. However, in France its share in fatal crashes is significantly lower than that associated with positive blood alcohol concentration.

Safety and economic impacts of photo radar program.

Chen G. **Traffic Injury Prev** 2005; 6(4): 299-307.

Objective. Unsafe speed is one of the major traffic safety challenges facing motorized nations. In 2003, unsafe speed contributed to 31 percent of all fatal collisions, causing a loss of 13,380 lives in the United States alone. The economic impact of speeding is tremendous. According to NHTSA, the cost of unsafe speed related collisions to the American society exceeds \$40 billion per year. In response, automated photo radar speed enforcement programs have been implemented in many countries. This study assesses the economic impacts of a large-scale photo radar program in British Columbia. The knowledge generated from this study could inform policy makers and project managers in making informed decisions with regard to this highly effective and efficient, yet very controversial program.

Methods. This study establishes speed and safety effects of photo radar programs by summarizing two physical impact investigations in British Columbia. It then conducts a cost-benefit analysis to assess the program's economic impacts. The cost-benefit analysis takes into account both societal and funding agency's perspectives. It includes a comprehensive account of major impacts. It uses willingness to pay principle to value human lives saved and injuries avoided. It incorporates an extended sensitivity analysis to quantify the robustness of base case conclusions.

Results. The study reveals an annual net benefit of approximately C\$114 million in year 2001 Canadian dollars to British Columbians. The study also finds a net annual saving of over C\$38 million for the Insurance Corporation of British Columbia (ICBC) that funded the program. These results are robust under almost all alternative scenarios tested. The only circumstance under which the net benefit of the program turns negative is when the real safety effects were one standard deviation below the estimated values, which is possible but highly unlikely. **Conclusion.** Automated photo radar traffic safety enforcement can be an effective and efficient means to manage traffic speed, reduce collisions and injuries, and combat the huge resulting economic burden to society. The cost-effectiveness of the program takes on special meaning and urgency when considering the present and future government funding constraints. The application of the program, however, should be planned and implemented with caution. Every effort should be made to focus on and to promote the program on safety improvement grounds. The program can be easily terminated because of political considerations, if the public perceives it as a cash cow to enhance government revenue.

Are car drivers holding a motorcycle licence less responsible for motorcycle-Car crash occurrence? A non-parametric approach.

Magazzù D, Comelli M, Marinoni A. **Accid Anal Prev** 2005; ePub: ePub.

The purpose of this work is to evaluate the effect of a specific motorcycle licence, held by car drivers, in responsibility for motorcycle-car crashes. The data were provided by a multicentric case-control study (MAIDS) regarding the risk of crash and serious injuries of motorcyclists. A non-parametric method, classification and regression tree (CART), was used to accomplish the objective, and then compared to standard unconditional logistic regression. Drivers owning a motorcycle licence turned out to be less responsible for motorcycle-car crashes than drivers who do not have one; both types of analysis are consistent with this result. It is reasonable to assume that car drivers who hold a motorcycle licence have acquired more ability in riding and controlling two wheeled vehicles than drivers without a licence, and this may help them in predicting motorcycles manoeuvres.



Graduated driver licensing in Wisconsin: does it create safer drivers?

Fohr SA, Layde PM, Guse CE. **WMJ** 2005; 104(7): 31-6.

OBJECTIVES: The purpose of this study was to measure the effectiveness of Wisconsin's graduated driver licensing law and determine whether a reduction in crash rates was due to reduced exposure, safer driving, or both. **METHODS:** General population crash rates for 16 and 17 year olds were computed for years before and after graduated drivers licensing. The induced exposure method was used to measure exposure and compute the odds ratio of at-fault crash involvement. **RESULTS:** For 16 year olds, general crash rates declined 13.8% while injury crash rates declined 15.6%. For 17 year olds, crash rates declined 6.2% for all crashes and 5.8% for injury crashes. There was no statistically significant change in the odds ratio of at-fault crash involvement for 16- or 17-year-old drivers, relative to the reference group. After graduated drivers licensing, 16-year-old drivers were more likely to have at least 1 adult present and less likely to carry 2 or more teen passengers. There was no statistically significant effect on driving habits by time for 16 year olds.

CONCLUSIONS: Graduated driver licensing in Wisconsin has resulted in a drop in the general population crash rates for 16 and 17 year olds. This decrease is the result of reduced exposure to the risk of collision rather than safer driving by teens.

Examining the Effects of Fatal Vision Goggles on Changing Attitudes & Behaviors.

Jewell J, Hupp SD. **J Prim Prev** 2005; ePub: 1-13.

This study investigated the effectiveness of the Fatal Vision(TM) goggles (goggles that simulate the visual impairment caused by alcohol or other drugs). College students (N = 251) were randomly assigned to one of four groups including two control groups, a group wearing the goggles, and a group watching those wearing the goggles. Attitudes and behaviors toward drinking and driving were assessed immediately prior to and after the intervention, and then again at a four-week follow up. The group wearing the goggles reported significantly greater declines in accepting attitudes toward drinking and driving compared to the other groups at the immediate post-test. However, these differences disappeared after four weeks. Also, the change in attitude was not accompanied by a similar decrease in drunk driving behaviors. **Editors Strategic Implications:** School and agency administrators, seeking to reduce unacceptably high rates of drinking and driving, will benefit from this well-designed longitudinal experiment. Replication will be necessary, but the authors present strong evidence that this is a prevention strategy that does not result in behavioral change.

Impairment related to blood amphetamine and/or methamphetamine concentrations in suspected drugged drivers.

Gustavsen I, Mørland J, Bramness JG. **Accid Anal Prev** 2005; ePub: ePub.

Experimental studies have investigated effects of low oral doses of amphetamine and methamphetamine on psychomotor functions, while less work has been done on effects of high doses taken by abusers in real-life settings. There are indications that intake of high doses may impair traffic related skills, and that abuse of amphetamines may cause hypersomnolence at the end-of-binge. The present study aimed at investigating the concentration-effect relationship between blood amphetamines concentrations and impairment in a population of real-life users. Eight hundred and seventy-eight cases with amphetamine or methamphetamine as the only drugs present in the blood samples were selected from the impaired driver registry at The Norwegian Institute of Public Health. In each case the police physician had concluded on whether the driver was impaired or not. 27% of the drivers were judged as not impaired, while 73% were judged as impaired. There was a positive relationship between blood amphetamines concentrations and impairment. The relationship reached a ceiling at blood amphetamines concentrations of 0.27-0.53mg/l. Younger drivers were more often judged impaired than older drivers at similar concentrations. Despite the performance enhancing qualities of amphetamines demonstrated in some low dose laboratory experiments; this study revealed a positive relationship between blood amphetamines concentration and traffic related impairment.

Does public education improve rail-highway crossing safety?

Savage I. **Accid Anal Prev** 2005; ePub: ePub.

Improvements in rail-highway grade crossing safety have resulted from engineering, law enforcement, and educating the public about the risks and the actions they should take. The primary form of the latter is a campaign called Operation Lifesaver which started in the 1970s. This paper uses a negative binomial regression to estimate whether variations in Operation Lifesaver activity across states and from year-to-year in individual states are related to the number of collisions and fatalities at crossings. Annual data on the experience in 46 states from 1996 to 2002 are used. The analysis finds that increasing the amount of educational activity will reduce the number of collisions with a point elasticity of -0.11, but the effect on the number of deaths cannot be concluded with statistical certainty.



(from page 2)

do with comfort and enjoyment. Perhaps we have been too concerned with safety and we should be more concerned with comfort and mobility if we want driver education to thrive? Please let me know what you think. Should we be more focused on promoting comfort and mobility when it comes to promoting driver education?

(from page 7)

costs a teen should be aware of. Such costs include insurance, gas, vehicle registration, and parking decals. Most states require car insurance and it is the responsibility of the teen driver to understand their insurance and the importance of such a service and be prepared to contribute to this expense. Depending on the contract, some teens may be responsible for some or all of the costs mentioned above. The

contract may use these additional costs as a way to teach teen drivers about the financial responsibility associated with vehicle ownership and operation.

Consequences

Should the teen violate the agreement set forth by the Parent-Teen Agreement, the teen should be aware of all consequences. For example, if the teen violates a rule or regulation, they may be faced with losing driving privileges for a certain amount of days, weeks, or even months. Another possible repercussion may be that the amount of miles a teen is allowed to drive weekly be decreased or the teen may face restrictions in the number of passengers they are allowed to have or they may have to pick up some extra household chores.

Should the teen not be responsible for their own insurance or gas, another repercussion to violating the contract may

be taking over one, or both of the financial responsibilities. If a teen receives a ticket, s/he must be aware of both the legal consequences, financial consequences and the Parent-Teen consequences. However, the contract may also reward good behavior. Teens who exhibit strong, mature and respectful driving performance may receive positive feedback in the form of an increase in driving privileges. Feedback is the best way to reinforce behavior and is especially important when learning the complex task of driving.

Hopefully, this article has provided useful information regarding the role of the teen in the Parent-Teen Agreement. The goal of the contractual agreement isn't to make teen driving life difficult, but to help reinforce that driving is a dangerous and risky privilege and it must be respected and treated with maturity.

Research Abstracts and Reports

Hazard perception and driving experience among novice drivers.

Sagberg F, Bjørnskau T. **Accid Anal Prev** 2005; ePub: ePub.

The crash risk of novice drivers decreases rapidly during the first few months of post-licensing driving, indicating that some important safety-relevant traffic skills are learnt during this period. The present study tested the hypothesis that the risk decrease is related to improved hazard perception skills. A video-based hazard perception/reaction test, measuring reaction times to 31 traffic scenes, was administered to three groups of drivers, having held a licence for 1, 5, and 9 months, respectively, and to a group of drivers who had held their licences for several years. Average reaction times tended to decrease with experience, but the decrease was not significant. There were some significant differences in the expected direction for individual test items, indicating a possible effect of experience. One half of the situations were presented together with a secondary task, in order to investigate effects of increased mental load on hazard perception. Male novice drivers had relatively longer reaction times with the secondary task, compared to both female novice drivers and male experienced drivers. It is concluded that hazard perception as tested here is probably only a minor factor in explaining the initial risk decrease among novice drivers.

Use of drugs of abuse in less than 30-year-old drivers killed in a road crash in France: A spectacular increase for cannabis, cocaine and amphetamines.

Mura P, Chatelain C, Dumestre V, Gaulier JM, Ghysel MH, Lacroix C, Kergueris MF, Lhermitte M, Moulsmas M, Pépin G, Vincent F, Kintz P. **Forensic Sci Int** 2005; ePub: ePub.

A collaborative study was conducted in France in order to determine the prevalence of cannabinoids, opiates, cocaine metabolites and amphetamines in blood samples from drivers killed in road accidents in 2003 and 2004 and to compare these values with those of a previous study performed during the period 2000-2001 involving 900 drivers. Blood samples were provided from 2003 under 30-year-old drivers, killed in a traffic accident. Drugs of abuse were determined by gas chromatography-mass spectrometry using the same analytical procedures in all the 12 laboratories. The most frequently observed compounds were by far cannabinoids, that tested positive in 39.6% of the total number of samples. Delta(9) tetrahydrocannabinol (THC), the most active of the principle constituents in marijuana (cannabis sativa), was detected in the blood of 28.9% drivers and was the single drug of abuse in 80.2% of the positive cases. It was associated with amphetamines in 7.4% and with opiates and cocaine in 1.9 and 4.8%, respectively. Amphetamines were present in 3.1% of the total number of samples, cocaine metabolites in 3.0% and opiates in 3.5%. When comparing these results with those of a previous study performed 3 years before, a significant increase is observed for THC (28.9% versus 16.9%), cocaine metabolites (3.0% versus 0.2%) and amphetamines (3.1% versus 1.4%). This study demonstrates the critical necessity of implementing in France as soon as possible systematic roadside testing for drugs of abuse.



(Oregon from page 10)

research studies and data analysis.

∑ Create legislative concepts.

- 1. Requiring Driver Education for all new young drivers under 18
- 2. Reimbursement for all approved Driver Education providers
- 3. GDL restrictions extended from 6 to 12 months
- 4. Low Income Incentive for the Driver Education Program
- 5. Cell Phone usage in GDL

The Oregon Driver Education program is saving lives, reducing injuries, dramatically reducing the impact of teen driving and is making our newest drivers better and safer.

(Robbie from Page 2)

∑ Developing comprehensive driver education and behind-the-wheel training curricula requires an understanding not only of traffic safety, but also how teenagers learn.

∑ Training is necessary for skill development and proficiency in any activity, and logically, driver education and training should provide such benefits for novice drivers.

∑ Despite the dramatic changes in vehicles, highways, and the driving environment over the past 56 years, the approach to driver education has changed little.

While the above are just a few of the comments from NTSB they do illustrate the need for serious change in driver education.

Researchers acknowledge that past studies have not controlled for exposure when evaluating driver education programs. In other words, driver education students have been compared to non drivers. For many years driver education has been held to a higher standard of evaluation than other countermeasures. The false concept that driver education causes early licensure has caused researchers to not control for exposure when comparing trained and untrained drivers. Obviously drivers who do not drive are going to have fewer crashes than trained drivers who do drive.

What the future holds for any of us, and in particular, driver education is a good guess. What I can predict is a continued interest at the federal level to do more in support of driver education. We see changes as each of these



stakeholders continues to push for changes in driver education. I believe the changes will be positive and will be supported by all of us in driver education.

I have heard others say we must think outside of the box. I certainly agree this thinking and encourage all of us to be bold and consider what driver education should be in the years ahead.

(from page 5)

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(from page 8)

“pretzel steering” (palming the wheel or locking crossed arms), 140 used hand over hand, 21 used underhand steering (reaching across to pull down the inside of the wheel on the opposite side), some used combinations.

Results

Out of 286 runs through the course, knocked-down-cones represented 97 separate crashes, the majority due to the inability to ABS brake-and-turn effectively and simultaneously. Many drivers didn't turn the steering wheel enough to negotiate tight turns due to hand position and difficulty to manipulate. Many entered maneuvers with more momentum than the tires could influence or off-balanced cars, sabotaging the handling. Most drivers felt they would do better with practice, the majority of hit cones (74) were hit on the drivers' first runs. Learning **what you can't do** can be motivation to improve. Of those who mishandled the car, most rationalized it was due to the car's inability.

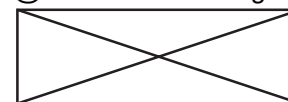
Conclusions, Hunches

1. Safety and technological features may have no influence on performance preparedness for these test situations and may have less effectiveness in more threatening, hazardous situations.

2. These drivers, automotive dealership personnel, sell the safety benefits of the product but may not be able to access or utilize (or evaluate) the crash avoidance benefits and demonstrate inabilities that may be generalized to the public.

3. Multiple, simulated attempts (which are not available in sudden emergency situations) improved both the understanding of the systems and the use of the system improving personal performance within the capabilities of the vehicle(s).

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than 475 instructors have gone through training established by minimum standards of competency. A group of instructors completed the trainer of trainers conducted by the American Driver Traffic Safety Education Association (ADTSEA). Last year more than 47 teacher preparation courses were conducted to more than 300 instructors.

5. A national study completed in Oregon in January 2005 reviewed teen driving records, including 16, 17, 18 and 19-year old drivers. It compared those that had 50 hours of driving practice and a formal driver education course, against those that chose 100 hours of driving practice with their parents and no driver education course.

a. The crash rate for the teens taking formal driver education was 11-21% LOWER than those taking 100 hours of practice time with their parents.

b. The traffic conviction rate for the teens taking formal driver education was 39-57% LOWER than those taking 100 hours of practice time with their parents.

c. The driver license suspension rate for the teens taking formal driver education was 51-53% LOWER than those taking 100 hours of practice time with their parents.

6. 2005 Teen Licensing Survey was published through ODOT Research Unit that contracted with the University of Oregon Survey Research Laboratory to conduct a study on parents, and teen's attitudes, views, and behavior about newly licensed teens. The study's goal was to obtain statistically valid and reliable information concerning a wide variety of transportation issues such as opinions and attitudes on accidents and crashes, instruction, risky behavior, driving behavior, parent rules and employment.

7. The Legislature increased funding to \$210 per student completing an approved driver education program.

Recommendations for Improvement

The Oregon Transportation Safety Action Plan (OTSAP) envisions a future where Oregon's transportation-related death and injury rate continues to decline. This renewed OTSAP encourages us to develop partnerships among state and local governments,

community groups, businesses, and the media to achieve a safer transportation system. With a shared commitment, the actions in the plan can be effectively implemented.

The 2004 Oregon Transportation Safety Action Plan is a living document that gives direction to our efforts and guides investment decisions. The sixty nine actions can be considered Oregon's transportation safety agenda for the next twenty years. Driver education is highlighted as a one of the nine key actions—Driver education will be given highest priority for implementation by the year 2010. In implementing these key actions, consideration should be given to those geographical areas with the greatest needs, based, in part, on an analysis of transportation crash data.

OTSAP ACTION 10 – Expand Driver Education in Oregon

Improve and expand the delivery system for driver education in Oregon. Consider the following in designing a model program:

- Consider legislation to make driver education mandatory for new drivers under age 18.

- Evaluate the possibility of funding the increased cost of providing this additional training by raising learning permit fees. (Completed)

- If feasible, by the year 2015 extend this requirement to all persons seeking their first driver license.

- Establish new and improved standards to support quality driver and traffic safety education programs.(Completed)

- Establish a definition of what a model driver is in terms of knowledge, skill, behavior and habits. Once the definition is established, design a curriculum that is aligned with the expectations of a model driver. The curricula should address content, methods, and student assessments.(In Progress)

- Establish standards for teacher preparation programs that fully prepare instructors to model and teach the knowledge, skill behavior and habits needed. These standards should include specific requirements for ongoing professional development.(Completed)

- Evaluate the possibility of

establishing a licensing process that measures driver readiness as defined by the model driver, and employs a process that facilitates the safety means to merge the learning driver into mainstream driving.

- Establish program standards that apply to every driver education/training program/school. (Completed)

- Develop oversight and management standards that hold the driver education system accountable. These standards should encourage quality and compel adherence to program standards.

- Identify and promote strategies that establish a driver and traffic safety education system. This system should promote lifelong driver learning, and foster a commitment to improve driver performance throughout the driver's life span.

- Create partnerships to support driver education. (Continuing)

- Identify and promote best practices for teaching and learning among and between parents, educators, students and other citizens. (In Progress)

Priority Driver Education Issues For The Next 18 Months Include:

- ∑ Complete the OAR Revision Process (6 month process).

- ∑ Assist providers in marketing, curriculum development and instructor training.

- ∑ Continue to partner with DMV to support quality driver and traffic safety education.

- ∑ Promote and work with school/communities to offer driver education through schools, community colleges and/or educational service districts.

- ∑ Update the Oregon Driver Risk Prevention Curriculum.

- ∑ Conduct regional curriculum workshops in the winter and spring.

- ∑ Conduct and monitor Trainer of Trainers activities.

- ∑ Monitor providers of driver education (conduct at least 25 on site inspections).

- ∑ Implement strategies of the Oregon Transportation Safety Action Plan for improving the quality and delivery of driver education.

- ∑ Provide a public awareness campaign to gain support for requiring driver education by using the recent (page 11 Oregon)



Oregon Driver Education Update

John L. Harvey, Program Manager Driver Education

Historical Background

Driver Education: Coordinates efforts to improve driver education thereby reducing fatal and injury crashes in first time drivers through:

- ∑ Coordination of Driver Education course content;
- ∑ Certification of public and private driver education providers;
- ∑ Public information, education programs and resources;
- ∑ Oversight of student driver training fund for public school reimbursement;
- ∑ Coordination of train-the-trainer curriculum development

During the last five years Oregon's driver education program has expanded and improved. Oregon's driver education program seeks to develop safe and efficient drivers who understand that all young drivers should become competent, caring, productive, and responsible traffic safety citizens who are committed to improving driver performance throughout their lifetime. The goal of the Oregon's driver education program is to develop a system that results in measurably safer new drivers with fewer injuries and deaths. In 2000 the Legislature moved the Driver Education program from the Department of Education to the Oregon Department of Transportation in the Transportation Safety Division. Under the leadership of Administrator, Troy Costales, the Division created an action plan that looked at four cornerstones of a quality driver education program. The Division established four Task Forces that held public forums throughout the state looking at Curriculum, Instructor Standards, Public Outreach and Operation. As a result of the task force work, a four year action plan was formulated. Key areas of program development included:

- ∑ Standards for acceptable driver education curriculum for licensing purposes
- ∑ Standards for acceptable driver education curriculum for reimbursement purposes,
- ∑ Standards for instructor trainers of driver education and driver education

instructor teacher competencies for classroom and behind the wheel

- ∑ Standards for operational and financial issues(reimbursement procedures and qualification criteria)
- ∑ Consistent statewide standards that included content, delivery and outcomes for local public and private approved driver education providers.

Successes of the Oregon's Driver Education Program

1. The Oregon Parent Involvement Resource Guide was developed with a partnership with the Oregon Traffic Safety Education Association. It has two primary goals: (1) to develop materials for teachers to use in getting parents more involved with their teenagers learning to drive; and (2) to create a parent handbook to assist, promote and provide guidance in helping parents to provide behind the wheel and practice and experience.

2. In 2005 the Oregon Driver Education Risk Prevention Curriculum CD was completed. The Curriculum is available at www.otsea.org. Files of the CD include a curriculum resource file that contains a localized scope and sequence sample, curriculum flow chart, program improvement plan and several other documents to help localize a curriculum. Each Module contains:

- a. An overview and activities document
- b. Classroom and in-car lesson plans
- c. Homework assignment sheets and keys
- d. Classroom worksheets and keys
- e. Movie Clips (in some modules)
- f. In-car driving route, record, and activities documents
- g. Parent student guided practice route
- h. Entrance and exit exams and keys
- i. Interactive student centered power point lessons and their overhead counterparts.

This document, and its related documents and resources were created through a partnership between Oregon Department of Transportation and Western Oregon University. It is a representation of a localized Traffic Safety Education curriculum and brings

together resources and materials gleaned from the WOU-ODOT Trainer of Trainers Curriculum, National Driver Training Credentialing Program of the American Driver and Traffic Safety Education Association (ADTSEA) and the National Institute for Driver Behavior (NIDB) Driver Risk Prevention Curriculum. It follows the NIDB Risk Prevention Curriculum behavioral delivery sequences. It is designed to meet the minimum standards of driver behavior risk prevention as set forth by the ADTSEA and NIDB.

3. The establishment of a Driver Education Advisory Committee was created two years ago. The duties of the committee are solely advisory. The Committee's responsibilities are to give advice on driver education issues.

Duties of the committee are to:

- Advise and confer on matters pertaining to the establishment of rules necessary to carry out duties of the Driver Education Program.
- Work toward the goal of making driver and traffic safety education programs available to all youthful drivers of Oregon.
- Review and update guidelines for the operation of the Driver and Traffic Safety Education Program.
- Promote the Graduated Driver Licensing Program.
- Promote partnerships with the Driver and Motor Vehicle Services; including third party testing, tester training and driving school regulations, etc.
- Act as a sounding board on forms, processes, etc., on the Student Driver Training Fund reimbursement program.
- Provide a communication channel between driver education and stakeholders.
- Stimulate public awareness of driver education needs and contributions.
- Serve as an advocate of driver education.
- Influence driver education support through appropriate channels.
- Lend credibility and stature to driver education programs.

4. Instructor Training Standards were developed and implemented. More

(next page)



A Thumbnail Analysis of Two Driver Performance Skills by a Sample Population of Automobile Dealership Personnel

"Three Minute Test Drivers", a blind study

Bob Green, Instructor/Trainer survivethedrive

Last year, during a product launch, ride and drive tour "Spring Training" for dealership personnel across the country, the participants in one segment of the training activities were asked to evaluate and compare the two separate brand vehicles, both comparably equipped. The dealership principals, sales staff and some service personnel were given a "chalk talk" and explained the things to watch for; "handling", ride, ease and responsiveness of steering, balance, stability and particularly the ABS braking.

The driving course was set up as a chalk lined, orange coned test course with a series of tight maneuvers and surface irregularities simulating highway emergency maneuvers and poor traction conditions (wet, wheel hop). On courses like this, drivers can readily evaluate the "feel", the comfort and security, of the car within a quarter mile drive, even given wide variables in driver style and skill. Test drivers. Better than 2/3 (est.) of the folks in the group raised their hand when asked who thought they were a good driver (some thought it was a "trick question").

Of particular note was the "chalk talk" orientation, description and explanation of ABS;

a. how the system works, that the ABS will not operate until a given amount of wheel slip (impending skidding) takes place.

b. how this is different from conventional braking in mechanism and technique, why "pumping" the brakes is ineffective, how friction and heating the tire can create adhesion (the tire sticking to the surface rather than rubbing across it), and how a (1) skid abrades granular rubber from the tire creating "rubber rollers" under the tire, or (2) melts the rubber, providing a liquid rubber lubricant under the tire. The analogy was the rubber is like grandma's fudge; at room temperature (?) fairly solid, warm it up (?) sticky (adhesive), enough heat (?) melted.

c. the object of all emergency braking is to apply the brakes in a manner that the tire rolls across the pavement at a speed

slower than the pavement is going by, using the complete circumference of the tire, "maximizing "grip". Also, the tire can only steer the car if it is rolling, lateral thrust can create more slip, but the ABS adjusts braking according to slip rates, not necessarily to the drivers intentions or expectations.

d. in the ABS system, electronic sensors monitor wheel slip and adjust braking to maintain slip at a pre engineered optimum level once slip is initiated until pedal pressure is released or the vehicle stops.

e. It all came down to "STOMP, STAY AND STEER" the terminology used by the ABS Education Alliance to describe the technique. The participants were warned, "this is to simulate emergencies", "No Whimpy Braking", "hitting the cones out there on the course, on any other road would be a crash; orphans and puppies, you have to do your best to do whatever you can to miss whatever gets in the way."

f. To use the brakes each driver was to perform, on command, a full stop in a straight line and a full stop while turning in each car, A/B, back to back comparison between vehicles. Acceleration length limited the vehicles to a consistent approach speed of less than 40 mph before the braking command, some maneuvers on the course, required more than 1/2 turn of the steering wheel and speeds of less than 15 mph. Commentary coaching continuous.

Also explained was that;

a. "you swing a baseball bat with two hands, you need two hands to steer effectively"

b. steering technique effects both effective maneuvering but crossing the center of the wheel presents a brutal physical hazard on airbag deployment, the safety feature becomes the danger with poor steering technique.

c. "you wouldn't put your hand across the barrel of a loaded gun" and how crossing the center of the wheel puts your arms and hands in a weak and vulnerable position, possibly locked "like a pretzel".

"Your airbag won't go off unless your car is getting shorter"

d. British drivers are taught "Push-Pull" or shuffle steering, evaluated on it and have fewer air bag related injuries. American drivers think it's "clumsy" or "a hassle". American drivers weren't required to learn it at an early age, when the incentive to learn could be to pass a more fully evaluative test.

Some people hit cones. These were explained as purposeful, meaningful, very inexpensive crashes. The drivers compared the cars and profited from the experience for their sales pitches on the showroom floor.

The challenge of performance – "Handling" as a noun is what the car can do, as a verb it is what the driver can do to make it work.

These subjects/drivers unknowingly participated in an informal, blind tally of their braking and steering abilities. Given; the "chalk talk" orientation they had received, and that these were all "automotive professionals" they all raised their hands and confirmed that they knew the expectations. No evaluation was done to see how many of the participants had done this type of program previously. Instructors continuously coached the drivers as they drove the length of the course.

ABS – Of 147 drivers, 62 did not engage the ABS on the first try, extending the braking distance beyond the ABS potential. 42% crash potential first try. By the fourth try only 12 did not. Some quick commentary from the drivers; (a) blamed the car (one brand more than the other), (b) that they didn't want to hurt the car (as if a crash wouldn't), (c) some drivers pumped the brakes (d) most braked as hard as they thought necessary, less than effective.

Steering – (several types of curves, different radii and swerve maneuvers, across varying frequency and size bumps and wetness) Of 143 drivers, 3 used push-pull, shuffle steering (all three were trained, during their teens in the U.K.), 78 used either one hand or

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(from page 6)

Reduce Distractions

While it may be impossible to control what is going on outside the vehicle, it is important to know that making certain decisions inside the vehicle can help reduce risk. By managing distractions inside the vehicle perception and judgment will be able to function optimally and attend to the most important task at hand, driving. In the contract, the teen will agree to avoid distractions inside the vehicle, and not participate in behaviors like:

- _ eating or drink in the car;
- _ using a cell phone while driving;
- _ or changing CDs.

Avoid Impaired Driving

Alcohol is the single largest cause of motor vehicles crashes, injuries and fatalities each year. Approximately 40 percent of all fatal crashes involve alcohol. That is why it's important to commit to not drive under the influence or ride with an impaired driver under any circumstance. It is important that the Parent-Teen Agreement stress the consequences of driving under the influence of alcohol, but also stress that other drugs, both legal (prescription and over-the-counter) and illegal (marijuana, ecstasy, or cocaine) can negatively affect driving behavior as well. By issuing a "zero-tolerance" rule in the contract stating that vehicle privileges will be taken away immediately should this rule be violated, teens will be more likely to avoid such dangerous behavior.

Other Behaviors

Additionally, the behaviors exhibited by the teen outside the vehicle play a critical role in being able to operate a sophisticated piece of machinery. It is important to incorporate into the contract behaviors that may not be directly related to driving a vehicle, but still affect the privilege of being able to do so. Some of the behaviors to incorporate into the Parent-Teen Agreement include, but are not limited to:

- _ school achievement;
- _ obeying driving curfew;
- _ maintaining open communication with parent for driving assistance and advice;
- _ and avoiding falling prey to peer pressure.

Make the Grade

As a new driver, it is easy to become distracted with the excitement of being able to drive. However, being able to drive should also be dependent on being able to maintain focus on education. If the contract states that driving privileges may be affected by school performance, it's then critical for the teen to maintain that performance. The Parent-Teen Agreement should state that strong academic performance yields additional driving privileges. Conversely, teens should be aware that poor academic performance yields a reduction or loss of driving privileges. This way the teen driver will work for what they want and maintain or in some cases improve their behavior in order to drive.

Obey Driving Curfew

It is up to the teen to choose to exhibit the behaviors that will yield positive results. Setting a driving curfew is a way for the teen to demonstrate responsibility and respect for the driving privilege and Parent-Teen Agreement. The teen should be home at the time specified by the contract. However, should something come up, it is the responsibility of the teen to call his or her parents and explain the situation. The teen should fully understand the repercussions for failing to call and or missing curfew.

Maintain Open Communication

The teen should never be afraid to ask for driving advice or help. The contract should include that if the teen is in a difficult situation, that s/he will be able to rely on the support of the parent. Being able to ask parents for advice or help should never be intimidating or stressful. Therefore, no matter how difficult it may be, it is important to know and demonstrate responsible behaviors by seeking assistance when necessary.

Avoid Peer Pressure

Peer pressure may be one the greatest issues faced by teen drivers. However, it is important for the teen to exhibit strong resistance to peer pressure, especially when being pressured to perform risky driving behaviors. It is imperative that teen drivers exhibit maturity in decision making and avoid risk taking. The key

is to always stay focused on driving safely and ensure the safety of all passengers, other drivers, and pedestrians. The Parent-Teen Agreement should act as a powerful reminder to the teen as to why it's important to avoid peer pressure. By being aware of the consequences of vehicle misuse, teens will be more likely to resist peer pressure and choose responsibility over recklessness.

Vehicle Responsibility

Besides demonstrating positive behaviors that influence driving, it's also important to know the responsibilities that come along with vehicle ownership. The Parent-Teen Agreement may set regulations and requirements that are centered on the vehicle itself. Some of these topics may include:

- _ which vehicles can be driven;
- _ vehicle maintenance;
- _ and financial responsibility.

Which Vehicles can be Driven?

The teen driver should know what vehicle(s) they are permitted to drive. For example, the Parent-Teen Agreement may specify that the teen driver can only operate vehicles with airbags. Additionally, it should specify which family vehicle(s) the teen is allowed to drive and which vehicles are off limits. It is the responsibility of the teen to follow the rules and regulations set forth by the contract and only drive the vehicle(s) the contract permits them to drive.

Vehicle Maintenance

Driving comes with great responsibility. However, it is important that the teen not only be aware of the liability and health risk associated, but the financial responsibilities as well. The teen should know what they are responsible for and how to go about the process of caring for the vehicle. Two things that may be included in the Parent-Teen Agreement are engine maintenance and interior/exterior cleanliness.

Financial Responsibility

Besides the financial responsibility associated with car care, there are other

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Parent-Teen Driving Agreements: Contracts for Safety?

Part I- Effective Components for Promoting Teen Responsibility and Safe Behaviors

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Parent-Teen Driving Agreements are just one way for parents to play an active role in developing safe teen drivers. The Parent-Teen Driving Agreement is a contractual arrangement between parents and teens that states the rules and regulations for driving and the consequences for contractual violations. This article, which identifies and explores the importance of teen responsibilities and behaviors in Parent-Teen Driving Agreements, is part of a series of articles that will examine the components for promoting parent and teen responsibilities and safe behaviors, and how to use a Parent-Teen Driving Agreement to its full potential.

Parent-Teen Driving Agreement

One of the biggest challenges of parenthood occurs when children become novice drivers. There are many ways for parents to play an active role in this teenage milestone, and developing a Parent-Teen Driving Agreement is just one of the ways. With motor vehicle crashes being the leading cause of death in people ages 3 to 34 and with an estimated 5,000 teenagers dying in automobile crashes every year, developing a Parent-Teen Driving Agreement may make the difference between life and death. But what is a Parent-Teen Driving Agreement?

A Parent-Teen Driving Agreement is an agreement between teens and their parents, regarding driving privileges and the use of motor vehicles. These agreements typically set forth the rules and regulations as well as the agreed consequences of violating the agreement. Not only the teen must commit to this agreement, but the parents must as well. It is important to establish that both parent and teen are entering into a contract together and that both have a voice in the contract.

More importantly, the parents must also follow certain rules and regulations in order for the contract to work to its full potential. Leading by example is the foundation of such a contract and parents must commit to this leadership

role. It is the goal of this series of articles to discuss the roles that both the parent and teen play in the contract and to identify what they must do in order for it to be successful.

This article will focus on what components are related to the teen driver and how feedback provided during scheduled meetings between parents and teen(s) can enhance driver performance. Two main components will be presented and further broken down into areas of responsibility: driver behavior and vehicle maintenance. Additionally, consequences for vehicle misuse and negative behaviors are presented since the teen and parent must agree to the terms and conditions for violating the contractual agreement.

Important Teen Behaviors

It is important to identify what types of behaviors are expected of the teen related to safe vehicle operation. The teen is responsible for following the behaviors identified by the contract and fully understanding what is expected of him or her. Operating a motor vehicle demands respect and the teen must be held accountable for his/her behavior at all times.

There are many behaviors that a teen should display while driving and some of the critical behaviors are:

- _ using safety belts;
- _ obeying traffic laws;
- _ and reducing distractions.

While most teen drivers have completed some sort of driver's education program, it is still important to make sure that the behaviors learned in class are continually assessed, and the Parent-Teen Agreement is a good way to do this. The contract can target the behaviors that are most critical to safe driving and continually assess teen driver performance through periodic meetings between the parent and teen. The behaviors listed above are just some of the ones that are critical to maintaining safe and responsible teen driving. These behaviors are examined in greater detail.

Use Safety Belts

The U.S. Department of Transportation reported that in 2003, safety belts saved more than 14,903 American lives. However, during that same year, nearly two-thirds (60 percent) of passenger vehicle occupants killed in traffic crashes were not wearing a safety belt. Driving research has shown that lap/shoulder belts, when used properly, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate to critical injury by 50 percent. For light truck occupants, safety belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent. These are some powerful reasons as to the importance of safety belt use. It is up to the teen to follow the safety belt policy outlined in the Parent-Teen Agreement and make the right choice to mandate that s/he and all passengers will wear safety belts at all times to reduce risk.

Obey Speed Limits and Traffic Laws

Road engineers know the road better than anyone else and they recommend speed limits based on a variety of complex factors. It is best practice to follow and respect posted speed limits. However, it's also important for the teen to understand that they must not only obey speed limits, but also be aware of factors that affect their speed. Visibility, surface conditions and traffic are just three factors that a teen should keep in mind when driving at all times. Being aware of the factors that affect speed and effectively adjusting speed are critical to reducing risk.

Furthermore, the teen is responsible for obeying all traffic laws and to demonstrate that they know and respect the rules of the road. Not obeying traffic laws can have serious consequences and it's important that the teen be aware of how illegal or irresponsible behavior can result in devastating life-changing consequences. By stressing in the Parent-Teen Agreement the consequences associated with violating the law, teens will be cognizant of how important it is to maintain and demonstrate safe driving behaviors.

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Table 2.

Comparison Among Least Squares Means (\pm SE) Using T-tests for the Effect of Experimental Treatments on the Increase in Attitudinal Scores (CPKAT).

Treatment	Pretest Mean	Posttest Mean	Change	p
A	3.14 (\pm 0.03)	3.16 (\pm 0.05)	0.00 (\pm 0.02)	0.409
B	3.13 (\pm 0.02)	3.33 (\pm 0.04)	0.22 (\pm 0.02)	0.003
A - B	.	.	-0.22	0.993

Table 3.

Comparison Among Least Squares Means (\pm SE) Using T-tests for the Effect of Experimental Treatments on the Increase in Behavioral Scores (CPKAT).

Treatment	Pretest Mean	Posttest Mean	Change	p
A	3.36 (\pm 0.11)	3.32 (\pm 0.08)	-0.06 (\pm 0.04)	0.901
B	3.46 (\pm 0.08)	3.55 (\pm 0.06)	0.11 (\pm 0.03)	0.022
A - B	.	.	-0.17	0.975

embraced transformational leadership as one way for organizations to obtain superior outcomes to other forms of leadership by encouraging followers to perform beyond expectations (Bass, 1985, 1990; Bass & Avolio, 1994, 1999; Dvir et al., 2002). More recently, research in educational leadership has begun to advocate the contributions of transformational leadership theory in school settings (Leithwood, 1993; Leithwood, Jantzi, & Steinbach, 1999; Ross & Gray, 2004). However, until the present investigation, no studies were found to have been conducted on the effects of transformational leadership in the field of youth traffic safety education. There are a number of positive outcomes related to this investigation. First, it is to be noted in the post hoc analysis in Table 4 that all but one of the groups showed statistically significant improvement in at least one of the three measures. Second, half of the groups demonstrated statistically significant improvement in all three measures. Third, none of the groups had significant negative results in any of the three measures. While the results indicated insufficient evidence that the increase in the three dependent variables for Treatment A was significantly greater than the increase in Treatment B, there is evidence of enough successful increases to warrant further investigation of the research hypotheses in future studies.

Findings in this study indicated non-significant change in the increases of cognitive, attitudinal, and behavioral test scores of students in a youth traffic

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Table 4.

Post Hoc Analysis of Results of the Study.

Teacher	Pair	Treatment	Cognitive	Attitude	Behavior
1	1	A	.	.	.
2	2	A	+	+	.
3	2	A	+	.	.
4	4	A	+	+	+
5	1	B	+	+	+
6	2	B	+	+	+
7	3	B	+	+	.
8	4	B	+	+	+

Note. (+) = $p < .05$. (.) = N.S.

safety education program between the groups of teachers who received either transformational leadership or transactional leadership training. However, the review of literature emphasized a growing body of evidence that demonstrates that the measurement of transformational and transactional leadership can be used to predict subsequent follower performance (Barling, Weber, & Kelloway, 1996; Dvir et al., 2002; Judge & Piccolo, 2004). Two major challenges still remain: (1) to discover how to effectively train such leadership behaviors and (2) to determine the effect of these styles of leadership on student outcomes. Future research in transformational leadership and transactional leadership training in the area of youth traffic safety education should be conducted to predict such student outcomes.

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(from page 3)
 was adapted from the Introduction to Situational Leadership II (Blanchard, Zigmari, & Zigmari, 2003).

During the implementation of the research project in the classroom setting, the teachers administered the Cruisers Program Knowledge and Attitudinal Test (CPKAT; Alexander & Pidgeon, 2002) to 353 students as a pretest. The CPKAT was designed to assess program participants' knowledge related to traffic safety facts and issues presented in the Cruisers Program. Furthermore, the CPKAT instrument was prepared to measure participants' attitudes, behaviors, and behavioral intentions regarding issues of traffic safety. The instrument was structured in two parts. Part one of the instrument contained two sections. In the first section respondents were asked to indicate the extent to which they agreed or disagreed with each item on a four-position Likert-type scale. The first section contained 21 questions, measures both participants' attitudes and behavioral intentions. Of the 21 questions on the attitude survey, 16 questions related to traffic safety attitudes, and 5 questions relate to behavioral intentions. The second section contained 6 questions measuring the current behavioral patterns of the participants. Part two of the instrument contained a 25-item multiple-choice test. The questions for this portion of the instrument were derived from traffic safety facts and issues taken directly from the content of the Cruisers Program lesson plans.

Teachers then implemented the Cruisers Program: A youth traffic safety curriculum for middle schools (Alexander & Pidgeon, 2002) during the fall semester of 2004 utilizing the appropriate leadership techniques presented in the respective leadership-training modules. The Cruisers Program is a life skills based curriculum containing 15-lessons focusing on pre-driver knowledge, attitudes, and behaviors. Finally, the teachers administered the CPKAT to 350 students as a posttest at the end of the program.

Descriptive procedures were used to analyze the demographic data for gender and grade level, as well as the numbers of students assigned to the various experimental treatments. Analysis of

Variance (ANOVA) along with t-tests among LSMEANS was used. Increases in cognitive, attitudinal, and behavioral variables within each treatment were defined as the difference in pretest and posttest and

effect of the experimental treatments on the cognitive scores is depicted in Table 1.

Objective 3: The effect of transformational leadership training and transactional leadership training for

Treatment	Pretest	Posttest Means	Change	p
A	0.50 (\pm 0.04)	0.56 (\pm 0.06)	0.06 (\pm 0.02)	0.032
B	0.54 (\pm 0.03)	0.71 (\pm 0.04)	0.17 (\pm 0.01)	0.003
A - B	.	.	-0.11	0.983

these increases were tested and compared.

Findings

Objective 1: Demographic Profile
 Of the 361 students in the study, 178 (49.31%) were males and 183 (50.69%) were females. In terms of grade level, 168 (46.54%) were seventh graders, and 193 (53.46%) were eighth graders. The largest group of participants fell in the 13-14 age range with 229 students or 64.5 percent of the total sample. Ninety-seven students were in the 11-12 age range (27.32%), and 29 students were in the 15-16 age range (8.17%). Of the total sample, 89.36 percent (319) were reported to be White, 8.12 percent (29) African American, 1.68 percent (6) Hispanic, 0.56 percent (2) Asian, and 0.28 percent (1) other (frequency missing = 4).

Objective 2: The effect of transformational leadership training and transactional leadership training for middle school teachers on student test scores regarding change in traffic safety knowledge.

The two methods of leadership training were compared using the notation (A) for teachers who received transformational leadership training and (B) for teachers who received transactional leadership training. Treatments A and B both showed a significant increase in the cognitive scores of the CPKAT between the pretests and posttests. T-tests among LSMEANS for the pretest and posttest cognitive scores for the treatments indicated that the difference in the increase in the cognitive variable for Treatment A was not statistically greater than the increase in Treatment B, $p = .983$, $p > .05$. The test for the

middle school teachers on student test scores regarding change in attitude towards traffic safety issues.

Results of the t-tests showed no significant increase for Treatment A on the attitudinal scores of the CPKAT between the pretests and posttests, while Treatment B did show a significant increase. T-tests among LSMEANS for the pretest and posttest attitudinal scores for the treatments indicated that the difference in the increase in the attitudinal variable (CPKAT) for Treatment A was not statistically greater than the increase in Treatment B, $p = .993$, $p > .05$. Summary statistics for the effect of the experimental treatments on the attitudinal scores from the CPKAT are depicted in Table 2 on page 5.

Objective 4: The effect of transformational leadership training and transactional leadership training for middle school teachers on student test scores regarding change in behavior and behavioral intention regarding traffic safety issues.

Results of the t-tests showed no significant increase for Treatment A on the behavioral scores of the CPKAT between the pretests and posttests, while Treatment B did show a significant increase. T-tests among LSMEANS for the pretest and posttest behavioral scores for the treatments indicated that the difference in the increase in the behavioral scores for Treatment A was not statistically greater than the increase in Treatment B, $p = .975$, $p > .05$. Summary statistics for the effect of the experimental treatments on the behavioral scores are depicted in Table 3 on page 5.

Conclusions A large body of contemporary leadership research has (more on page 5)



A Study of the Influence of Leadership Training on a Youth Traffic Safety Education Program

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Introduction According to the Insurance Institute for Highway Safety (2003), young drivers ages 16 to 19 have a higher risk of being involved in a collision than do older drivers. These high crash rates for young drivers are largely due to immaturity combined with inexperience in the driving task (Arnett, 2000). More specifically, there has been a lack of research in applying culture theory to leadership in youth traffic safety programs in order to improve the knowledge, attitude, and behavior of students in youth traffic safety programs. Transformational leadership theory is one such approach which has increasingly captured the attention of researchers and organizations. The interest in transformational leadership theory indicates that this approach is robust with impressive organizational outcomes (Brown & Lord, 1999; Judge & Piccolo, 2004). Furthermore, renewed interest in educational leadership has lead to the systematic empirical inquiry of transformational leadership theory in schools (Bryman, 1992; Leithwood & Riehl, 2003). However, prior to this investigation no studies were found to have been conducted to determine if transformational leadership theory can increase the effectiveness of a youth traffic safety program. Therefore, this study investigated the influence of transformational versus transactional leadership training on participants in a youth traffic safety education program.

Purpose and Objectives The purpose of this study was to examine the influence of transformational leadership and transactional leadership on the cognitive, attitudinal, and behavioral test scores of students in a youth traffic safety education program. Specific objectives of the study were:

- 1) To describe the profile of participants in terms of age, gender, grade level, and race.
- 2) To determine the effect of transformational leadership training and transactional leadership training for middle school teachers on student

test scores regarding change in traffic safety knowledge.

3) To determine the effect of transformational leadership training and transactional leadership training for middle school teachers on student test scores regarding change in attitude towards traffic safety issues.

4) To determine the effect of transformational leadership training and transactional leadership training for middle school teachers on student test scores regarding change in behavior and behavioral intention regarding traffic safety issues.

The assumption was made in this study that transformational leadership training would cause an increase in the three dependent variables in the study, and that these increases would be greater than any increases due to transactional leadership training.

Rationale The theoretical framework underlying this study is transformational leadership theory. James Burns (1978) first introduced the concept of transformational leadership with the term "transforming leadership," by classifying two-types of leaders: transactional leaders and transforming leaders. Transactional leadership involves motivating followers by an exchange of rewards for services rendered (Burns, 1978). Thus, transactional leadership is based on contingent reinforcement (Bass & Steidmeier, 1999). Followers, according to Bass, "are motivated by the leaders' praise, promises, and rewards, or corrected by negative feedback, reproof, threats, or disciplinary actions" (Bass & Steidmeier, 1999, p. 184).

Burns (1978) distinguished transformational leadership from transactional leadership. Transformational leadership, for Burns, is more complex and more potent. The transformational leader "looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower" (Burns, 1978, p. 4). Bass (1985) contends that "while

both transactional and transformational leadership involve sensing followers' felt needs, it is the transformational leader who raises consciousness about higher considerations through articulation and role modeling" (p. 15-16).

The transformational leader, according to Bennis and Nanus (1985), "is one who commits people to action, who converts followers into leaders, and who may convert leaders into agents of change" (p. 3). Thus the followers are energized by the transformational leader so that they follow because they want to. Furthermore, transformational leadership attempts to rally the members around a vision in order to empower them to receive the vision themselves. In the case of traffic safety education, for example, the youth would be empowered by a transformational leader to become engaged in a lifestyle of safety and health because they have themselves become convinced of this vision.

Methodology Participants (N=361) in the study were middle school students drawn from two public school districts in a specific region of a southeastern state. To assess differences in cognitive, attitudinal, and behavioral change, a randomized block design was chosen for this study with pairs of classes defining the blocks. Pairs of similar classes were created and randomly assigned to either transformational or transactional leadership training in order to remove the teacher effect. Furthermore, these random assignments were made to cancel out the effects of a risk perception and team building training administered in the classrooms. Alpha was set at .05. The transactional and transformational leadership-training modules were adapted by the researcher from existing leadership programs. The transformational leadership-training module utilized in the study was adapted from Training Full Range Leadership (Bass & Avolio, 1999). The transactional leadership-training module for the study

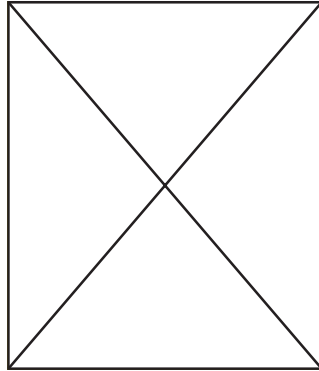
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Reflections on an Event Filled Year

Dr. Allen Robinson, CEO

As you read this article please remember some of the highlights of 2005. At best, these highlights might not seem to be earth shattering, but they are significant. Here are a few significant results of 2005: SAFETY – LOU was passed by Congress and signed by the President; the National Transportation Safety Board (NTSB) released a report on driver education; The National Highway Traffic Safety Administration (NHTSA) has responded to the report; Congress passed a fiscal year 06 appropriation for NHTSA and, researchers acknowledge driver education has been held to a higher standard of measurement than other countermeasures.



Allen Robinson

The general theme of each of these cited references mentioned above is the emerging emphasis concerning driver education.

Our US Congress continues to show concern and encouragement for an increased effort in driver education. Congress continues to ask many questions concerning driver education. Such as, how can the nation better address the problems of young drivers? As a result, NHTSA has initiated new program efforts to help answer this question. While these efforts take time and money, I believe we are headed in the right direction.

The National Transportation Safety Board wants NHTSA and the US Department of Education to do more in support of driver education. NTSB has stated in their findings the following:

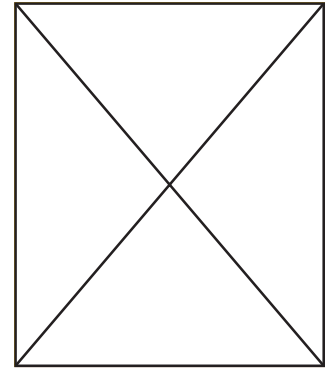
- ∑ Many driver education curricula, public and private, have been developed without the benefit of information about what constitutes an effective program.
- ∑ Without national leadership, everyone has done their own thing. As a result, what driver education is in one community is entirely different in another community.

(Robbie continued on page 11)

Opportunity to be Involved

Jim Gibb, President

As I look back over the past months, and what is coming up with respect to ADTSEA, I'm excited and thrilled with many programs, projects and engagements for the year. I will try to briefly update you on three of the prominent ones in my article this quarter.



Jim Gibb

As I'm sure everyone is aware, this year's ADTSEA annual conference is the organization's 50th. Ironically, it will be held in Michigan, where their state association is also celebrating their 50th. Confirm the dates of July 29 through August 3, 2006 on your calendars and know that we will gather in Kalamazoo, Michigan for this opportunity for learning and celebration.

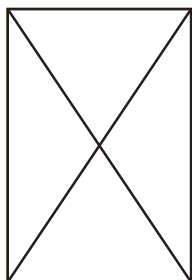
The conference program is shaping up nicely, and the location is a beautiful one for this event. The Radisson Plaza Hotel and Suites is our home base, and rooms can be reserved by calling 800-333-3333. Please mention you are with the ADTSEA group and you will receive the \$95.00 plus tax group rate. Registration information will go out by March 1, 2006 from the ADTSEA office, but please be sure to check the webpage for additional information.

NSSP is also gearing up for their annual conference. This year, they will be visiting the University of Central Oklahoma from July 5 through July 9, 2006. Conference information is available on the NSSP site, along with their most current conference agenda.

My third prominent issue to inform you of and encourage you to participate in is the nomination of teachers from your state/region for the Teacher of the Year program. You can gather more information on nomination instructions, procedures and candidate criteria on the ADTSEA website. Nomination materials and questions can also be directed to Dr. Terry Kline.

Although I've only mentioned three, there are many exciting things happening with ADTSEA. Be sure to check the website often and get involved by joining us at the 50th annual conference this year. I look forward to seeing you.

Editor's Notes



John W. Palmer

News and Views (N&V) is full of information. Everything you need to know to act on President Gibb's admonition to nominate some one for teach of the year is included. Kim Hetherington, a newly licensed driver education teacher, shares insights into responding to the problem of distracted driving and Curt Hanson, a regular contributor, urges that all of us read "A Report on the State of Teen Driving 2005". Excitement about a \$3,000+ driver education program and insights into the current "War on the Car" along with the "Price of Safety are also shared in N&V. Other topics address in N&V include: the impact of parent driver education in Texas, driver education in the news, best practices in GDL in Canada, and information about the Cingular Be Sensible Award winner. On a sad note, Carl J. Wenzinger, Kaywood Award winner and longtime ADTSEA leader died on January 9, 2006.

Two of the three "Wall Street Journal" articles excerpted in "News & Views" provide and interesting snap shot of our societies split personality when it comes to the automobile mobility and safety. On the one hand people are willing to spend 10's of thousands of dollars on auto designed and manufacture to perform at levels most suitable for a the track. Some of these same people will spend thousands of dollars on driver education to get the most out of their purchase. Many of these same people also are more willing to spend money on expensive accessories that have nothing to do with safety but have everything to

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The Chronicle of the American Driver and Traffic Safety Education Association

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