In this Issue:

Revised 2017 Novice Teen Driver Education and Training Administrative Standards Released

Model Driver Education Instructor Training Materials Released

Use of a Driving Simulator to Assess Health Belief Model Variables for Distracted Driving Prevention

A Driver Education Campaign to Increase Bicyclist Safety and Awareness
Table of Contents
2018 Issue

Volume 63

Revised 2017 Novice Teen Driver Education and Training Administrative Standards Released ........................................3
The Association of National Stakeholders in Traffic Safety Education, Brett Robinson, Secretariat

Model Driver Education Instructor Training Materials Released.............................................................................5
The Association of National Stakeholders in Traffic Safety Education, Brett Robinson, Secretariat

Use of a Driving Simulator to Assess Health Belief Model Variables for Distracted Driving Prevention.....................7
Theresa M. Enyeart Smith, Ph.D.
Maria Theresa Wessel, Ed. D.

A Driver Education Campaign to Increase Bicyclist Safety and Awareness............................................................12
Katherine Dutt, Brooke Pinkos, Melissa Bopp, Kelly Doyle, Bradley Fisher, Anna Nelson, Patricia Meek

ADTSEA Regional Affiliates, State Affiliates and Corporate Members..........................................................................17

2018 Annual ADTSEA Conference.................................................................18

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Revised 2017 Novice Teen Driver Education and Training Administrative Standards Released

The Association of National Stakeholders in Traffic Safety Education

Brett Robinson, Secretariat

Motor vehicle crashes remain the leading cause of death for teens in the United States, plus the number of young drivers 16-20 years old involved in fatal crashes increased by 10 percent from 2014 to 2015. But there is hope in addressing the risks faced by novice teen drivers when getting behind the wheel. In spite of the increase in fatal vehicle crashes, there are still organizations like the Association of National Stakeholders in Traffic Safety Education (ANSTSE) working to reduce these fatalities. ANSTSE has revised the Novice Teen Driver Education and Training Administrative Standards (NTDETAS) to improve driver education programs nationwide.

This 2017 revision represents a multi-year effort of ANSTSE to enhance the national standards for driver education.

The revised standards incorporate:
1. classroom and behind-the-wheel delivery standards,
2. online delivery standards,
3. instructor training standards to support the stages for an instructor preparation program and the model training materials for the teaching task, which were developed, as well as
4. a revision to the entire NTDETAS.

The revised standards are available for free download at www.anstse.info.

States are encouraged to adopt and implement the standards contained in the NTDETAS to assist in their efforts to reduce teen driver crashes and fatalities. The NTDETAS are recommended and intended to be accepted as the minimum standard for “novice driver education programs” within the United States.

These are all minimum requirements that States should strive to achieve. It is understood that not all States can implement all of the standards at once, but that States should develop a plan to implement these standards incrementally.

The NTDETAS, revised in 2017 by ANSTSE, are a key highway safety countermeasure for states to use in improving teen driver safety. They include:

- Administrative Standards
- Content Standards (ADTSEA & DSAA)
- Delivery Standards
- Online Delivery Standards
- Instructor Training Standards
- Online delivery standards for driver education will improve the quality of online driver education programs nationwide. They provide consistency in “how” online driver education programs are delivered and provide guidelines on topics including:
  - Instructional design – how to organize, standardize, communicate and examine the instructional content of the online course.
  - Structural design – describes how the course will be implemented in order to meet the learning and course requirements.
  - Evaluation/testing/assessment – how and what type of evaluation will be carried out for learners, the course and online instructors.
  - Technological design and capabilities – minimum technological tools and/or capabilities.

(continued on page 4)
5. **Coordination with Driver Licensing** - provides standards for communication between the state driver education agency and the driver license authority; the GDL system; coordination and education with courts and law enforcement; requirements for the knowledge and skills tests. New attachments are also included in the revised NTDETAS. These include:

- Attachment A – ADTSEA Curriculum Standards
- Attachment B – DSAA Curriculum Standards
- Attachment C – Stages for Driver Education Instructor Preparation Program
- Attachment D – Table of Contents of the Model Training Materials for the Teaching Task
- Attachment E – NHTSA Graduated Driver Licensing System Model
- Attachment F – NHTSA Uniform Guidelines for State Highway Program

We encourage you to utilize the revised 2017 NTDETAS in your continued efforts to enhance driver education and reduce teen crashes and fatalities. For more information and additional resources, please visit [www.anstse.info](http://www.anstse.info).

Driver Education Saves Lives!
Improved training for driver education instructors has been recommended as one of the primary recommendations in most, if not all, of the National Highway Traffic Safety Administration’s (NHTSA’s) State Driver Education Assessments / Peer Reviews. Plus, over 50% of current instructors nationwide are at retirement age, so a training system to replace these instructors is needed. Unfortunately, in the past ten years, many colleges and universities have discontinued their teacher training programs. Faculty retirements, university budget costs, and low enrollment have been the primary causes.

The Association of National Stakeholders in Traffic Safety Education (ANSTSE) has announced the release of a Model Training Curriculum for the Teaching Task and the Stages for an Instructor Preparation Program. The instructor training program creates an alternative and option to university-based driver education instructor training. This training program will assist all state programs to offer quality driver education instructor training, providing public, commercial, and private schools with a powerful new resource for training driver education instructors.

The Model Training Curriculum for the Teaching Task Instructor Preparation Program was developed by the Teacher Training Working Group (TTWG) and ANSTSE with funding from the National Highway Traffic Safety Administration (NHTSA). The curriculum was pilot tested and formative evaluation conducted in three states (North Carolina, Michigan, and Oregon) to demonstrate that the materials would efficiently train new driver education instructors to teach the State approved driver education program. The curriculum contains model training lesson plans and visuals with an instructor’s guide and participant workbook to train new driver education instructors on teaching and learning theories for classroom and behind-the-wheel instructional methodology. Instructor candidates should have a strong understanding of state law, the driver education curriculum they will be teaching and exceptional driving ability demonstrated. All instructor candidates must have completed a driving task analysis course or have been tested for their knowledge on the driving task before entering/enrolling in the teach task courses.

There are three parts to the teaching task:

1. Fundamental Concepts of Teaching and Learning,
2. Classroom Teaching and Learning Theories,

The driver education instructor training courses should be taught by a qualified master instructor who has received training on how to utilize these materials. States/programs may duplicate the materials for use and distribution to participants. State-specific and program-specific content may be added.

The intent of the curriculum is to enhance the quality and effectiveness of training throughout a State’s instructor training program and ensure a beneficial learning experience for the instructor candidates. This curriculum is not designed to accomplish all of the training and information a State may wish to provide their new driver education instructors. This material should be supplemented by State material and information.

The electronic PDF, Microsoft Word and PowerPoint files with embedded videos for the Teaching Task Curriculum are available for free download at www.anstse.info.

This model curriculum provides the resources needed to conduct Stage III, teaching and learning theories or the Teaching Task, of the instructor training system. The training system includes five stages:

1. Pre-Screening and Entry Assessments
2. Foundations of Novice Driver Education (The Driving Task)
3. The Teaching Task / Teaching and Learning Theories
4. Student Teaching Practicum or teaching with an experienced mentor
5. Exit Assessments for successful completion of the instructor preparation program

Each Stage is a critical component within the “System.” Altering or omitting a Stage within the “System” will drastically affect the quality of driver education instructors trained. Many of the Stages require course development by the State or program. ANSTSE has developed training resources to assist in conducting Stage III: The Teaching Task.

(continued on page 6)
Details on each stage can be found in the revised 2017 NTDETAS Attachment C – Stages for Driver Education Instructor Preparation Program. The NTDETAS is available for free download at www.anstse.info. The following table provides a summary of the estimated instructional time and the time to administer the entry and exit assessments.

Summary of Estimated Instructional Time

| Stage I: Entry Assessments | Time determined by the State/Program, estimated at 1 hour to administer the knowledge assessment to all instructor candidate’s and up to 1 hour per candidate to administer the driving assessment. |
| Stage II: Foundations of Novice DE | 35 hours (inclusive of 6 BTW hours) |
| Stage III: The Teaching Task | 70 hours for all three parts |
| Part I Fundamental Concepts | 14 hours (2 days) |
| Part II Classroom T&L Theory | 21 hours (3 days) |
| Part III BTW T&L Theory | 35 hours (5 days) |
| Stage IV: Student Practicum | Time determined by the State/Program |
| Stage V: Exit Assessments | Time determined by the State/Program, estimated at 1 hour to administer the knowledge assessment to all instructor candidates and up to 1 hour per candidate to administer the driving assessment. |

Certification Level

<table>
<thead>
<tr>
<th>Certification Level</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Certification – Both Classroom and BTW Instructor</td>
<td>105 hours (15 days) + entry and exit assessments and student practicum</td>
</tr>
<tr>
<td>BTW Instructor Only</td>
<td>84 hours (12 days) + entry and exit assessments and student practicum</td>
</tr>
<tr>
<td>Classroom Instructor Only</td>
<td>70 hours (10 days) + entry and exit assessments and student practicum</td>
</tr>
</tbody>
</table>

Notes:
Total suggested instruction times are minimums. Instruction time does not include time to conduct entry and exit assessments and student teaching practicum. Instruction time is based on a 3:1 student trainer ratio for Parts II and III. States and programs are encouraged to require all three parts of the teaching task.

We encourage you to utilize the Model Training Curriculum in your continued efforts to enhance driver education and reduce teen crashes and fatalities. For more information and additional resources, please visit www.anstse.info.

Driver Education Saves Lives!
Use of a Driving Simulator to Assess Health Belief Model Variables for Distracted Driving Prevention

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Introduction

Many who have had phones since their preteen years consider them a crucial part of their daily lives; however, they can be deadly distractions. In 2015, 15% of motor vehicle injury crashes and 10% of fatal crashes were distraction related (National Highway Traffic Safety Administration [NHTSA], 2017). To break it down even further, approximately nine people are killed and over 1,000 injured in the United States every day due to distracted driving (NHTSA, 2017). Approximately 14% of all fatal distraction-affected crashes in 2015 were related to cell-phone use while driving (NHTSA, 2017). However, the National Safety Council, when accounting for unreported cell phone use, estimates at least one in four car crashes involves cell phone use (National Safety Council, 2013). A 2016 survey showed that drivers reported participating in distracted driving events, even though they were aware that the activities were distracting and increased the likelihood in crashing (State Farm Mutual Automobile Insurance Company, 2016). For example, 29% of drivers reported searching the web while driving, even though 96% found it distracting and 77% thought it increased the likelihood of a crash (State Farm Mutual Automobile Insurance Company, 2016). Among all drivers who reported cell phone use while driving, the age group with the highest likelihood (33%) to continue the habit was 20-29 year olds (NHTSA, 2017). The top two reasons distracted drivers reported using their cell phone for talking while driving was because “It is an efficient use of my time” (49%) and “I want to stay in touch with my family” (36%) (State Farm Mutual Automobile Insurance Company, 2016).

The trend of using online driving simulators is becoming popularized within various hospitals, community events, public schools, and accredited universities in attempt to make their communities a safer place to live and drive in. The issue is so important that the research aspect is gaining the interest of multiple corporations. AT&T is in the midst of a texting and driving simulator project, titled “It Can Wait,” in which an online driving simulator is available countrywide (Panta 2017). The company released in 2017 that the anti-texting campaign has inspired more than 15 million people in making pledges not to drive and use their phone simultaneously (Panta 2017). AT&T also noted that 90% of those surveyed voiced that they are more aware of the dangers of distracted driving (Panta 2017).

The purpose of this study was to identify attitudes related to distracted driving behaviors, particularly texting and driving, before and after the completion of an online distracted driving simulation using the One Simple Decision Simulator.

Methods

Prior to implementation of the study, the procedures and survey were pilot tested. The pilot test included an additional four-item written survey used to edit the final survey and implementation.

Study participants completed a 14-item online “One Simple Decision” pre-test using Qualtrics. The pre-test included questions on demographics, driving behaviors, and knowledge and attitudes related to distracted driving. Participants then performed the “One Simple Decision” distracted driving simulation for approximately ten minutes. Immediately following the simulation, the participants completed the “One Simple Decision” online post-test using Qualtrics. The post-test included eight questions to measure knowledge, attitudes, and behaviors related to distracted driving. The participants’ responses were recorded using Qualtrics and later assessed using the SPSS statistical analysis program.

Data Analysis

Using SPSS (V. 24), descriptive statistics were determined including means, modes, and medians; chi-square analyses were used to determine relationships, if any, between demographic variables and risk behavior results.

Results

Results indicated a total of 90 students participated in the study having completed the pre-test, simulation, and post-test. Many participants reported driving daily (84%) with a small minority reporting they never use their phones while driving (6%). Considering most participants reported having used their phones while driving (94%), a majority (62%) said texting on the phone while driving was “very distracting”. Texting while driving was the most frequently identified distraction among those listed in the survey.

Age:
- 60% were 21 years of age
- 32% were 20 years of age
- 8% were 22 years of age

Gender:
- 91% participants were female
- 9% participants were male

(continued on page 8)
Class:
- 83% were juniors
- 17% were seniors

Driving Frequency:
- 84.4% drove daily
- 6.7% 2-3 times a week
- 2.2% once a week
- 2.2% 2-3 times a month
- 2.2% once a month
- 2.2% never

Texting and Driving Environments:
- Neighborhood
  - 77% text and drive in a neighborhood
- Heavy traffic
  - 59% text and drive in heavy traffic
- Major city roads
  - 53% text and drive on major city roads
- Country roads
  - 70% text and drive on country roads
- Highways/interstates
  - 49% text and drive on highways/interstates
- Stopped at a traffic light
  - 94% text and drive when stopped at a traffic light
- Stopped at a stop sign
  - 76% text and drive when stopped at a stop sign

Discussion

Health Belief Model Constructs
Results indicate students continue to drive distracted in spite of acknowledging the risk. Health Belief Model constructs verify high perception of susceptibility and perceived severity to negative consequences of distracted driving, high perception of benefits to not texting while driving to reduce negative consequences, and low perceptions of self-efficacy to safely text and drive. All attitudes and beliefs are favorable for prevention of texting and driving. However, a majority perceived texting while driving was a hard habit to change. Unfortunately, an accident was the most frequently listed cue to action for changing behavior considering it is a serious negative consequence, which could have been prevented in the first place. Additional cues to action for prevention include having friends and/or family members promoting not texting while driving, receiving a fine if caught, media accident reports and coverage using public service announcements, being stopped by law enforcement officers, or losing one’s license due to texting while driving.
Prevention - Use of Simulators

Studies show that when people are placed on a simulator course simple faults, such as swerving, inconsistent speeds, or slower reaction times, indicating the driver is not paying attention and are at a higher risk for causing or being involved in an accident (Horrey, Lesch, & Garabet, 2008). Driving while distracted places all people on the road in a dangerous situation. Texting, playing games, e-mailing and trying to look up a number can distract people from the road and increase the risk for a potential accident. Distracted driving continues to be a serious health hazard and the National Transportation Safety Board has supported a nationwide ban on the use of portable electronic devices (PEDs) by all drivers (National Transportation Safety Board, 2011). However, no state has a complete ban on cell phone use (including hands-free options) while driving (Insurance Institute for Highway Safety, Highway Loss Data Institute, 2016).

Use of Cell Phone Applications

Considering that cell phone use is a common behavior among many people, the incorporation of applications used on the portable device to incentivize safe driving practices or even block the use of a portable device has been implemented by many companies and organizations. These applications are designed to keep the driver’s attention on the road and off the phone (Department of Motor Vehicles [DMV], 2017). Many applications exist to assist with keeping drivers safe, such as sending parent notifications, blocking text messages, blocking calls, tracking miles driven in a safe manner, incentivizing safe driving patterns, and the sharing of one’s location (DMV, 2017). Below is a summary of some of the more common applications used by the public along with the benefits they provide to the driver, the passenger(s), and others:

- **Apple iOS 11 Update (https://www.apple.com/ios/ios-11/)**
  - Setting options include: Do Not Disturb and Do Not Disturb While Driving
  - Automatically detects driving based on motion and will block notifications from entering the driver’s phone
  - The phone can connect to Bluetooth in the car and the setting will be activated OR
  - The driver can opt to manually activate the setting of choice
  - Another feature the update has is an Autoreply while you are driving, which texts those who texted you saying, “I’m driving with Do Not Disturb While Driving turned on. I’ll see your message when I get where I’m going.”

- **Lifesaver (https://lifesaver-app.com/)**
  - Blocks the ability for a driver to use the phone while driving through GPS monitoring
  - Features a “driver portal” where parents can set up rewards for children when they demonstrate safe driving behavior
  - Sends parent notifications, blocks texts, blocks calls, tracks safe miles driven, and rewards safe driving

  - Blocks calls and text messages
  - Can be set to automatically block the phone when you are driving over 15 MPH
  - Notifies parents when teen driver deactivated or changed settings on the application

- **TrueMotion Family (https://gotruemotion.com/)**
  - Provides a resource to encourage and monitor safe driving habits ultimately reducing claims and process costs related to distracted driving
  - Each time a person is driving, the application rates the overall drive and pinpoints moments where driving may have been distracted
  - Compares driving scores and shows family members’ location on the road in real time, as well as providing a trip history
  - Sends parents notifications, tracks safe miles driven, and shares location
  - Provides the free application, Mojo

- **Mojo (https://gotruemotion.com/app/)**
  - Receive overall Mojo score based on how often one swipes, types, and talks on phone
  - For each minute a person drives without engaging in these behaviors, he/she earns one point. When the driver reaches 300 points, he/she can spin a prize wheel for a chance to win a $5 gift card to Amazon, Starbucks, or Dunkin’ Donuts
  - The cell phone owner can invite and compete with friends to see who is the safest driver
In-Vehicle Information Systems

Recent research from the American Automobile Association (AAA) indicates that the purpose of the hands-free In-Vehicle Information Systems (IVIS) is to improve the safety of making phone calls or adjusting entertainment system settings. However, all of the systems increase the amount of distraction that a driver will be exposed to, therefore increasing the chances of being involved in an accident (AAA Foundation for Traffic Safety, 2017). The study showed that drivers using IVIS tended to have slower reaction times and increased levels of distraction (AAA Foundation for Traffic Safety, 2017). Therefore, use of voice activated systems will not completely eliminate distracted driving.

Conclusion

Simulations are deemed a beneficial technique for enhancing learning that are applicable to various disciplines (Lateef 2010). In the case of this study, the simulation was used to uncover the difficulty of maintaining safe driving practices while cell phone use was involved. Simulation-based learning can be a way in which students can expand their knowledge, skills, and attitudes on specific subject matters (Lateef 2010). One outstanding benefit of simulation usage is the ability to replace and intensify real experiences with instructive and low-risk measures within a controlled environment (Lateef 2010). Simulators allow participants to experience and grasp safety-critical knowledge that would be inappropriate and ethnically challenging to practice on the road (de Winter et al 2012). Another positive trait of simulation use is the controllability and standardization (de Winter et al 2012). Participants in different physical locations can be engaged in the simulation under standardized procedures, which can be measured accurately and efficiently through feedback received from the controlled system (de Winter et al 2012).

Simulators may be a powerful tool to add to the arsenal of strategies designed to prevent distracted driving, which is a prevalent, unsafe behavior leading to unnecessary deaths.

References:


References:


A Driver Education Campaign to Increase Bicyclist Safety and Awareness

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4 CentreBike Advocacy Group, State College, PA, 16801
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Abstract

Background: Bicycling has significant health benefits, though rates of participation remain low in the United States, possibly related to safety concerns from traffic. Providing education to new drivers about sharing the road with cyclists may help with preventing injury. The purpose of this case study is to describe the development and implementation of a pilot program in high school driver education to improve bicyclist safety and awareness in a community.

Methods: Led by the local bike advocacy group, a collaborative group of community partners developed a curriculum to educate students in driver education classes at the regional high school. The curriculum was delivered by a trained volunteer and provided instruction on laws and proper Driver behavior.

Results: More than 400 students received the information. Community support was positive, resulting in a continued offering of the program in driver education at the regional high school with potential expansion to neighboring school districts.

Conclusion: This pilot test of a program offering an opportunity to enhance the safety of all bicyclists on the roads gained acceptance and has potential for dissemination to high schools and possible a long term impact on bicyclists.

Background

In the United States, millions of people bicycle every year and enjoy health benefits of biking, participation in biking remains lower in the United States compared with other countries (Bassett, Pucher, Buehler, Thompson, & Crouter, 2008). In many places in the U.S.A., infrastructure or the environment necessitates that bicyclists share the road with cars, therein bicycle safety laws are in place to help protect highway users. Throughout the United States laws vary by state, but there are some consistencies in bicycle safety laws nationwide; riders must obey traffic rules (e.g. stop signs, traffic lights), using hand signals when turning, and motorists must pass bicyclists at a safe distance (League of American Bicyclists, 2012). These laws are designed to ensure the safety of bicyclists when sharing the road with other motor vehicles.

Though there are laws in place to enhance safety, there are problems that arise when cyclists share the roadways with motorized vehicles. Data from 2014 from the National Highway Traffic Safety Administration (NHTSA, 2014) revealed that 726 cyclists lost their lives from bicycle/motor vehicle crashes, while another 50,000 cyclists were injured during the year. The cost of injuries and deaths each year is estimated by the National Safety Council (2017) to be over 4 billion dollars each year, making safe bicycle/motor vehicle interactions essential for population health, well-being, and economic outcomes. Cyclist fatalities account for two percent of the total traffic fatalities in the U.S., while less than one percent of travelers on the roadway are cyclists. It is difficult to pinpoint one outstanding cause of driver/cyclist fatalities, however some exposure risks include: time of day (most fatalities occur between 6 and 9 pm), experience of the cyclist, location (68% of fatalities occur in urban areas), availability of bike lanes (only 5% occurred in bike lanes) and alcohol use (20% of bicyclists killed had a blood alcohol content of 0.08 or above) (NHTSA, 2014). Many of these factors heavily contribute to bicyclist fatalities, but education for both drivers and cyclists about traffic safety is one modifiable aspect that can be targeted to increase knowledge and understanding of bicycle laws in the community.

Providing education for drivers to enhance cyclists’ safety has the potential. The degree to which cyclist safety is addressed in teen driver education programs varies significantly by state (NHTSA, 2016). The U.S. Department of Transportation’s Safer People, Safer Streets: Pedestrian and Bicycle Safety Initiative was launched in 2015 with an aim of helping communities do more to address non-motorized transportation safety-related issues. This included resources and support for communities to improve safety and conduct assessments to examine potential issues (US Department of Transportation, 2015). Initiatives such as these, focusing both on the physical infrastructure and driver/bicyclist behavior have the potential to prevent many of the crashes and
fatalities. In Pennsylvania, where bicycle crashes represent 1.1% of all accidents and 1.6% of all deaths, there is a need for prevention and education (Pennsylvania Department of Transportation, 2014). Currently, PennDOT requires new drivers to complete a driver education course in order to obtain a state driver’s license before the age of 18. These driver education courses range from online programs to those included as a part of high school curriculum, but few contain bicycle safety content to teach drivers how to share the road with cyclists. By educating all younger drivers, knowledge about bicycle awareness and safety may help prevent bicycle/motor vehicle fatalities and accidents. Other states have developed model bicycle safety curriculums attempting to educate drivers and decrease the likelihood of crashes (e.g. Utah and Illinois, with improvements in knowledge for safely sharing the road (State of Illinois, 2016)).

The purpose of this case study is to describe the development and implementation of a pilot driver education program to improve bicycle safety and awareness in State College, PA.

Methods

Setting:

The State College Area is located in Centre County in central Pennsylvania (regional population approximately 92,000). The region is predominately Non-Hispanic White (85%), with 55.4% below the age of 24, making the education of younger drivers critical to the safety of bicyclists on the roads (US Census Bureau, 2016). The State College Area has been awarded a bronze bicycle friendly designations by the League of American Bicyclists (2013).

Community Partnerships:

Advocacy efforts in the region are organized by CentreBike, the local bicycle coalition, and the Centre Region Bicycle Advisory Committee which provides input and advice to local governments to enhance safety, improve infrastructure related to biking and facilitate programs to educate and encourage biking. Members of these organizations include local citizens, representatives from local government, employers, organizations concerned with biking (e.g. parks department, cycling club), and the local university. The coalition and the committee work together to promote biking throughout the region.

The State College Area School District has an enrollment of approximately 6,900 with 2,300 students in grades 9-12. Each year 400-450 students take driver education as an elective.

Bicycle Education for Student Drivers:

In Fall 2015, the high school allowed a pilot program focused on bicycle safety in their driver education course. The bicycle component of the driver education course was taught by a representative from the CentreBike committee. The overall goal of the bicycle safety portion of the driver education class was to increase the knowledge of bicyclists’ rights on the road and to reduce the amount of bicyclist/motor vehicle crashes and fatalities in the area.

This program was developed as a collaboration among numerous community partners for the development and implementation of the program, including: CentreBike (facilitated connections between organizations), Centre Region Bicycle Advisory Committee (helped with curriculum development), State College Borough Government (provided an employee), and State College Area High School and the school district (allowed the pilot program to proceed). The planning process began in August 2015, and the program was implemented during the 2015-16 school year.

The driver-bicyclist safety lesson plan was presented during one class session of the driver education program. Throughout the school year there were 17 sections of driver education taught, and all students enrolled in the class received the instruction. The representative from CentreBike who taught the lesson worked for the State College Borough government as an Americorp member and part of the duties associated with this position were related to promoting biking in the community. The lesson plan used for this class was based off the Ride Illinois Cyclist’s Driver Education Video and Lesson, which is an Illinois Secretary of State-approved online lesson and quiz used to educate new drivers on how to safely and legally respond to bicycle interactions (State of Illinois, 2016). The information provided by this lesson was then adapted to accurately represent Pennsylvania state laws regarding bicycle-motorist interactions. Since this was a pilot project and there was only one high school in the school district, there was no easily accessible control group.

The driver-bicyclist safety lesson plan included: a teacher’s guide, quiz, presentation and videos. The guide outlined the objectives, materials, approach, and some background information demonstrating the need and importance of driver-bicyclist safety education, as well as a quiz guide including detailed explanations for each question. The 10 question bicyclist-driver safety quiz was administered prior to the presentation to gauge the students’ knowledge about safely sharing the road (Table 1). The responses were then discussed in detail and used as a teaching tool. A ‘Share the Road’ presentation which addressed the correct answers to the quiz, and educated the students on the laws in place protecting bicyclists and how to properly maneuver around bicyclists. Two PennDOT videos on sharing the road and bicycle laws were also shown (PennDOT, 2013a, PennDOT, 2013b). The quiz was re-administered to revisit points and clarify points beyond the videos.

(continued on page 14)
This avenue was chosen as a desirable method for educating new drivers on sharing the road because it can have a far reach and a lasting impact by establishing safe driver habits early in their driving career. In the state of Pennsylvania all novice drivers are already required to take driver education to receive early licensing before the age of 18, and a bicycle safety component, which is currently not required, can be easily incorporated into these courses. All of the materials used for this class can be easily disseminated and utilized by driver education teachers all over the state, as well as adapted for use nationwide. Other approaches grounded in infrastructure, such as share the road signs may not require routine effort to get the message across, but they do not provide any insight as to how to safely deal with bicyclists whom they are sharing the road with nor educate them on bicyclists’ laws and rights. Additionally, this approach required minimal time and did not require additional funding.

Results

The piloting, development, and implementation of the driver education program resulted in a number of important outcomes. The methods of delivery were carried out as planned, and the students reported positive feedback and leaving having a better understanding of bicycle laws and how to properly share the road when driving. After the first round of teaching the wording of some of the questions were altered for clarity, but the rest of the materials remained the same. Though tests were not collected, based on classroom responses, the majority of students answered all post-test questions correctly. Actively engaging the students was found to be important for success. Each class included the students sharing their experiences and close calls between drivers and bicyclists, pointing to the importance of this component of the class. Additionally the cross-sector community collaboration involved in implementing this program strengthened ties surrounding biking education and encouragement in the region, resulting in the submission of grants seeking further funding to encourage and educate about biking in the school district.

The bicycle education component of the driver education program was taught during each of four grading terms during the 2015-16 school year, to a total of 17 individual classes. The participation rate of the students remained fairly consistent, with new students coming in as they went through the driver education program, reaching 420 students over the course of the year. Feedback from the community at large revealed positive comments and impacts. This was the first year that the program was implemented, but will continue due to the successful implementation. Additional plans are being developed to thoroughly evaluate the long term outcomes of the program.

The original community partners involved continued to be engaged throughout the year, although less involvement was required from some of them after the development of the program. State College Area School District is one of seven school districts in Centre County and expanding the partnership and implementing the program in these districts will be the next step in dissemination and increasing the reach of the program for improving bicyclist safety in the region. During the second year of the program (2016-17 school year) a survey was administered to determine the benefit based on student responses and other interactive course activity was included.

Lessons Learned

This small pilot project yielded a number of valuable insights for developing and implementing a collaborative program targeting bicycle safety. Despite these insights, there are a number of notable limitations. First, there was minimal evaluation pre-post of students’ knowledge or awareness of bicycling safety; future offerings of this program will include some measures to gauge relevant outcomes. Another limitation is the relatively short amount of time since implementation, resulting in a lack of results for the long term outcomes of decrease crashes and fatalities in the region. The Centre Region Council of Government (2015) compiles crash data for the area; in the five years prior to the implementation of this driver education program there were 99 crashes and no fatalities. This data will provide a foundation for a long-term analysis of accident and injury prevention. Lastly, we are unsure if this model of program development and implementation would work in other communities outside of our region. The current project enjoyed strong collaborations with community partners and communities that may not have these existing relationships may not have the capacity to address some of the bureaucratic challenges associated with working within school districts.

These limitations none withstanding, there were a number of valuable lessons learned from this pilot project that other communities may heed when trying to increase bicycle safety. Our key elements of success included tailoring the class to fit the issues of the community and their audience, creating greater engagement in the class based on the expertise of the students on bicycling or driving, executing the program with minimal costs/resources and cross sector partnerships.

Overall, the bicycle education component of the driver education program in the State College School District achieved the objective to provide beginning drivers with knowledge about safely interacting with bicyclists on roadways, though further research is needed to gage the effectiveness of this initiative. The long term goal of this program, to decrease the number of incidences of car and bike collisions, as yet
to be recognized. However, the potential for a decrease in collisions can possibly decrease the number of injuries and fatalities between bicyclists and drivers, which was the overarching goal of the implementation of the program. Further initiatives could include instruction to young cyclists to prevent the many single vehicle crashes and fatalities. Considering the minimal investment, this program has shown promise for becoming a worthwhile, long-term fixture in the curriculum. In conclusion, this program offers one more method for enhancing the safety of all bicyclists on the roads and has significant potential for dissemination and long term impact.

Acknowledgements

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References


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(continued on page 16)
Table 1. Content of class presentation

Questions/Topics

1. **What direction should a bicyclist ride on the roadway?**
   a. Against the traffic flow (facing traffic; left side for two-way streets).
   b. With the traffic flow (right side for two-way streets)
   c. Depends on whether it’s a one-way or two-way street
   d. A bicyclist may choose to ride either with or against the traffic flow

2. **When a driver approaches a bicyclist from behind, the driver should:**
   a. Gently tap on the horn to alert the bicyclist.
   b. Blast the horn for at least two seconds.
   c. Race the engine
   d. Determine if they can safely pass

3. **What is the minimum safe distance for a driver to pass a bicyclist going in the same direction?**
   a. Two Feet
   b. Four Feet
   c. Six Feet
   d. Fifteen feet

4. **A bicyclist should:**
   a. Always ride on a sidewalk.
   b. Always hug the side of the road (ride on the edge) no matter what.
   c. Ride as close to the side of the road as practicable.
   d. Block traffic for no good reason

5. **True or False**
   Bicyclists have no legal right to ride on the road, and they follow different traffic rules.

6. **True or False**
   Bicyclists should use only designated bike lanes and bike paths.

7. **At a stop sign before proceeding, a driver should**
   a. Look for cars coming from the left, right and straight ahead.
   b. Look for pedestrians on sidewalks.
   c. Look for bicyclists approaching on the road and the sidewalk.
   d. All of the above

8. **A driver should be alert to:**
   a. A bicyclist riding into the street from a driveway or side street.
   b. A bicyclist riding alongside parked cars.
   c. A bicyclist riding against the traffic flow.
   d. All of the above

9. **All of these are driver errors except:**
   a. Opening the door into the path of a bicyclist, after parking on-road.
   b. Passing a bicyclist and then immediately turning right, into the path of the cyclist.
   c. When turning left, misjudging an oncoming bicyclist’s speed and cutting him off.
   d. Being unable to safely pass three bicyclists riding side-by-side.

10. **True or False:**
    Because cars and trucks are larger than bicycles, drivers always have the right of way when bicyclists are on the road.
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