NORTH DAKOTA DRIVER'S EDUCATION INSTRUCTOR SURVEY: PERCEPTIONS AND PROGRAM EVALUATION, 2013

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ASTRACT

Driver's education is a fundamental tool necessary for inexperienced drivers to learn how to operate a motor vehicle safely. In North Dakota, a new Graduated Driver's License process – one which utilizes learner, intermediate, and full driver stages – has been incorporated into the North Dakota Driver Risk Prevention Curriculum (NDRPC). The curriculum emphasizes skills, behaviors, and knowledge in order to educate future drivers. Coupled with recent legislation prohibiting cell phone use to text while driving, the latest curriculum was designed to prioritize safety on North Dakota's roadways. A survey questionnaire was presented to driver's education instructors at the annual North Dakota Driver and Traffic Safety Education Association conference to better understand the perceptions of educators regarding the NDRPC. Nominal, ordinal, and scale survey responses were quantified for statistical analysis and written responses were organized, coded, and analyzed via emergent theme content analysis. The study addresses two key goals related to improving traffic safety in North Dakota: first, to measure driver's education instructor perceptions of the new curriculum; and, second, to evaluate the new curriculum in relation to its usage in schools. Survey results indicate that instructors prioritize some preparedness indicators and skills differently. Involving parents and increasing the amount of time spent learning and practicing driving appears to be beneficial, but further improvements can be made.

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1. INTRODUCTION

The driving environment in North Dakota is considerably different than in other parts of the country. Roads in North Dakota are predominantly categorized as rural rather than urban. Gravel and dirt roads are more prevalent here than in most other regions of the United States. Drivers in this part of the country must be prepared for four distinct seasons and need to have a sufficient grasp of how to drive on snow, ice, sleet, and other wintry conditions.

With such unique driving conditions, the education program used to teach new drivers must be catered to fit the driving issues that are specific to North Dakota. As such, driver education in North Dakota is dynamic. It is offered publicly in many school districts across the state and privately via various driving schools. It emphasizes educating the driver about the vehicle, rules of the road, space management, deadly practices and behaviors, driving appropriately for the weather conditions, interacting with other drivers, practicing skills, managing risks, and putting the knowledge to use behind the wheel.

Historically, age limits and driving restrictions in North Dakota have been lenient when compared to other states. For example, permits were able to be obtained at age 14 and licensure prior to age 16 was possible for family, work, or agricultural exceptions. During the 2011 legislative session, North Dakota lawmakers implemented new Graduated Driver's License (GDL) procedures designed to target new drivers and make the roadways safer for all North Dakotans. These new GDL provisions went into effect at the beginning of 2012.

The new GDL consists of three phases: the learner stage, the intermediate stage, and full driving privileges. The learner stage must last a minimum of 12 months for drivers under the age of 16. For drivers over 16 years of age, the learner stage lasts six months or until age 18; whichever comes first. Drivers under age 16 must complete a minimum of 50 hours of supervised driving, including driving at nighttime.

In the intermediate stage, a nighttime driving restriction is placed on all drivers and they are not allowed to drive between sunset or 9:00 p.m. (whichever is later) and 5:00 a.m. Additionally, these drivers are subject to a passenger restriction in which they are not allowed to operate a vehicle with more passengers inside than the vehicle's manufacturer recommends. For both drivers in the learner stage and for those in the intermediate stage, those under age 16 are only permitted to operate a vehicle owned by either their parents or legal guardian. If all of the requirements of the learner and intermediate stages are met, a driver may have full driving privileges at age 16.

These new policies, coupled with new restrictions on cell phone use while driving, altered some aspects of the preexisting driver education standards. As a result, a new curriculum for driver education in North Dakota was established and is currently being used to instruct North Dakota's newest drivers.

The purpose of this study is two-fold. First, a survey questionnaire is used to elicit responses from driver education instructors in order to understand their perceptions of the new curriculum. Second, the project evaluates the new driver education curriculum in relation to its usage in schools. The following section provides context for the survey discussion that is presented in sections five and six. Sections three and four provide information on the method and survey response. Curriculum use is studied in section seven as an indicator of the benefits and limitations of the current North Dakota Driver Risk Prevention Curriculum (NDRPC). The final sections provide recommendations and a discussion for the survey.

2. BACKGROUND

Creating a driver education curriculum is a complex and challenging task. There are certain standards which the federal government mandates must be met. The U.S. Department of Transportation (2008) outlines dozens of topics and hundreds of skills that students should learn while enrolled in driver education. At the state level, however, driver education instructors are given flexibility when designing curricula to meet local driving conditions. For example, winter driving in Hawaii is not comparable to winter driving in North Dakota. Similarly, a student learning to drive in Brooklyn, New York faces altogether different challenges on the roadway than a student learning to drive in Brooklyn Township, North Dakota. As such, the driver education curriculum in North Dakota is tailored to local driving needs, but also focuses on education and improving skills – two areas that are emphasized in driver education classrooms nationwide. The curriculum has ten modules outlining the vehicle, control, driving situations, interaction, dangerous decisions, skills, and management. The following literature review outlines the current state of driver education – in context of both national studies and as it pertains to North Dakota.

2.1 Driver Education in a National Context

It is important to clarify the distinction between driver training and driver education. Engstrom et al. categorize driver training as "teaching people enough skills for controlling and operating a vehicle so they can obtain a licence [sic]" (2003:84). These skills are the basic, fundamental tools drivers learn early in the driving process. In contrast, the authors classify driver education as that which includes driver training, but also includes "knowledge about road laws, general road safety concepts, attitudinal and behavioural [sic] characteristics and awareness" (2003:84). In a recent study, Mayhew defines the core objective of driver education in North America as the ability "to produce safer drivers" (2007:229). Despite technological advancements in vehicle safety, driver safety, and road surface improvements, Mayhew notes that "driver education has remained relatively unchanged with the standard 30-hour in-class education and 6-hour in-vehicle instruction, a program design initially recommended at the first national conference in 1949, still the norm in many jurisdictions today" (2007:229). These are the very standards that the Department of Public Instruction uses in North Dakota. Unfortunately, Flanigan et al. (2010) identified driver education in North Dakota as being one of the worst performing programs in the United States. North Dakota has the highest proportion of teens with driver's licenses in the country and also has the second-highest rate of teen driver deaths due to alcohol or drugs (Flanigan et al. 2010). In this state, teen driver's license laws were rated as "failing," drunk-driving laws rated as "insufficient," driving-while-texting laws rated as "failing," motorcycle helmet laws rated as "failing," safety-belt laws rated as "inadequate," and red light and speeding camera laws rated as "failing," yet North Dakota teen drivers had the ninth-most miles traveled per capita in the nation (Flanigan et al. 2010:10-11). It is clear that teen drivers in North Dakota face altogether different challenges when learning how to properly operate a motor vehicle.

2.1.1 Goals of Driver Education Model

Multiple studies have examined the Goals of Driver Education (GDE) model as it relates to teaching young inexperienced drivers about safely operating a vehicle. Engstrom et al. (2003) focused on methods and incentives that have been used to influence young drivers' attitudes and behavior, especially regarding alcohol, seat belt use, and speeding. The researchers presented the GDE model, a hierarchical strategy that begins by teaching young drivers basic knowledge and skills (vehicle maneuvering), then general knowledge and skills (mastery of traffic situations), followed by knowledge and skills (goals and context of driving), and finishes with knowledge about and control over situations (goals for life and skills for living). The authors contend that attitudes, emotions, and behavior all influence young drivers, and learning skills in a hierarchical way best prepares drivers to mitigate these challenges.

In a separate study, Gandolfi also examined the GDE model and found that "self-assessment skills relating to driver attitudes and individual motives are part of the highest levels of the GDE matrix, and have been acknowledged as the most promising area for improvement in driver education" (2009:10). The author discusses that the key components of successful driver's education – when utilizing the GDE model – include identifying the target audience and tailoring content for that group, using educational frameworks to address educational requirements at all levels, and continuously evaluating program elements to improve effectiveness. These studies show that driver's education is dynamic and rapidly evolving. Tailoring the GDE to the needs of students can improve safety for this vital demographic.

2.1.2 Changing the Focus of Driver Education

Some studies have examined the tendencies of young, inexperienced drivers and have recommended that a shift occur in the focus of driver education. For example, Engstrom et al. (2003) highlighted police officers in South Australia. These law enforcement personnel realized the limitations of driver education and shifted the focus away from "changing attitudes and behaviour [sic] of the students to making the community more aware of road laws, risk, and risk management" (2003:88). The idea is that if a community actively assesses risk and risk management, it will provide more noticeable benefits than focusing on attitudes and behaviors. In a similar study, Hirsch (2003) noted that risk on the roadway was a product of societal norms and standards. Hirsch contends that pressures from society create what he terms "mobility bias," which is "the nonrandom selection of policies that promote access to privately owned and operated motor vehicles over alternative means of transport" (2003:290). Rather than using public transportation or other modes of travel, Hirsch argues that societal pressures create the expectation that young drivers should own vehicles for private transportation purposes. As such, parents – despite being aware of the risks facing young drivers – accept "these risks in exchange for the convenience that accrues from licensing young people" (2003:290). This leads to more risk on the roadway and a greater likelihood of accidents taking place due to inexperienced operators. Hirsch concludes that society needs to prioritize safety over mobility, but notes that "the empirical basis for driver's education curriculum development remains limited" (2003:294).

2.1.3 Studies Outlining the Effectiveness of Driver Education

Multiple studies have attempted to assess or quantify the effectiveness of driver education at local, state, and national scales. Results from these studies are sometimes contradictory and empirical evidence may be minimal. Nonetheless, it is important to use these studies as a guide for improving driver education within North Dakota.

Taubman – Ben-Ari (2010) developed an instrument used to assess attitudes towards accompanied driving among young drivers. Five factors were found to be meaningful to the study: tension, relatedness, avoidance, disapproval, and anxiety. These factors paralleled the important issues that were conceptualized by the author. It is believed that the instrument can be used in the future to predict aspects related to young drivers' involvement in car crashes.

In a study analyzing the effectiveness of driver education within a graduated driver's licensing program, Mayhew et al. did "not recommend that the length of time in the system be reduced for successful completion of driver education/training, because the empirical evidence does not support this practice" (1998:52). The authors found that "driver education/training might be able to provide the structure for the orderly and efficient acquisition of critical safe-driving skills during the graduated licensing phase" (1998:57). In other words, safe driving skills are best learned while young drivers are gaining driving experience, but prior obtaining full driving privileges. This study concludes that driver education

programs "should be empirically-based and focus on those psychomotor, perceptual and cognitive deficiencies that have been shown to be associated with high collision rates of novice drivers" (1998:60).

In a somewhat outdated study, Asch and Levy (1987) addressed before-and-after fatality rates among young drivers using 1978 as a baseline year. Three years of data were tracked in order to compare and contrast fatality rates before and after the implementation of a minimum legal drinking age of 21. The study was limited because – during the study – not all states had a minimum legal drinking age of 21. Also, not all fatal crashes reported alcohol impairment and in some jurisdictions impairment was not a variable that was studied. The authors found that, among young drivers, alcohol impairment itself did not definitively explain crash rates. Rather, inexperienced drivers and unfamiliarity with the impacts of alcohol may be better at explaining crash rates among young drivers.

A study in Australia found that the use of simulators during driver education were not always effective (Engstrom et al. 2003). Those students who "had completed the programme [sic] with the in-car component did not have a reduction in accidents and did not have an increase in the amount of traffic offences [sic]" (2003:89). In North Dakota, driving simulators are permitted and are considered a viable strategy for teaching safe driving practices.

Multiple studies have concluded that there is no evidence that driver education reduces crashes among new drivers. Roberts and Kwan (2001) conducted three trials in which crash rates were tracked of students that had obtained driver education and compared to students in a control group. The authors found that "there is no evidence that driver education reduces teenage involvement in road traffic crashes" (2001:4). A similar study by Christie found that "driver training of a conventional nature contributes little to reductions in accident involvement or risk among drivers of all ages and experience groups" (2001:4). The author claims that improving driver knowledge and skill does not always lead to a change in behavior or a reduced crash risk. In 2009, Senserrick et al. administered a survey to nearly 21,000 young drivers in New South Wales. Results from their study showed that there is "no association between participation in either of 2 education programs, 1 driver-focused and 1 resilience-focused, and risk for accumulated traffic offenses" (2009:1289). Although these studies have comparable findings, it is widely accepted that crash involvement and traffic offenses are only two of many variables contributing to the safety of a roadway. Therefore, although these studies provide insight into the dangers of young drivers, they cannot be considered as definitive of the tendencies of new drivers.

A study by Zhao et al. (2006) had positive findings for young drivers participating in driver education. In this study the authors examined driver behavior via a survey that was administered to 1,533 students in Ontario. In Ontario, a GDL program is in place which requires all new drivers to successfully pass through two stages before full licensure is obtained. The first stage is referred to as "G1" and the second as "G2." Results from the study indicated that there were significantly lower odds of collision involvement among G1 license holders who had taken driver education than those that had not (Zhao et al. 2006). Factors such as gender, the number of months of licensure, and overall kilometers driven were deemed as other predictors that also explained crash involvement.

Lonero and Mayhew (2010), in an extensive literature review of driver education issues, conclude that many studies have seemingly contradictory results, and thus regional differences and differences in experimental design may explain why driver education is viewed differently by local, state, and national entities. One section of the study focused exclusively on graduated licensing processes. The authors recommend that GDL processes be "multi-phased," "implemented in the content and delivery of driver education," and "should not give a 'time discount' for driver education" (2010:14). The overall sentiment from the authors is that, regardless of how "the weight of the available evidence does not favor the hypothesis that formal instruction has safety benefits," empirical evidence is lacking; therefore no

conclusions about the effectiveness of driver education can be considered universally definitive (2010:13).

2.2 Driver Education Requirements in North Dakota

Certain requirements must be met if a driver education program is to be certified by the State of North Dakota as an approved training program that satisfactorily fulfills general driver training requirements. In North Dakota, there are requirements concerning the length of the training program, the types of driver education that can be offered, and the qualifications of the instructor.

2.2.1 Time and Class Requirements

According to the North Dakota Administrative Code, potential drivers enrolled in classes from the Department of Public Instruction must complete driver education courses that consist of classroom instruction and behind-the-wheel instruction. In total, the child "must complete at least six hours of behind-the-wheel instruction, and thirty hours of classroom training by an instructor certified by the Department of Public Instruction" (North Dakota Administrative Code 37-03-04-02). If these requirements are not met, students are not eligible to obtain a learner's permit. Alternatively, the student may be issued a restricted driver's license or permit if a course at an approved commercial driver training school has been completed. Private driver's education schools may not include the same standards of training; for example, it is not obligatory to take a CDL education course to get a CDL license in North Dakota.

2.2.2 Class Type

With regard to driver and traffic safety education in North Dakota, Sanstead, Ziegler, and Welk (2011) highlight three programs that are most commonly used in teaching driver education in the state. Each program has multiple phases that meet the requirements presented in North Dakota Administrative Code 37-03-04-02.

The first program has two phases – classroom and behind-the-wheel. It is the most frequently offered driver and traffic safety education course in the state. This program consists of 30 hours of classroom instruction, a minimum of six hours of observation, and a minimum of six hours of supervised behind-the-wheel on-street instruction in a dual-control vehicle (Sanstead et al. 2011). The course is only offered for grades nine through twelve and the student must be a minimum of 14 years of age before participating in the in-car portion of driver training.

The second program has three phases. There are two variations of this program. The first variation consists of 30 hours of classroom instruction combined with at least three hours of behind-the-wheel on-street instruction and 12 hours of simulation. The second variation consists of 30 hours of classroom instruction combined with extensive driving on a multi-car driving range. Students receive at least three hours of behind-the-wheel on-street instruction in addition to at least six hours of range driving. With regard to both variations, the three phase program is only offered for grades nine through twelve and the student must be at least 14 years of age prior to the in-car portion of the program.

The third program has four phases. It is an integrated program that blends a minimum of 30 hours of classroom instruction with the sequential use of simulation, multiple-car driving range, and behind-the-wheel on-street instruction. Students are required to receive a minimum of two hours of behind-the-wheel instruction. Like the two and three-phase programs, the four-phase program is offered for grades nine through twelve and the student must be at least 14 years of age to take the course.

Sanstead et al. (2011) recommend that the following take place in the programs:

- The course should be taught using the NDRPC
- A student/parent orientation should be scheduled well in advance of the class
- Students should be required to have permits
- A student confidential health information form should be completed and signed by a parent/guardian
- Classroom instruction in summer programs should be scheduled over a time period of at least two weeks not to exceed three hours of instruction in any day
- There should be at least six in-car lessons in two-phase programs
- In-car instruction should be integrated or concurrent with classroom instruction
- Students should not drive longer than 60 minutes during any lesson with the exception of one lesson of 90 minutes for travel to a larger city for complex driving instruction
- Behind-the-wheel lessons should be spaced to allow for student/parent practice between lessons
- Students should be given classroom and behind-the-wheel schedules
- There should be an attendance policy with makeup provisions
- A driving log should be utilized for communication between the instructor and the parent
- A letter to parents or a meeting with parents should follow the completion of the course emphasizing student progress and describing further practice needed by the student
- Parents should be informed of class limitations (night driving, winter driving, freeway driving, etc.) and information provided to assist them in providing student/parent practice
- Student/parent practice is encouraged to continue after the course is completed

2.2.3 Instructor Requirements

There are also specific requirements that driver education instructors must meet. Sanstead et al. (2011) explain that high school courses in driver and traffic safety education must be taught by an individual that has a valid, non-suspended, unrevoked or non-canceled operator's license suitable for the type of vehicle to be used. Furthermore, the instructor must have a valid regular North Dakota educator's professional license with a valid driver and traffic safety education endorsement. The instructor is also required to renew the Driver and Traffic Safety endorsement on an annual basis. The instructor is responsible for ensuring that the training vehicle is insured and meets the minimum requirements of North Dakota law for use with behind-the-wheel instruction.

2.2.4 Drivers Allowed in North Dakota

According to Ziegler, Butts, and Jackson (2011a), only certain individuals can obtain a driver's license. In North Dakota, any person other than a nonresident student, a tourist, or a nonresident member of the Armed Forces who has lived in the state for 90 consecutive days is deemed a resident of North Dakota for the purpose of driver licensing.

There are, however, some individuals that are not allowed licensure. North Dakota Century Code 39-06-03 explains that licenses cannot be issued to the following individuals:

- Any person under sixteen years of age
- Any person whose license has been suspended in this state or in any other state
- Any individual who is a habitual drunkard, or is a habitual user of narcotic drugs, or is a habitual user of any other drug to a degree that renders the individual incapable of safely driving a motor vehicle

- Any person who has previously been adjudged to be afflicted with or suffering from any mental disability or disease and who has not at the time of application been restored to competency by the methods provided by law
- Any person deemed to have poor physical or mental health and thus would not be able to operate a motor vehicle with safety upon the highways
- Any person deemed to be inimical to public safety while operating a motor vehicle on the highway

All other drivers are allowed in North Dakota provided that they successfully pass written and in-car examinations. With regard to driver education, the criteria outlining substance abuse, mental disability, and physical disability used for licensure is also applicable for driver education training. Thus, since some North Dakota residents cannot legally obtain licensure, these individuals should not receive driver education.

2.2.5 Driver Education Process: From Learning to Licensure

In general, driver education in North Dakota begins at age 14 or 15. Students enroll in either public or private driver education courses. Courses taught through the Department of Public Instruction place a heavy emphasis on classroom instruction, observation, behind-the-wheel driving practice, simulated driving experiences, multiple-car driving ranges, and other methods of driver education. Driver education courses taught via private schools often focus on behind-the-wheel training.

According to Sanstead et al. (2011), once a student has successfully completed the driver and traffic safety education program course, a certificate of completion is presented to the student to confirm that the student is prepared to operate a motor vehicle. The certificate of completion is an official document that must be presented to the driver examiner at the time of the road test to determine licensure (Sanstead et al. 2011).

Prior to licensure, however, the student must obtain an instruction permit to legally practice driving. In order to obtain a permit the driver must first pass the written examination and the visual screening test. The applicant must be at least 14 years of age and any applicant under the age of 18 must have approval from a parent or legal guardian. Ziegler et al. (2011a) indicate that permits are valid for up to one year. Drivers with permits must drive with a person with a valid license for the class of vehicle being driven who is at least 18 years of age and has had at least three years of driving experience (Ziegler et al. 2011a). Any other individual driving in the vehicle may not be in the front seat.

Once the permit is obtained, applicants under the age of 16 must maintain the learner's permit for 12 months. The applicant must also complete 50 hours of supervised driving in varied conditions such as nighttime driving, gravel road driving, winter driving, and driving on both urban and rural roadways (Ziegler et al. 2011b). Once these parameters are met, the applicant can apply for licensure. In order to be licensed in North Dakota, one must have proof of identification, a valid social security number, pass a vision screening test, pass a written examination, and pass a driving test. If these parameters are met and license, registration, and valid insurance fees are paid, the applicant will receive licensure.

2.2.6 Driver Education Locations in North Dakota

Driver education in North Dakota is offered both publicly and privately. Public driver education instruction occurs through the Department of Public Instruction during both the regular academic school year and the summer months. Summer driver education is more common than driver education during the school year. The most recent state data from 2010 show that 187 summer driver education courses were

offered compared to just 50 during the school year. Table 1 summarizes the driver education courses that were offered during the entire year. The most common public driver education course was the two phase program involving both classroom and behind-the-wheel learning. A majority of students (68.4%) used that program compared to other course types.

In sum, 4,842 students were enrolled in public driver education during the 2010 calendar year. Of these students, 986 were enrolled during the regular school year. Summer enrollment totaled 3,856 students. Table 2 outlines the number of students enrolled in each course type. The proportion of the total number of students enrolled in each public driver education course type directly parallels the number of each course type that was offered in 2010. Table 3 displays enrollment numbers and typical class sizes.

Table 1 Public Driver Education Courses in North Dakota, 2010

Course Type	Number of Courses Offered	Percent
21012: Driver Education Classroom Only	3 (Regular: 3, Summer: 0)	1.3%
21014: Two Phase Program: Classroom and Behind-the-Wheel	162 (Regular: 16, Summer: 146)	68.4%
21015: Three Phase Program: Classroom, Behind-the-Wheel, and Simulation	32 (Regular: 11, Summer: 21)	13.5%
21016: Three Phase Program: Classroom, Behind-the-Wheel, and Multi-Car Driving Range	12 (Regular: 0, Summer: 12)	5.1%
21018: Four Phase Program: Classroom, Behind-the-Wheel, Simulation, and Multi-Car Driving Range	28 (Regular: 20, Summer: 8)	11.8%
TOTAL	**237**	

Table 2 Public Driver Education Enrollment, by 2010 Course Type

Course Type	Enrollment Total	Percent
21012: Driver Education Classroom Only	22	0.5%
21014: Two Phase Program: Classroom and Behind-the-Wheel	3,263	67.4%
21015: Three Phase Program: Classroom, Behind-the-Wheel, and Simulation	611	12.6%
21016: Three Phase Program: Classroom, Behind-the-Wheel, and Multi-Car Driving Range	290	6.0%
21018: Four Phase Program: Classroom, Behind-the-Wheel, Simulation, and Multi-Car Driving Range	656	13.5%
TOTAL	**4,842**	

A clear majority of students enrolled in public driver education had a class size between 11 and 30 students. Five public driver education courses had between 41 and 50 students enrolled. Five other courses had at least 51 students enrolled. One course had 70 students enrolled – the largest among all public driver education courses offered in 2010.

Table 3 Public Driver Education Class Size, by Number of Classes

Enrollment Size	Number of Courses with Enrollment Size
0 – 10	36
11 – 20	96
21 – 30	82
31 – 40	13
41 – 50	5
51 – 60	4
61 – 70	1
TOTAL	**237**

In addition to public driver education, private driver education schools are permitted in the state of North Dakota. Legislation enacted August 1, 2013, grants the director of the NDDOT responsibility for the regulation of commercial driver training schools and instructors in North Dakota (North Dakota Century Code 39-25-02). The North Dakota Century Code gives the director authority to adopt and prescribe regulations concerning the administration and enforcement of Chapter 39-25 in order to protect the public. The following private driving schools are currently licensed in North Dakota:

- 1st Geer Driving School, Bismarck
- A FM Driver Training, Fargo
- AJM Behind the Wheel Driving, Fargo
- Behind the Wheel, Carrington
- Dakota Driving School, Williston
- Dave's Dakota Driving School, Bismarck
- Don's Driving School, Bismarck
- Forks Drive-Right, Grand Forks
- G's Driving School Inc., Minot
- Krueger Driving Academy, Fargo
- Larry's Driving School, Dickinson
- Minor Driver's License Recertification, Minot
- Mylo's Driving School, Bismarck
- Paul's Behind the Wheel, West Fargo
- The Right Way LLC, Grand Forks
- Xcell Driving School, Fargo

2.2.7 Parental Involvement in Driver Education

The State of North Dakota emphasizes parental involvement throughout driver education and driver training. Sanstead et al. list "supportive parents who provide encouragement and supervise practice time" as one of the components that lead to the success of the driver and the overall effectiveness of the safety education program (2011:1). In addition to providing support and driving expertise, a "written approval from the student's parent or legal guardian" is needed in order for a student to enroll in the behind-the-wheel portion of driver training (Sanstead et al. 2011:8).

Sanstead et al. (2011) indicate that as part of public driver education, schools are expected to provide parents with either the *North Dakota Parent Guide to Teen Driving Manual* or its website. The manual contains a comprehensive list of strategies parents can use to teach their children about the importance of safe driving. Topics include "Parent's Role in the World of Teen Driving," "Supervise Your Teen

Driver," "Set Family Rules and Guidelines for Driving," "Before You Even Begin," "Basic Driving Skills," "Step-by-Step Maneuvers," "Complex Driving Skills," "Emergencies – How to Handle Them," and "What Happens If You Mess Up?" (NDDOT 2012).

2.2.8 New Graduated Driver Licensing Provisions and New 2012 Legislation

In 2011 the North Dakota Department of Transportation (NDDOT) released its Highway Safety Plan for the Federal Fiscal Year 2012 (Ziegler et al. 2011c). In it, one of the emphasized areas focused on revising the driver's education curriculum. The Department of Transportation worked closely with the NDDTSEA to revise the preexisting driver's education curriculum and recommend new GDL provisions to legislators. These provisions were passed by the North Dakota Legislature and include changes designed to improve driver safety. The changes that were made are geared specifically towards teenage drivers.

As of January 1, 2012 – the date that the new provisions were implemented – new restrictions were made based on age. The North Dakota Department of Health (2012) outlines the following changes that were made:

- All applicants must be at least 14 years of age
- Any applicant under the age of 18 must have parent or legal guardian sponsorship
- Teens under the age of 16 are required to hold the permit for 12 months (or until they turn 16)
- During the permit phase, teens are required to accumulate at least 50 hours of supervised driving experience in varied conditions such as winter driving, nighttime driving, rural roads, urban roads, and dirt/gravel roads
- If the road test is successfully completed, drivers under the age of 16 are limited to driving the vehicle of a parent, legal guardian, grandparent, sibling, aunt, or uncle. Drivers under the age of 16 cannot have more passengers than the vehicle manufacturer's suggested passenger capacity. Drivers under the age of 16 are prohibited from driving between sunset or 9:00 p.m. (whichever is later) and 5:00 a.m. All drivers under the age of 18 are prohibited from using a cell phone except in the case of an emergency.

2.2.9 The Influence of the NDDTSEA on Driver Education in North Dakota

The NDDTSEA is the leading entity in driver education in North Dakota. The purpose of the NDDTSEA is fourfold: 1) to promote and encourage the teaching of driver and traffic safety education to youth of the state of North Dakota; 2) to study the problems associated with the teaching of driver and traffic safety education and then attempt to solve these problems; 3) to cooperate with other agencies in the interests of the teaching of driver and traffic safety education, especially in the high schools and colleges; and, 4) to improve and upgrade requirements for teaching driver and traffic safety education (NDDTSEA 2012).

The NDDTSEA worked closely with the NDDOT in 2011 to revise the driver education curriculum to include the new legislation about graduated driver licensing provisions (Ziegler et al. 2011c). Throughout their partnership with the NDDOT, the NDDTSEA continued to promote, distribute, and provide technical assistance to instructors related to the driver education curriculum. This curriculum is known as the NDRPC (Ziegler et al. 2011c).

2.2.10 Influence of Oregon Driver Education Program on the NDRPC

The NDDTSEA tailored the State of Oregon's driver education curriculum for use in North Dakota (Ziegler et al. 2011c). The curriculum was first used by school-based driver education programs in the spring and summer of 2009 (Ziegler et al. 2011c). The curriculum has since been revised to include new mandates passed by the North Dakota Legislature concerning graduated driver licensing.

The Oregon Driver and Traffic Safety Education Association (ODTSEA) originally developed the Oregon Driver Risk Prevention Curriculum (ODRPC) four years ago (ODTSEA 2012). Though it has been revised seven times, it is widely considered to be the leading driver education curriculum in the United States and currently has seven other states using the curriculum in some form (ODSTEA 2012). The number of 16 year-olds involved in fatal and injury crashes within Oregon has decreased from 1,195 in 1998 to just 621 in 2007, suggesting that the curriculum, instructor training, and graduated driver licensing provisions within the state made driving conditions for this demographic substantially safer. The curriculum is freely available to the public and features ten safety modules. The ten safety modules are as follows:

1) Uniting Driver, Vehicle
2) Knowing Where You Are
3) You Are In Control
4) Searching for LOS-POTs (Line of Sight-Path of Travel)
5) You Control the Intersection
6) Space Management
7) Interacting with Others
8) Practicing Your Skills
9) Managing Driver, Vehicle, Environmental Risks
10) Putting It All Together

These modules were used as the foundation for the NDRPC. The NDRPC is slightly modified to fit driving needs that are more conducive to North Dakota driving conditions. These conditions include winter driving, rural driving, and traveling on gravel or dirt roads.

2.2.11 North Dakota Driver Risk Prevention Curriculum

The NDRPC has the same ten modules as created by the ODTSEA. Each module contains classroom lesson plans and an overview detailing how to perform the activities, entrance and exit exams with keys, interactive student-centered power point lessons, homework assignment sheets and keys, classroom worksheets and keys, movie clips, hyperlinks, in-car lesson plans, driving routes, and parent-student guided practice routes (NDRPC).

The goal of the NDDTSEA is to reduce the number of collisions involving North Dakota teen drivers (NDDTSEA 2010). Seven strategies were highlighted as methods necessary to meet this goal:

1) Establish high standards for what students should know and be able to do
2) Transform learning experiences so that all students meet the standards
3) Hold the system accountable for student learning
4) Manage for high performance at the state and local levels
5) Fuel change with high-quality professional development
6) Engage public support for the changes that are needed
7) Guarantee children and their families the support they need to succeed

If these strategies are utilized, it is assumed that efficient and effective driver performance skills, habits, and attitudes will be created for every student.

In addition to being influenced by the Oregon Driver Risk Prevention Curriculum, the North Dakota curriculum follows the National Institute for Driver Behavior (NIDB) Risk Prevention Curriculum and its behavioral delivery sequences. NIDB minimum standards promote basic skills and behaviors necessary for risk prevention. These skills include getting ready to drive, acceleration, braking, steering, securing the vehicle, vehicle judgment to roadway, visualization of intended travel path, searching intended travel path, speed control, lane selection, rear zone searching and control, following time and space, communication, and courtesy (ADTSEA 2006). An Assessment Summary Form was created based upon the NIDB minimum standards to measure the success of a student at learning various skills, procedures, habits, concepts, and actions.

2.2.12 Advancements in North Dakota Driver Education

New technology has been integrated into select driver education programs in North Dakota. Contributions to the NDDTSEA were made by local organizations in order to purchase DVR in-car cameras, monitors, and display tables to be used as part of driver education training. These in-car systems are used to record teen driving experiences and are subsequently used in classroom activities or simulated driving situations. These videos improve situational awareness, promote discussion, and can be utilized for role-playing. Table 4 summarizes donations and recipient schools.

Table 4 In-Car Camera System Donations

Donating Entity	School(s) Receiving Donation
-AAA North Dakota	Rolla, Hettinger, Ashley, Hillsboro, Center
-Titan Machinery	Wishek
-Kupper Chevrolet	Mandan
-Bismarck Motor Company	Saint Mary's - Bismarck
-Luther Ford	Fargo, West Fargo, Northern Cass, Oak Grove, Kindred
-Strasburg State Bank	Strasburg
-First Community Credit Union – Napoleon	Napoleon
-Dakota West Credit Union	Watford City
-Dakota Plains Credit Union	Ellendale

3. METHOD

A survey questionnaire was selected as the method to measure the perceptions of driver education instructors. A draft survey was designed by blending questions related to the NDRPC, the NHTSA Novice Teen Driver Education and Training Administrative Standards document which lists the criteria of a driver education and training program, and various behavior skills for student drivers. The NDDOT's Traffic Safety Office provided input regarding questions to include in the final survey.

The survey questionnaire was presented to North Dakota driver education instructors on April 5, 2013 at the annual NDDTSEA conference. The survey contained questions regarding time spent in the classroom and behind-the-wheel, usage of the NDRPC, perceptions of preparedness, importance of driver skills and behaviors, new GDL provisions, the new ban on texting while driving, and demographic information. Appendix A provides the complete survey questionnaire. The scale responses were transformed into ordinal values to quantify responses between scale extremes. Nominal level data were coded for descriptive considerations. Chapter 5 provides information about quantitative analysis results.

In addition to scale responses, driver education instructors were asked to provide comments on the back side of the questionnaire to provide input about the current state of the driver education curriculum. Instructors were invited to critique the program, indicate what is working effectively, what needs improvement, or what could be incorporated into the program to enhance it and improve the safety of teen drivers. Nearly one-quarter of all respondents provided input. As such, qualitative data analysis was also used in this project: emergent theme content analysis was performed to identify which themes were deemed important among respondents. Chapter 6 addresses the results of the qualitative data analysis.

4. RESPONSE

The survey response rate among all driver education instructors in North Dakota is unknown. The number of private driver education instructors in the state is unknown as this data is kept confidential by such driving schools. The researcher was unable to elicit such data from the private driver education instructors. Similarly, since the 2013 calendar year is not yet completed, it is unknown how many public driver education instructors will be teaching driver's education in North Dakota. This number is not known on account of the fact that some new instructors may be training currently to instruct in the summer or fall yet are not presently represented in the Department of Public Instruction enrollment numbers. Similarly, the most recent Department of Public Instruction data available to the researcher highlight public driver education instruction from the 2010 calendar year. What is known is that the 2010 calendar year had 161 instructors teach 237 courses to 4,842 students. Given the influx of residents moving to the western part of the state with the growth of the energy sector and the continued growth of the eastern part of the state due to a strong economic climate, it is likely that the 2013 calendar year will need slightly more instructors to teach a larger number of courses to a larger proportion of students.

Similarly, it should be stressed that not all driver education instructors decided to attend the annual NDDTSEA conference. At the time the survey was administered, there were 69 instructors in attendance. From this group, 66 surveys were completed, of which all were verified as providing valid results. Thus, the response rate among those in attendance was 95.7%, though this number would be substantially smaller if the total number of instructors in 2013 were known.

In terms of gender, the sample consists of 71.9% males and 28.1% females (Table 5). Of the responses provided, nine individuals chose not to identify their gender. This may explain the underrepresentation of females in this survey. Also, it should be noted that the total number of responses from the female cohort is not large enough to be extrapolated to fit the female driver education instructor population. In general, at least 30 valid responses are required for data to be considered representative of a particular demographic. Thus, any conclusions made for the female cohort in this survey cannot be considered indicative of the entire female driver education instructor population in the state of North Dakota.

Table 5 Valid Survey Responses by Gender

Gender	Valid Surveys	Percent of Sample Received
Male	41	71.9%
Female	16	28.1%
Total	*57*	*100%*

Frequency Missing = 9

With regard to what types of driver education the instructors teach, the majority (82.5%) teach both classroom and behind-the-wheel instruction (Figure 1). Six respondents (9.5%) teach behind-the-wheel only. Two respondents indicated that they teach classroom, behind-the-wheel, and multi-car driving range instruction. One individual taught in the classroom only, one taught classroom, behind-the-wheel, and simulation, and one taught all four areas: classroom, behind-the-wheel, simulation, and multi-car driving range instruction.

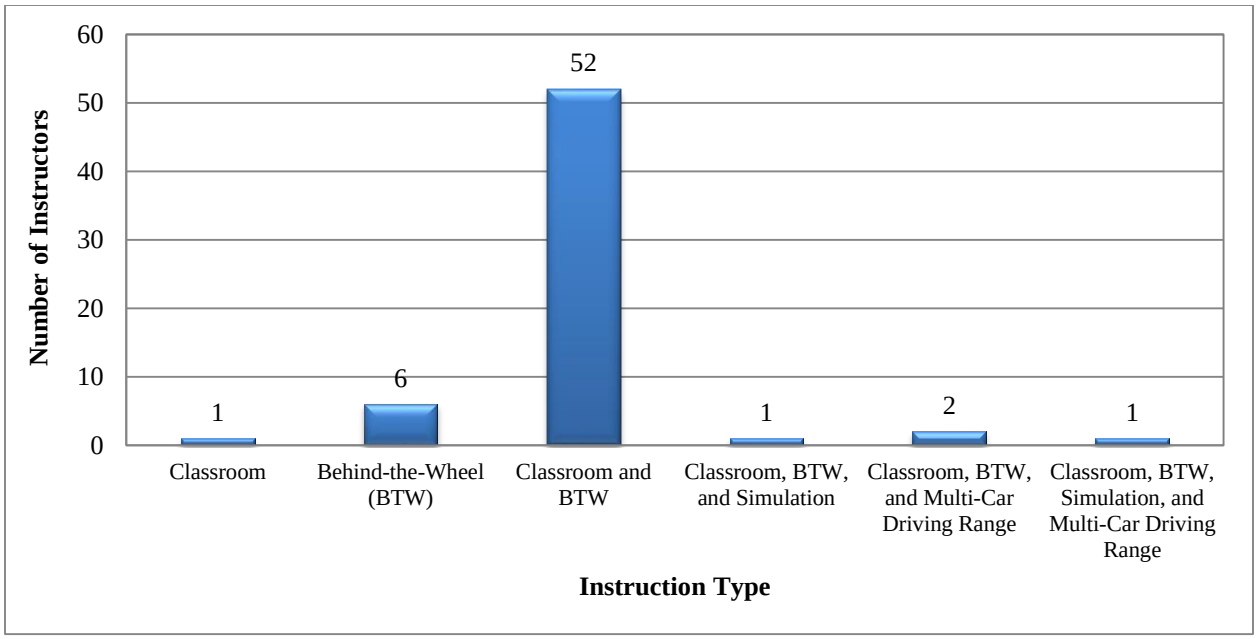

Figure 1 Type of Driver Education Taught, by Number of Survey Respondents

A diverse group of driver education instructors was represented in the survey when factoring for the amount of time the instructors have been teaching driver education in North Dakota (Figure 2). Though there was one outlier – one individual reported teaching driver education for 35 years in North Dakota – the remaining five-year cohorts were distributed fairly evenly with no fewer than seven respondents and no more than thirteen respondents in any given cohort. Most commonly, respondents have been teaching driver education between five and nine years. Thirteen individuals reported teaching driver education for this amount of time, though they represent only 19.7% of the entire sample.

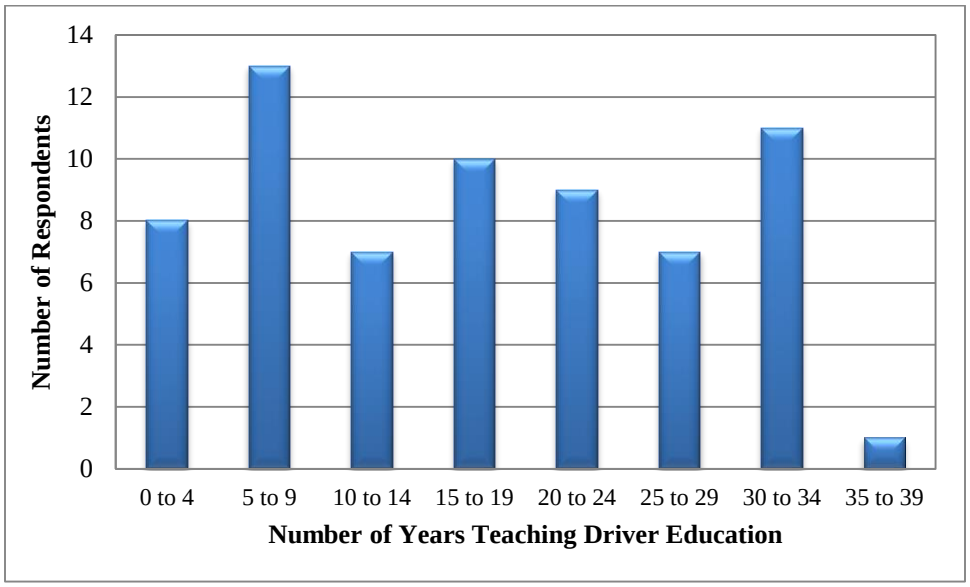

Figure 2 Time Spent Teaching Driver Education, by Number of Respondents

5. QUANTITATIVE ANALYSIS RESULTS

Survey responses offer important insight into driver education instructor perceptions and attitudes regarding the current driver education curriculum in North Dakota. Simple frequency analysis of ordinal and dichotomous survey responses provides a baseline of instructor views and perceptions. In addition, the scale responses were transformed to ordinal values to quantify responses between scale limits. This allows for statistical testing of relationships, means, and tests of significance. Quantitative scale definitions are provided in Table 6.

Table 6 Quantitative Scale Definitions for Responses

Q#	Question	Scale	Conversion Values
1a	Hours in Classroom	1-6	1=0-9 Hours to 6=50+ Hours
1b	Hours BTW Instruction	1-5	1=0-4 Hours to 5=20+ Hours
1c	Hours BTW Practice	1-9	1=0-9 Hours to 9=80+ Hours
2a	NDRPC Curriculum Use	1-3	1=No, 2=Yes/Part, 3=Yes/Entire
2b	Parent Segment	0-1	0=No, 1=Yes
3a	Basic Techniques	1-5	1=Strongly Disagree to 5=Strongly Agree
3b	Steer/Brake/Accelerate	1-5	1=Strongly Disagree to 5=Strongly Agree
3c	Understand Laws	1-5	1=Strongly Disagree to 5=Strongly Agree
3d	Knowing Attitude Impact	1-5	1=Strongly Disagree to 5=Strongly Agree
3e	Resist Peer-Pressure	1-5	1=Strongly Disagree to 5=Strongly Agree
3f	Urban/Rural Differences	1-5	1=Strongly Disagree to 5=Strongly Agree
3g	Sharing the Road	1-5	1=Strongly Disagree to 5=Strongly Agree
3h	Motorcycle Awareness	1-5	1=Strongly Disagree to 5=Strongly Agree
4a	Understanding Signs/Signals	1-4	1=Unimportant to 4=Very Important
4b	Impaired Driving	1-4	1=Unimportant to 4=Very Important
4c	Distracted Driving	1-4	1=Unimportant to 4=Very Important
4d	Blind Spots	1-4	1=Unimportant to 4=Very Important
4e	Highway Driving	1-4	1=Unimportant to 4=Very Important
4f	Nighttime Driving	1-4	1=Unimportant to 4=Very Important
4g	Winter Driving	1-4	1=Unimportant to 4=Very Important
4h	Parking	1-4	1=Unimportant to 4=Very Important
5a	GDL Under 16, permit 12 mo.	1-5	1=Strongly Disagree to 5=Strongly Agree
5b	GDL Under 16, 50+ Hours	1-5	1=Strongly Disagree to 5=Strongly Agree
5c	GDL Under 16, 9PM – 5AM	1-5	1=Strongly Disagree to 5=Strongly Agree
6a	Texting Ban Improves Safety	1-5	1=Strongly Disagree to 5=Strongly Agree
6b	Texting Ban Enforcement	1-5	1=Strongly Disagree to 5=Strongly Agree
9	Years Teaching	1-8	1=0-4 Years to 8=35-39 Years

5.1 Time Spent Learning and Practicing Driving

Three questions focused on the amount of time driver education instructors perceive is needed for teen drivers to become prepared for driving on North Dakota's roadways. Response frequencies for these questions are provided in Table 7. Responses show that driver education instructors most often identify the current learning and practicing standards as those that are most effective in preparing teen drivers for North Dakota roadways. For example, a majority (69.2%) of driver education instructors indicated that having between 30 and 39 hours of classroom instruction best prepares drivers. All three of the driver education programs in North Dakota discussed in Chapter 2 of this project mandate that a minimum of 30 hours of classroom instruction be given to prospective drivers. Similarly, with regard to the number of

hours of behind-the-wheel instruction, a majority (58.7%) of respondents noted that having between five and nine hours is best. As mentioned in Chapter 2, the majority of North Dakota students and the majority of driver education instructors teach course 21014, the two-phase program consisting of a minimum of 30 hours of classroom instruction and six hours of behind-the-wheel instruction. This likely explains why the majority of instructors responded this way. When asked how many hours of behind-the-wheel practice driving best prepared teen drivers for licensure, nearly half (49.2%) of survey respondents believed that having between 50 and 59 hours of practice driving is ideal. Yet again, this is synonymous with current standards: the new GDL provisions in North Dakota state that teens are required to accumulate at least 50 hours of supervised driving experience in varied conditions in order to obtain licensure.

Table 7 Perceptions of Time Spent Learning and Practicing Driving

Question				Responses				
1A) How many hours of classroom instruction do you believe best prepares drivers?								
			0 – 9	10 – 19	20 – 29	30 – 39	40 – 49	50+
			3.1%	0.0%	3.1%	69.2%	4.6%	20.0%
1B) How many hours of behind-the-wheel instruction (i.e. driving with a driver education instructor) do you believe best prepares drivers?								
				0 – 4	5 – 9	10 – 14	15 – 19	20+
				1.6%	58.7%	28.6%	4.8%	6.3%
1C) Upon receiving a permit, how many hours of behind-the-wheel practice driving (i.e. driving with parent supervision) should teens have until they are fully prepared for licensure?								
0 – 9	10 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80+
0.0%	1.5%	3.1%	6.2%	10.8%	49.2%	10.8%	1.5%	16.9%

Responses to the three questions about learning and practicing driving did not follow a normal distribution (Figure 3, Figure 4, and Figure 5). For all three questions posed, responses formed somewhat of a multimodal distribution. In each instance, responses were minimal at the lower extremes, gradually increased, peaked at the current standards, gradually decreased towards the upper extremes, and then had a smaller yet noticeable peak at the highest extreme. This indicates that responses to these initial questions were not uniform. Rather, there are two viewpoints about time spent learning and practicing driving. The first viewpoint posits that current standards in North Dakota are sufficient and do a capable job of preparing teen drivers for roadways within the state. This is the larger, more noticeable peak in each of the three scenarios. The second viewpoint contends that young, inexperienced drivers need as much practice as possible. In response to the first three questions, 20.0%, 6.3%, and 16.9% of instructors, respectively, reported that the highest value for all three questions was the best amount of time to prepare teen drivers for licensure.

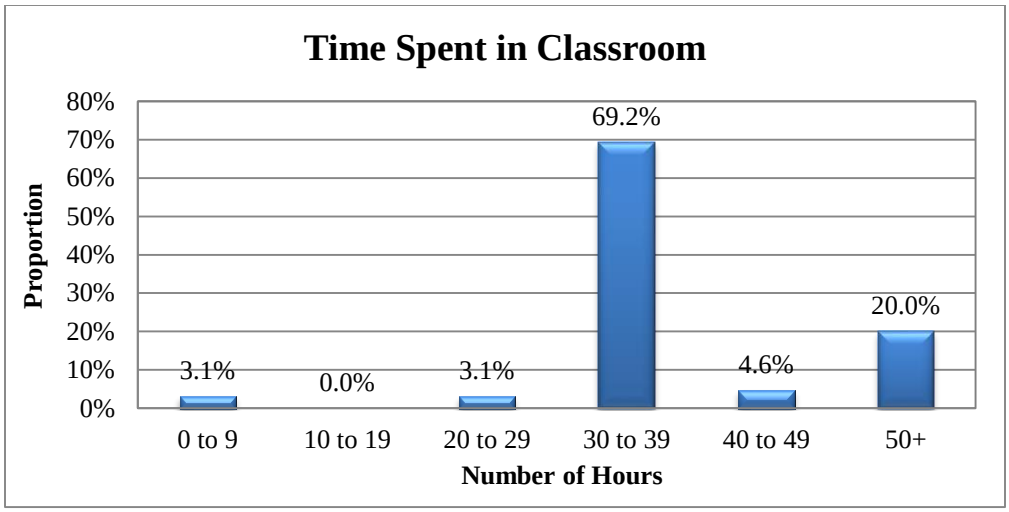

Figure 3 Ideal Time Spent in Classroom

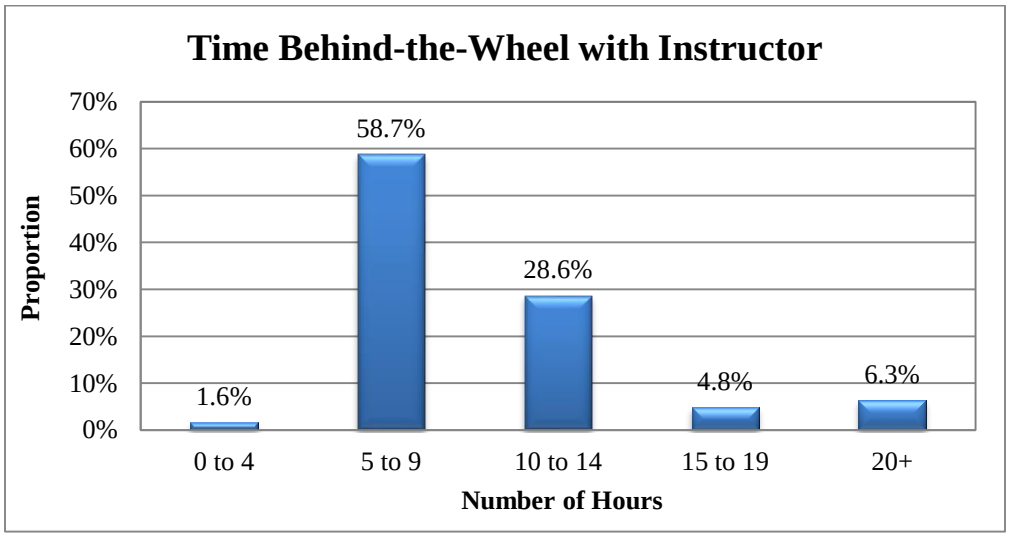

Figure 4 Ideal Time Spent Behind-the-Wheel Practicing with Instructor

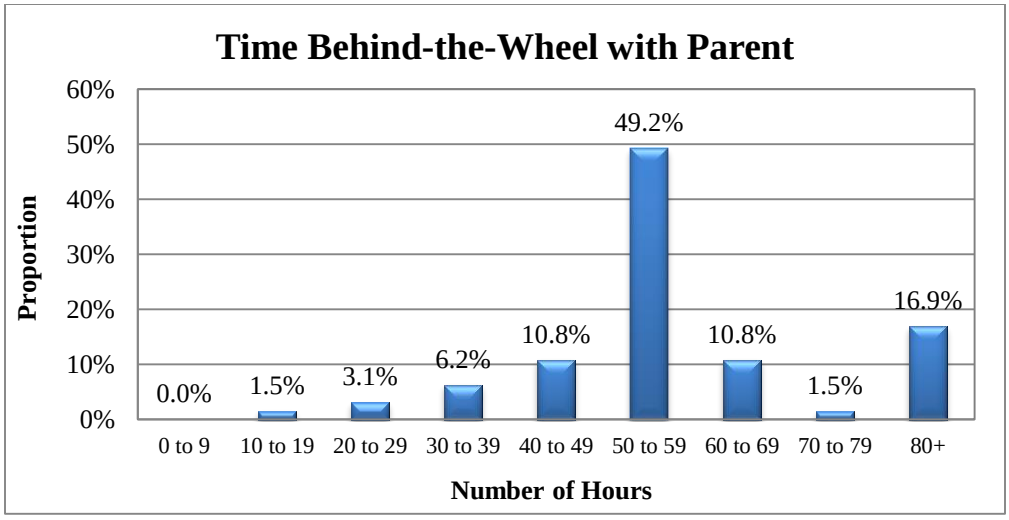

Figure 5 Ideal Time Spent Behind-the-Wheel Practicing with Parent

To study relationships beyond response rates, measures of association can be calculated for responses. The Pearson Coefficient measures the strength of association between two variables; in this case, it measures responses to the amount of time instructors perceive is needed to prepare drivers for licensure. Correlation coefficients range from -1 to +1, with values close to these extremes indicating stronger relationships. Relationships between -0.5 and +0.5 are considered weak and inconsequential. For example, although the "time behind-the-wheel with instructor" and "time behind-the-wheel with parent" variables do have a positive relationship at Pearson Corr.=0.309, the correlation measures shows that less than 10% of their variability is shared (Table 8). Although all three of the questions relating to time spent learning and practicing driving are statistically significant, none of the relationships have a correlation either less than -0.5 or greater than +0.5.

Table 8 Correlations and Significant Values in Time Spent Learning and Practicing Driving

	Q1A	Q1B	Q1C
Q1A: Time spent in classroom	1	0.393** 0.001	0.325** 0.009
Q1B: Behind-the-wheel with instructor		1	0.309* 0.014
Q1C: Behind-the-wheel with parent			1

**Correlation is significant at the 1% level
*Correlation is significant at the 5% level
Note: correlations between -0.5 and +0.5 indicate a weak relationship, so other relationships are not addressed in this study

5.1.1 Higher Learning and Practicing Standards: Group Identifier

Given the multimodal responses to the first three questions on the survey, a dichotomous variable was created to identify instructors believing that more time spent learning and practicing driving was preferable. The first three questions were summated using the compute function in SPSS. Question 1A had six possible responses each given a value of one through six. Question 1B had five possible responses each given a value of one through five. Question 1C had nine possible responses each given a value of one through nine. For each of the three questions, the values of four, two, and six, respectively, represent the current North Dakota standards of at least 30 hours of classroom instruction, at least six hours of behind-the-wheel practice with an instructor, and at least 50 hours of behind-the-wheel practice with parent supervision. As previously mentioned, these three amounts of time were most often perceived by instructors to be those that best prepare student drivers. Thus, the next highest values possible for these three questions – five, three, and seven – were summated and used as the baseline to identify anyone believing that the higher extreme of more time practicing and learning driving was best for teenagers in North Dakota. As such, anyone with a summated score greater than or equal to 15 was identified as being in favor of higher standards. This variable will be used throughout the analysis to understand any other differences between viewpoints.

5.2 Teen Driver Preparedness

A majority of driver education instructors believed that teen drivers were fully prepared for all eight of the preparedness scenarios based on those that answered with either "agree" or "strongly agree," respectively (Table 9). However, there were moderate differences in the distribution of responses based on those strongly disagreeing, disagreeing, or feeling neutral towards driver preparedness. For example, 21.5% of respondents indicated that they neither agreed nor disagreed that students understand state and local laws upon completion of driver education. This same percentage also chose to neither agree nor

disagree with the idea that students are fully aware of the special needs of motorcyclists upon finishing driver education. These proportions were much larger than the other six questions.

Table 9 Driver Preparedness Upon Completing Driver's Education

Q#	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3A	Basic Driving Techniques	38.5%	55.4%	6.2%	0.0%	0.0%
3B	Steering/Braking in Timely Manner	33.8%	53.8%	9.2%	3.1%	0.0%
3C	Understanding State/Local Laws	23.1%	52.3%	21.5%	3.1%	0.0%
3D	Attitude Impact on Driving	27.7%	55.4%	10.8%	4.6%	1.5%
3E	Resisting Unsafe Peer-Pressure	15.2%	43.1%	16.9%	21.5%	3.1%
3F	Differences in Urban/Rural Driving	28.1%	46.9%	15.6%	7.8%	1.6%
3G	Sharing the Road with Other Users	31.3%	53.1%	9.4%	6.3%	0.0%
3H	Motorcycle Awareness	21.5%	52.3%	21.5%	4.6%	0.0%

One significant contrast in driver education instructor responses took place with the question regarding student driver preparedness to resist unsafe peer-pressure situations. Over one-fifth (21.5%) of driver education instructors reported that they disagreed with the idea that students will be prepared to resist such situations. In addition, 3.1% reported strongly disagreeing that students are prepared to resist said situations. In contrast, for the other seven preparedness questions posited on the survey, no more than 7.8% ever disagreed with a preparedness question and no more than 1.6% ever strongly disagreed with such a question. A paired samples t-test of these ordinal-level responses shows that this was the most polarizing question of the eight preparedness questions: the proportion of responses to this question differed significantly compared to all seven other questions (Table 10). In other words, with regard to driver education preparing drivers to resist peer pressure situations, driver education instructors were less likely to strongly agree, less likely to agree, more likely to disagree, and more likely to strongly disagree on this question compared to the seven other preparedness questions presented.

Table 10 Paired Samples t-test: Question 3E (Resisting Peer Pressure) and All Others

Pair	Question	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig.
3E-3A	Basic Driving Techniques	-0.862	1.014	0.126	-6.853	64	**0.000**
3E-3B	Steering/Braking in Timely Manner	-0.723	0.944	0.117	-6.176	64	**0.000**
3E-3C	Understanding State/Local Laws	-0.492	1.091	0.135	-3.636	64	**0.001**
3E-3D	Attitude Impact on Driving	-0.569	0.847	0.105	-5.417	64	**0.000**
3E-3F	Differences in Urban/Rural Driving	-0.453	0.975	0.122	-3.719	63	**0.000**
3E-3G	Sharing the Road with Other Users	-0.625	0.882	0.110	-5.669	63	**0.000**
3E-3H	Motorcycle Awareness	-0.446	0.867	0.107	-4.151	64	**0.000**

Bold: Significant at the 1% level

The correlations among driver preparedness responses provide insight into the relationships between preparedness indicators and how some indicators are directly related to one another. Many of the preparedness indicators were statistically significant with correlations above +0.5 (Table 11). This indicates a substantive relationship. For example, there was a clear relationship between drivers being prepared for basic driving techniques and being ready to steer, brake, and accelerate in a timely manner (Pearson Corr.=0.844, $p<0.001$). This represents a straightforward relationship: as instructors perceived drivers to be prepared for basic driving techniques, so too did they perceive student drivers to be prepared for steering, braking, and accelerating in a timely manner. Another substantive relationship was that of sharing the road with other users and understanding how one's attitude impacts driving (Pearson Corr.=0.689, $p<0.000$). Again, there was a positive relationship: as one has a better understanding of how attitudes affect driving ability, one will be more likely to share the road with other users such as

pedestrians and bicyclists. Another substantive relationship was that of being prepared to share the road with other users and understanding the needs of motorcyclists (Pearson Corr.=0.682, p<0.000). This relationship shows that as students are more prepared to share the road with other users, they are also more prepared to have motorcycle awareness while on the roadway. These three examples had the highest correlation coefficient and had the greatest percentage of their variability shared.

Table 11 Correlations Among Driver Preparedness Indicators

Q#	Question	3A	3B	3C	3D	3E	3F	3G	3H
3A	Basic Driving Techniques	1	**0.844**** **0.000**	0.313* 0.011	**0.512**** **0.000**	0.396** 0.001	0.470** 0.000	**0.596**** **0.000**	**0.538**** **0.000**
3B	Steering/Braking in Timely Manner		1	0.412** 0.001	**0.549**** **0.000**	**0.522**** **0.000**	**0.593**** **0.000**	**0.585**** **0.000**	**0.523**** **0.000**
3C	Understanding State/Local Laws			1	0.270* 0.030	0.347** 0.005	0.263* 0.036	0.186 0.141	0.281* 0.023
3D	Attitude Impact on Driving				1	**0.644**** **0.000**	0.441** 0.000	**0.689**** **0.000**	0.474** 0.000
3E	Resisting Unsafe Peer-Pressure					1	**0.554**** **0.000**	**0.609**** **0.000**	**0.616**** **0.000**
3F	Differences in Urban/Rural Driving						1	**0.588**** **0.000**	**0.540**** **0.000**
3G	Sharing the Road with Other Users							1	**0.682**** **0.000**
3H	Motorcycle Awareness								1

**Correlation is significant at the 1% level
*Correlation is significant at the 5% level
Bold: Indicates substantive relationship

Interestingly, there was only one significant difference among driver education instructors in how they perceived preparedness when factoring for various demographic information (Table 12). This difference arose when separating those driver education instructors believing that students should have more time learning and practicing driving from those that believe current standards are acceptable. The statistically significant difference for this demographic related to whether or not students were prepared for differences in urban and rural driving (F=5.005, df=1, p=0.029). It was statistically significant at the 5% level. In this instance, those believing students should have more time in driver education were more likely to view drivers as unprepared (Figure 6). For example, 6.7% of those believing students need more time learning and practicing driving strongly disagreed with the idea that students were prepared for understanding how urban driving contrasts from rural driving. In comparison, none of the instructors believing that the current standards were sufficient held this viewpoint. Similarly, whereas 13.3% of instructors wanting longer times in the classroom and behind-the-wheel disagreed with student drivers being prepared for urban and rural settings, only 4.4% of other instructors disagreed. In contrast, 86.7% of other instructors either agreed or strongly agreed that teen drivers are prepared to know such differences in urban and rural driving after taking driver's education. Just 53.4% of instructors wanting students to have more time learning and practicing driving either agreed or strongly agreed with this preparedness indicator.

Table 12 Mean Values of Preparedness Indicators, by Demographic Information

			Resp.	Gender			Class/BTW Time		
Q#	Question	Scale	All	Male	Female	Sig.	More	Other	Sig.
3A	Basic Driving Techniques	1-5	4.32	4.34	4.19		4.27	4.39	
3B	Steering/Braking in Timely Manner	1-5	4.18	4.20	4.00		4.07	4.28	
3C	Understanding State/Local Laws	1-5	3.95	3.90	4.06		4.20	3.87	
3D	Attitude Impact on Driving	1-5	4.03	4.05	3.81		4.00	4.15	
3E	Resisting Unsafe Peer-Pressure	1-5	3.46	3.49	3.25		3.20	3.65	
3F	Differences in Urban/Rural Driving	1-5	3.92	3.98	3.75		3.53	4.13	*
3G	Sharing the Road with Other Users	1-5	4.09	4.13	3.88		4.00	4.22	
3H	Motorcycle Awareness	1-5	3.91	3.85	3.94		4.00	3.93	

*Significant difference at the 5% level

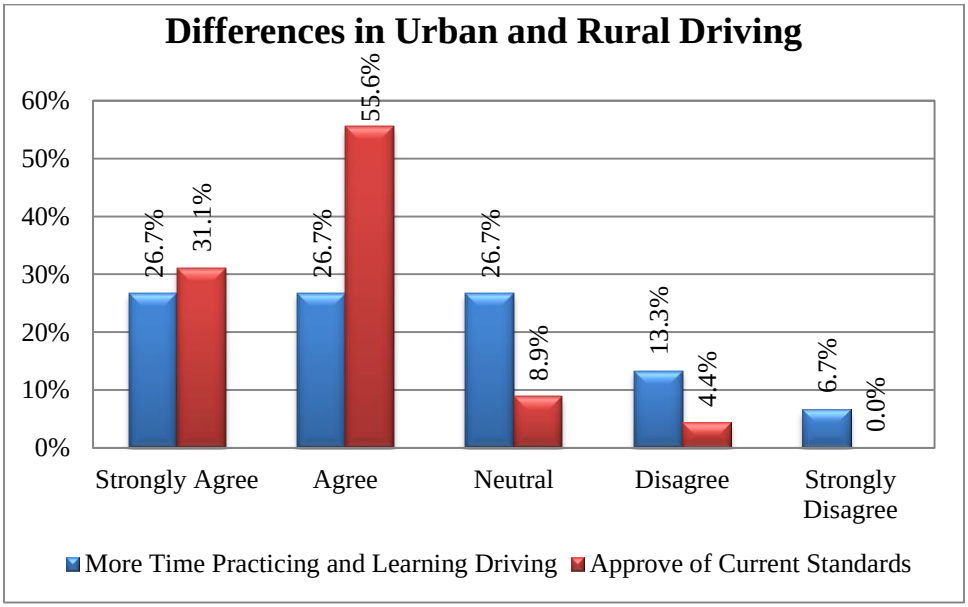

Figure 6 Differences in Urban and Rural Driving Indicator by Learning and Practicing Times

5.3 Importance of Teen Driver Skills and Behaviors

Driver education instructors were presented with eight skills and behaviors students learn during driver's education and were asked to rank each with regard to its overall importance. These skills and behaviors were taken directly from the NDRPC and also from the NHTSA's guidelines for driver education programs. With the exception of parking, respondents overwhelmingly indicated that each skill and behavior was very important: at least three-fourths of respondents felt this way for the first seven skills and behaviors (Table 13). Every respondent (100%) believed that understanding signs, signals, and markings, knowing the consequences of impaired driving, understanding the consequences of distracted

driving, knowing about blind spots, and knowing how to drive on highways were either "very important" or "important," respectively. Only 6.1% and 1.5% of respondents, respectively, considered knowing how to drive at night and knowing how to drive in the winter as being "less important." All other responses for those two questions were either "very important" or "important." Parallel parking, corner-backing, and parking on hills and inclines was rated with the lowest importance though it should be noted that a majority (86.2%) viewed this skill as being either "very important" or "important." In contrast to the other skills and behaviors in which more than three-fourths of respondents deemed them "very important," just 40.0% of respondents reported parking as being "very important," a considerable drop compared to the others highlighted in this section of the survey. Moreover, 13.8% of respondents said that parking skills were "less important" for teen drivers. This value was considerably higher than the other seven skills and behaviors. None of the respondents ranked any of the eight skills and behaviors as "unimportant."

Table 13 Importance of Skills and Behaviors

Q#	Question	Very Important	Important	Less Important	Unimportant
4A	Understanding signs, signals, markings	90.8%	9.2%	0.0%	0.0%
4B	Consequences of impaired driving	93.8%	6.2%	0.0%	0.0%
4C	Consequences of distracted driving	96.9%	3.1%	0.0%	0.0%
4D	Knowing blind sports	87.7%	12.3%	0.0%	0.0%
4E	Highway driving	77.3%	22.7%	0.0%	0.0%
4F	Nighttime driving	78.8%	15.2%	6.1%	0.0%
4G	Winter driving	84.8%	13.6%	1.5%	0.0%
4H	Parking	40.0%	46.2%	13.8%	0.0%

A paired samples t-test of question 4H (parking) paired with all other skills and behaviors proves that responses to this question differed in a statistically significant way (Table 14). With regard to these skills and behaviors, driver education instructors were less likely to view parking skills as "very important," more likely to view them as "important," and more likely to view parking as "less important" than the other seven skills and behaviors.

Table 14 Paired Samples t-test: Question 4H (Parking) and All Others

Pair	Question	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig.
4H-4A	Signs, Signals, and Markings	-0.625	0.604	0.076	-8.275	63	**0.000**
4H-4B	Consequences of Impaired Driving	-0.672	0.668	0.083	-8.047	63	**0.000**
4H-4C	Distracted Driving Consequences	-0.698	0.687	0.087	-8.068	62	**0.000**
4H-4D	Knowing Blind Spots	-0.609	0.607	0.076	-8.027	63	**0.000**
4H-4E	Highway Driving	-0.523	0.615	0.076	-6.856	64	**0.000**
4H-4F	Nighttime Driving	-0.477	0.664	0.082	-5.791	64	**0.000**
4H-4G	Winter Driving	-0.585	0.659	0.082	-7.153	64	**0.000**

Bold: Significant at the 1% level

Correlations among skill and behavior importance are generally inconsequential (Table 15). However, two substantive relationships did exist. As driver education instructors believed that knowing blind spots were important, so too did they believe that highway driving was important (Pearson Corr.=0.573, $p<0.000$). This is a logical relationship: as one travels on the highway, there are generally greater levels of traffic and thus a greater need to be aware of one's blind spots. The other substantive relationship was between the importance of nighttime driving and winter driving (Pearson Corr.=0.717, $p<0.000$). If driver education instructors rated nighttime driving as having high importance, they were also likely to view winter driving as having great importance. These two skills may be related in that they are unique

conditions that teen drivers may not always be faced with and thus instructors may view these skills as being more important.

Table 15 Correlations Among Skills and Behaviors

Q#	Question	4A	4B	4C	4D	4E	4F	4G	4H
4A	Signs, Signals, Markings	1	0.361**	-0.052	0.204	0.330**	0.499**	0.255*	0.453**
			0.003	0.682	0.103	0.007	0.000	0.041	0.000
4B	Impaired Driving Consequences		1	0.385**	0.294*	0.316*	0.213	0.359**	0.203
				0.002	0.018	0.010	0.088	0.003	0.108
4C	Distracted Driving Consequences			1	0.204	0.113	0.069	0.141	0.054
					0.107	0.376	0.590	0.265	0.676
4D	Knowing Blind Spots				1	**0.573****	0.312*	0.412**	0.444**
						0.000	0.011	0.001	0.000
4E	Highway Driving					1	0.442**	0.483**	0.473**
							0.000	0.000	0.000
4F	Nighttime Driving						1	**0.717****	0.457**
								0.000	0.000
4G	Winter Driving							1	0.370**
									0.002
4H	Parking								1

**Correlation is significant at the 1% level
*Correlation is significant at the 5% level
Bold: Indicates substantive relationship

There was one statistically significant difference when factoring for gender (Table 16). This difference was present when rating the importance of highway driving and was significant at the 1% level (F=8.907, df=1, p=0.004). Whereas 63.4% of men rated highway driving as "very important" and 36.6% of men rated it as being "important," 100% of women reported highway driving as being "very important" (Figure 7). Gender appears to be a factor in determining how important one views highway driving.

Table 16 Mean Values of Skills/Behaviors Importance, by Demographic Information

			Resp.	**Gender**			**Class/BTW Time**		
Q#	Question	Scale	All	Male	Female	Sig.	More	Other	Sig.
4A	Signs/Signals/Markings	1-4	3.91	3.85	4.00		3.80	3.93	
4B	Impaired Consequence	1-4	3.94	3.90	4.00		4.00	3.91	
4C	Distracted Consequence	1-4	3.97	3.98	4.00		4.00	3.96	
4D	Knowing Blind Spots	1-4	3.88	3.83	3.94		3.87	3.87	
4E	Highway Driving	1-4	3.77	3.63	4.00	**	3.73	3.81	
4F	Nighttime Driving	1-4	3.73	3.63	3.94		3.67	3.72	
4G	Winter Driving	1-4	3.83	3.78	3.94		3.93	3.81	
4H	Parking	1-4	3.26	3.18	3.44		2.87	3.37	*

*Significant difference at the 5% level
**Significant difference at the 1% level

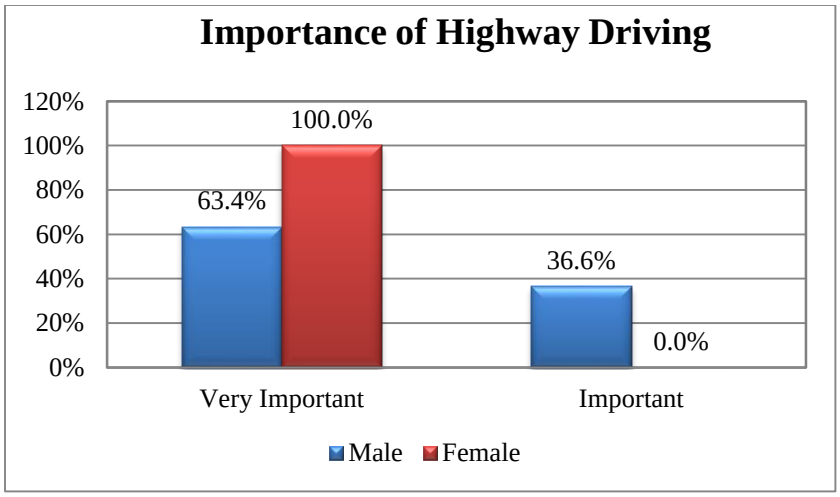

Figure 7 Differences in Highway Driving Importance, by Gender

Another statistically significant difference occurred when factoring for whether or not instructors believe that students need more time learning and practicing driving. This difference was present when rating the importance of parallel parking, corner-backing, and parking on hills and inclines as a skillset for young drivers and was significant at the 5% level (F=6.381, df=1, p=0.014) (Table 16). Whereas half of those approving of the current standards viewed parking as being "very important," just 6.7% of those thinking that more time learning and practicing driving was needed felt the same way (Figure 8). Although 37.0% of those favoring the current standards rated parking as "important," nearly three-quarters (73.3%) of instructors thinking more time learning and practicing driving was needed held this same viewpoint. Another contrast was that one-fifth of instructors wanting more time learning and practicing driving ranked parking as being "less important" compared to 13.0% of instructors satisfied with the current standards.

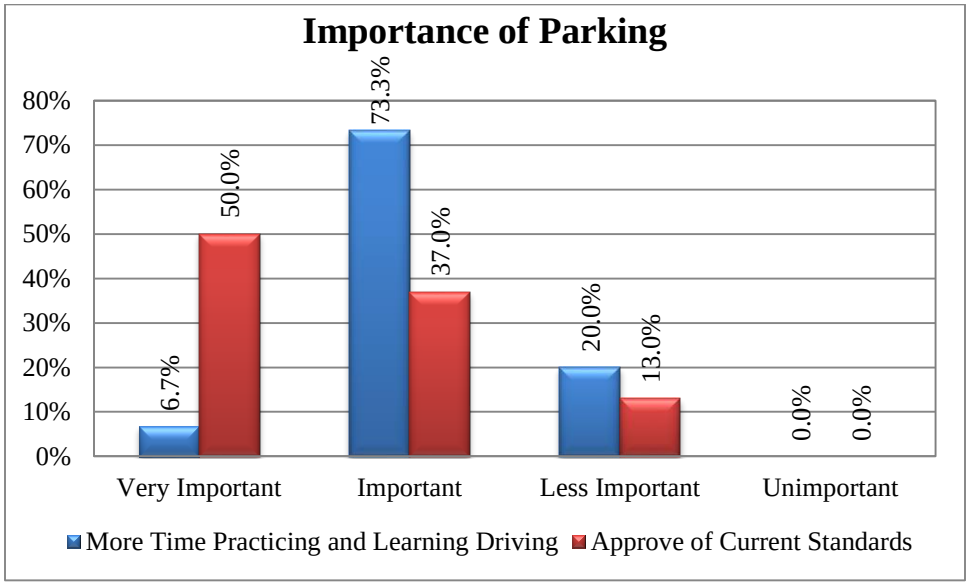

Figure 8 Differences in Parking Importance, by Learning and Practicing Times

5.4 New Graduated Driver's License Provisions

Three questions on the survey related to the new graduated driver's license provisions approved by the state legislature which went into effect in 2012. The questions asked instructors to rate their support for the following new mandates: 1) drivers under the age of 16 must maintain their permit for 12 months; 2) drivers under the age of 16 must have at least 50 hours of supervised driving; and, 3) those under age 16 cannot drive between 9:00 p.m. and 5:00 a.m. Results show that a majority of respondents strongly supported all three new provisions (Figure 9). The new provision stating that those under the age of 16 cannot drive between 9:00 p.m. and 5:00 a.m. was the only provision of the three listed in which driver education instructors either disagreed or strongly disagreed. A small proportion, 3.1% and 1.5%, respectively, did not support such a provision.

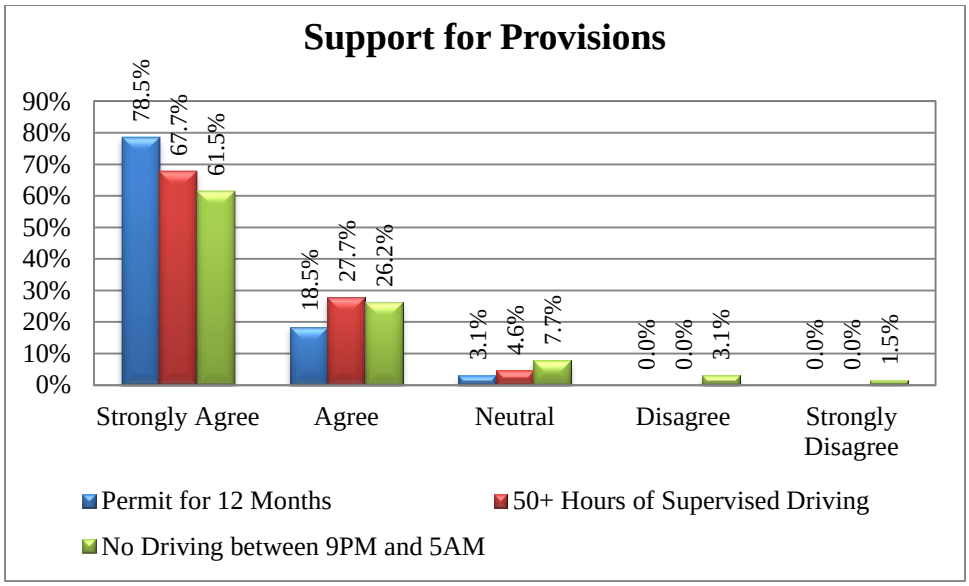

Figure 9 Support Levels for New Graduated Driver's License Provisions

Correlations of responses to the GDL provision questions indicate two substantive relationships (Table 17). Driver education instructors that supported the provision stating that drivers under the age of 16 must maintain their permit for 12 months were more likely to also support the provision that drivers must have at least 50 hours of supervised practice driving prior to licensure. This relationship shared roughly 51% of its variability. The second substantive relationship was that those in favor of the 50 hour minimum for supervised driving were also more likely to support the provision stating that drivers under the age of 16 cannot drive between 9:00 p.m. and 5:00 a.m. These variables shared approximately 52% of their variability.

Table 17 Correlations of Graduated Driver's License Provision Responses

Q#	Question	5A	5B	5C
5A	Permit for 12 Months	1	**0.711****	0.491**
			0.000	0.000
5B	50+ Hours of Supervised Driving		1	**0.718****
				0.000
5C	No Driving Between 9:00 p.m. and 5:00 a.m.			1

**Correlation is significant at the 1% level
Bold: Indicates Substantive Relationship

There were statistically significant differences when factoring for gender, the belief that students need more time learning and practicing driving, and how long one has taught driver's education (Table 18). Women were more likely to strongly agree with the provision that drivers under age 16 maintain their permit for at least 12 months (F=5.583, df=1, p=0.022). Similarly, women were more likely to strongly agree with the provision that drivers under the age of 16 should have at least 50 hours of supervised practice driving prior to licensure (F=5.969, df=1, p=0.018). These differences were both statistically significant at the 5% level. There were no statistically significant differences among men and women in terms of support levels for the new provision requiring that drivers under age 16 be prohibited from driving between 9:00 p.m. and 5:00 a.m. (F=2.357, df=1, p=0.130).

Table 18 Mean Values of New Graduated Licensing Provisions, by Demographic

			Resp.	**Gender**			**Class/BTW Time**		
Q#	Question	Scale	All	Male	Female	Sig.	More	Other	Sig.
5A	Permit for 12 months	1-5	4.75	4.66	5.00	*	4.87	4.72	
5B	50+ Hours of Practice	1-5	4.63	4.56	4.94	*	4.93	4.54	*
5C	No driving 9PM to 5AM	1-5	4.43	4.39	4.75		4.87	4.33	*

*Statistically significant difference at the 5% level

Two other differences were statistically significant at the 5% level when factoring for whether or not one believes that teen drivers need more time learning and practicing driving. As expected, there was a statistically significant difference in support levels for the provision stating that drivers under the age of 16 should have at least 50 hours of supervised practice driving. Instructors believing that teen drivers need more time learning and practicing driving were more likely to support this provision than their counterparts (F=5.529, df=1, p=0.022). Whereas 93.3% of those favoring more time learning and practicing driving strongly supported this provision, just 60.9% of other instructors held this same viewpoint. The other statistically significant difference between these groups was the level of support for the provision stating that teen drivers should not be allowed to drive between 9:00 p.m. and 5:00 a.m. (F=4.661, df=1, p=0.035) (Figure 10). Instructors believing that teen drivers need more time learning and practicing driving were more likely to strongly agree with this provision. Other instructors more often disagreed or strongly disagreed with this provision.

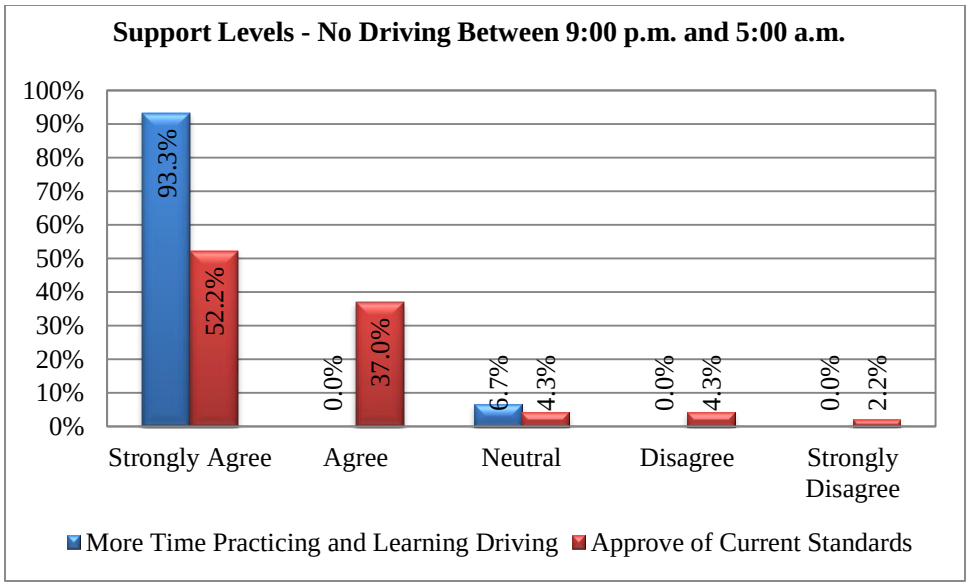

Figure 10 Differences in Support Levels for Driving Restrictions between 9:00 p.m. and 5:00 a.m.

There was also a statistically significant difference when factoring for the amount of time one has taught driver's education in North Dakota and how much one supports the mandate that drivers under the age of 16 maintain their permit for 12 months. In general, those teaching driver's education for shorter periods of time were more likely to support this provision than those that had been teaching it for a longer period of time ($F=2.665$, $df=7$, $p=0.019$). This difference was statistically significant at the 5% level.

5.5 New Legislation

Per discussion in the literature review, the North Dakota legislature recently enacted new legislation that bans texting on the phone while driving. The purpose of the legislation is to promote safe behaviors in favor of dangerous ones. Driver education instructors were asked to rate the legislation as it pertains to two areas: first, if it improves teen driver safety; and, second, if it is easily enforced. Results concerning the first question follow a negative linear pattern (Figure 11). A majority (63.6%) of driver's education instructors strongly agreed that such legislation improves teenage safety. About one-quarter (25.8%) agreed that the new law improves safety. Smaller proportions, 6.1% and 4.5%, respectively, responded that they were either neutral or in disagreement with the idea that banning texting while driving improves teenage safety while operating a vehicle on the roadway. Not a single respondent strongly disagreed with the idea that the new legislation improves safety. Though responses to the enforcement of the texting ban also appeared to be linear, it had a positive direction rather than a negative one. The smallest proportion of respondents, 4.7%, indicated that they strongly agreed that the new law banning texting while driving was easily enforced. A slightly larger proportion, 7.8%, agreed that such a ban was easily enforced. Approximately one-sixth (17.2%) of all respondents reported that they neither agreed nor disagreed with the idea that enforcement was effective. A clear majority of respondents (70.3%) did not think the new law banning texting while driving was easily enforced based on those choosing to disagree or strongly disagree with the legislation's enforceability.

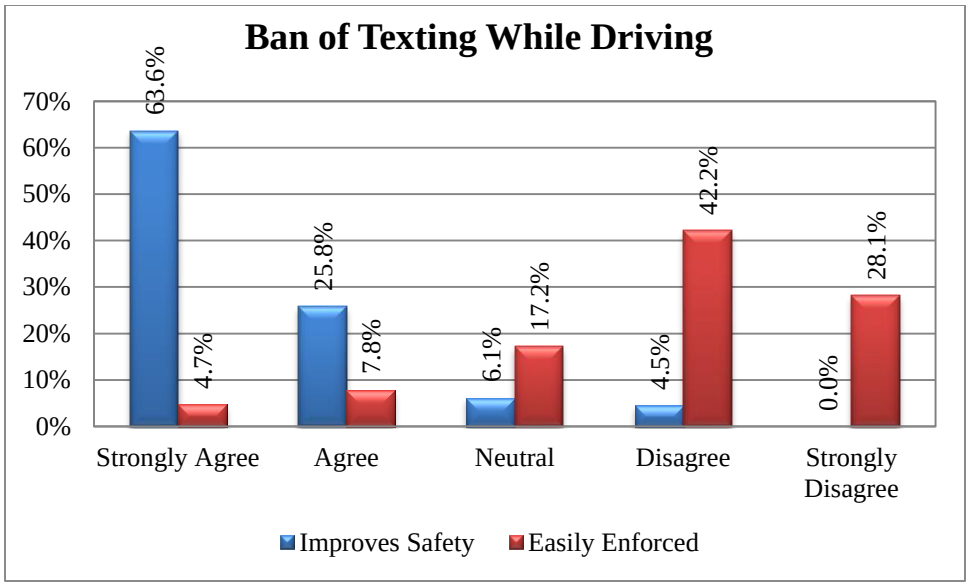

Figure 11 Support for Texting-While-Driving Ban

6. QUALITATIVE ANALYSIS RESULTS

Emergent theme content analysis was used in order to identify areas of the NDRPC instructors thought needed improvement. Throughout the survey, driver's education instructors were encouraged to provide feedback and comments about ways in which the curriculum can be improved. Thus, during data analysis, the comment section of the survey was addressed, coded, and resulting themes were organized. The following four themes emerged as being particularly important to driver's education instructors:

1) Having more stringent driver's education standards
2) Having better organization of the NDRPC
3) Having better enforcement of NDRPC mandates and better enforcement of unsafe driver behaviors
4) Promoting parental involvement

There were 11 instances in which driver's education instructors mentioned that the current driver's education standards in North Dakota need to be more stringent. A common message that arose is the idea that the current age requirements for obtaining a permit and license are too young. It was mentioned multiple times that the age of "15 is too young to have [a] drivers [sic] license" (ID 58). Instead, instructors suggested that age 15 should be the age necessary for a permit and that it is preferable to obtain licensure at 16. Along these same lines, a full graduated driver's license system is considered preferable to the current graduated driver's license provisions. Under a full GDL system, it was recommended that there be "restrictions in place until the beginning driver turns 18" years of age (ID 1).

Another message related to more stringent standards is the belief that students need more time learning and practicing driving. One individual stated "the more the better" when referencing practice driving but noted that this is limited by an amount that is "practical or possible" (ID 2). According to other driver's education instructors, the number of hours in the classroom should increase, students should have more behind-the-wheel instruction, and should have at least one full year of practice driving with a permit prior to licensure. In addition, it was mentioned that perhaps a newer driver's education curriculum could include requiring "the permit for 12 months for all drivers under the age of 18, and 6 months for those over 18" (ID 16).

It should be mentioned that among those driver's education instructors indicating that more stringent standards are needed for driver's education in North Dakota, they were also among those categorized using the aforementioned compute function as believing that students need more time learning and practicing driving. As such, these individuals represent one of the extremes for time spent learning and practicing driving. Studies have shown that those on both ends of extremes – regardless of the issue at hand – tend to be the most vocal. Thus, the reason this theme was so prevalent may be caused by the preexisting belief of the respondent that more time in the classroom and behind-the-wheel is preferable.

A second theme that emerged during qualitative data analysis is that the NDRPC could have better organization. One instructor specified that the current curriculum is "too packed" and could use more clarity regarding the contents of each lesson and module (ID 61). Another message centered upon the idea that a library of NDRPC "videos and materials that can be used by all" instructors via a checkout system would be beneficial during the classroom portion of driver's education (ID 61). This goes hand-in-hand with the suggestion that the NDRPC "pursue the interface upgrade to the curriculum" introduced at the annual NDDTSEA conference (ID 43). Along these same lines, it was suggested that the course "be more geared toward online education" as a new mode of educating and reaching out to students (ID 16). A separate suggestion was that driver's education be taught as a semester-long course "during the school year" in public North Dakota schools (ID 7).

One instructor (ID 48) also advised that the NDRPC would be better taught if drivers passed the permit requirements prior to enrolling in driver's education. According to the respondent, this would ensure three key components: first, that eye exams are already passed; second, that some legal practice driving could take place prior to the student's first behind-the-wheel experience; and, third, that students have some book knowledge about the rules of driving before entering driver's education.

The next theme highlighted by driver's education instructors is that there is a collective need for better enforcement of driver's education standards and dangerous driving behavior. One instructor (ID 27) indicated that some type of verification is necessary to prove that students have had at least 50 hours of practice driving before taking the in-car test for licensure. Moreover, instructors revealed that not only does the new law banning texting while driving need better enforcement (ID 27), but the penalties for engaging in such a dangerous behavior need to be harsher (ID 31). At present, it was noted that students text while driving near their lap to avoid penalty, which is perhaps an even more dangerous practice than before.

The final theme discussed by instructors is the need for parental involvement throughout the learning process. It was mentioned that students need to legally practice driving prior to partaking in the NDRPC. This will help students be better prepared for their behind-the-wheel time with an instructor and will also provide baseline knowledge of what students need to know for driver's education. Additionally, it was stated that parents should assist student drivers in learning various parking methods such as parallel parking, corner-backing, and parking on slopes or inclines (ID 27). According to this particular instructor, the justification for why parents should be involved with parking skills is that – in North Dakota – parking requirements are altogether different than in other parts of the country, and these skills are not as important within North Dakota as compared to other regions. It should be noted that all of the instructors believing additional parental involvement was necessary were already using a parental segment within their current curriculum.

7. CURRICULUM USE AS AN INDICATOR OF NDRPC BENEFITS AND LIMITATIONS

Use of the NDRPC provides insight into the priorities of driver education instructors in North Dakota. A majority of respondents (58.1%) indicated that they presently use part of the NDRPC (Figure 12). Roughly two-ninths (22.6%) use the entire curriculum. Approximately one-fifth (19.4%) do not use the curriculum whatsoever.

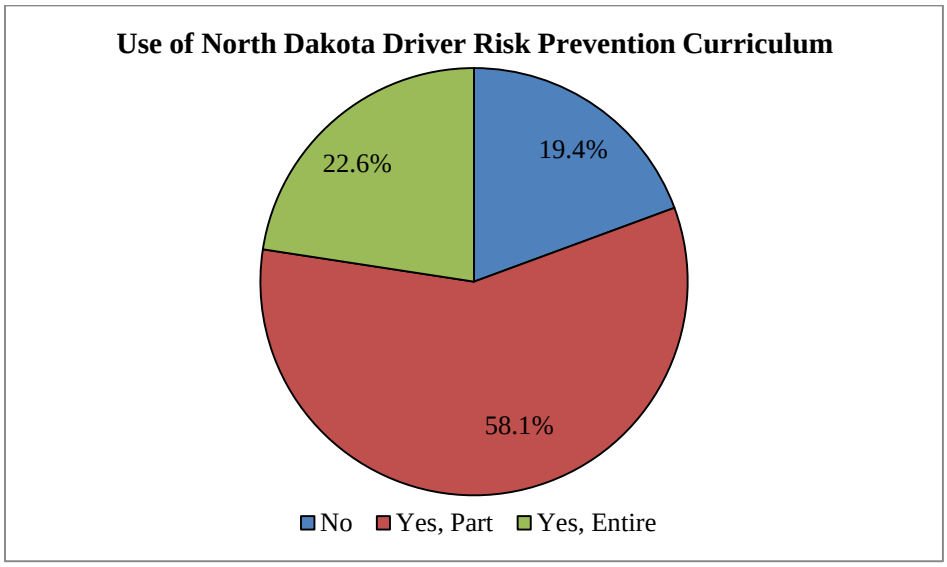

Figure 12 Use of the North Dakota Driver Risk Prevention Curriculum among Respondents

Parental involvement in the driver education curriculum was uniformly distributed (Figure 13). Approximately half (50.8%) said that they did have a segment in their curriculum involving parents. The other half (49.2%) of respondents had no portion involving parents whatsoever. These individuals represent a deviation from the State of North Dakota's recommendations that such a segment exist.

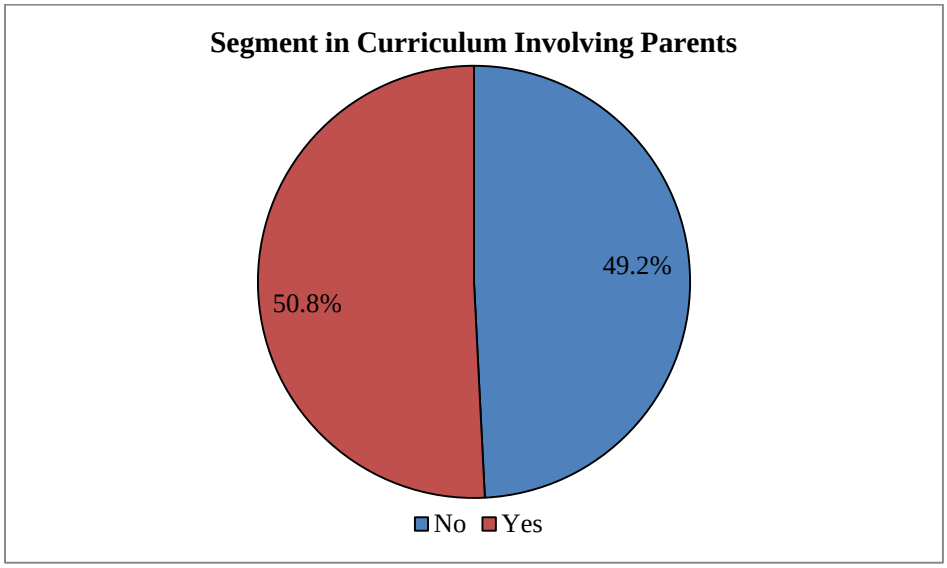

Figure 13 Parental Involvement in North Dakota Driver Risk Prevention Curriculum

There were no statistically significant differences among curriculum use when factoring for any demographic variables. For example, when factoring for respondents that wanted more time spent learning and practicing driving, the proportions of those using the NDRPC were nearly identical: 20.0% did not use the program whatsoever, 60.0% used part of the curriculum, and 20.0% used the entire curriculum (Chi-Sq.=0.157, df=2, p=0.924). Similarly, there was no statistically significant difference between how long one wanted to spend learning and practicing driving and whether or not a parental segment was used (Chi-Sq.=2.398, df=1, p=0.121).

There were also no differences between gender and use of the NDRPC (Chi-Sq.=0.695, df=2, p=0.706), the amount of time one has taught driver's education and the use of the NDRPC (Chi-Sq.=23.523, df=14, p=0.052), and what type of driver's education one teaches and the use of the NDRPC (Chi-Sq.=9.519, df=10, p=0.484). Similarly, there were no statistically significant differences between gender and the use of a parental segment (Chi-Sq.=2.596, df=1, p=0.107), the number of years one has taught driver's education and the use of a parental segment (Chi-Sq.=3.472, df=7, p=0.838), and which type of driver's education one teaches and the use of a parental segment (Chi-Sq.=8.951, df=5, p=0.111).

It appears as though there is no demographic indicator explaining why one does or does not use the NDRPC. Likewise, there is no indicator explaining why one does or does not include a parental segment in the driver's education program. These decisions may be better explained by variables not considered in this project or perhaps occur at random.

As previously mentioned, the survey included a question asking instructors if they presently use part of the NDRPC, the entire NDRPC, or if they do not use it whatsoever. Based on responses to this question, two nominal-level dichotomous ("dummy") variables were created to further examine how curriculum use impacts perceptions of the NDRPC. The first dummy variable divided respondents into two groups: those that use *at least part* of the NDRPC and those that do not use it whatsoever. The second dummy variable divided respondents into two similar groups: those that use *the entire* NDRPC and those that do not use it in its entirety.

There were noticeable differences among those that do not use the NDRPC and those that use at least part of it in their curriculum. For example, when factoring for the amount of hours of classroom instruction that driver education instructors believe best prepares drivers, there were differences at the extreme values (F=8.577, df=1, p=0.005). One-quarter (25.0%) of those that do not use the curriculum believed that having 29 hours or less of classroom instruction best prepared drivers; this proportion represents those believing that standards less stringent than what is currently mandated by the state is what best prepares drivers. In contrast, just 2.0% of those using at least part of the NDRPC hold this viewpoint. Similarly, whereas just 8.3% of instructors not using the NDRPC think that 40 or more hours of classroom instruction prepares drivers, a much greater proportion, 30.0% of those using at least part of the curriculum, think at least 40 hours of classroom instruction is necessary.

There were also differences regarding whether or not a segment involving parents was used when factoring for if at least part of the NDRPC was used or not (Chi-Sq.=3.985, df=1, p=0.046). Whereas just 25.0% of those not using the NDRPC whatsoever had a parental segment, over twice as many, 57.1%, of those using at least part of the NDPRC had a segment involving parents (Figure 14).

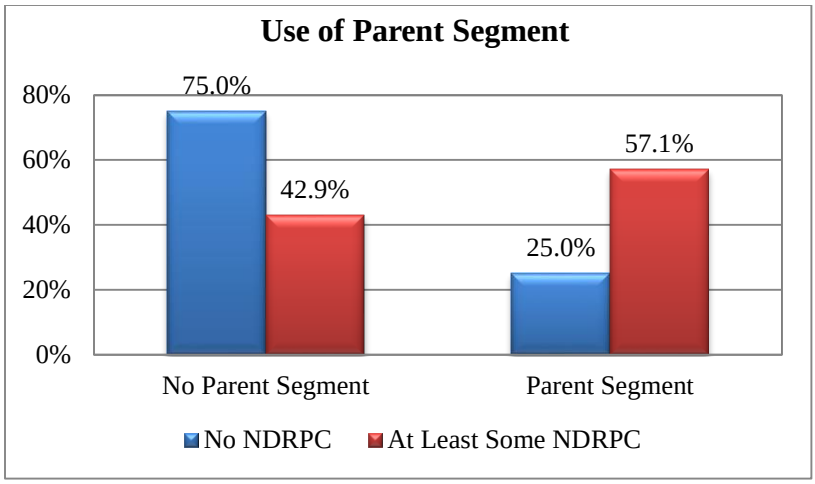

Figure 14 Use of Segment in Curriculum Involving Parents, by Some NDRPC Use

There were also statistically significant differences among instructors using at least part of the NDRPC when factoring for how they viewed the importance of understanding the consequences of distracted driving for teen drivers. Every driver education instructor (100.0%) using at least part of the NDRPC ranked understanding the consequences of distracted driving as "very important," the highest rank possible. A smaller proportion of those not using the NDRPC, 91.7%, held this same belief, with the other 8.3% ranking it as only "important." This difference between these two groups was statistically significant at the 5% level (F=4.308, df=1, p=0.042) (Figure 15).

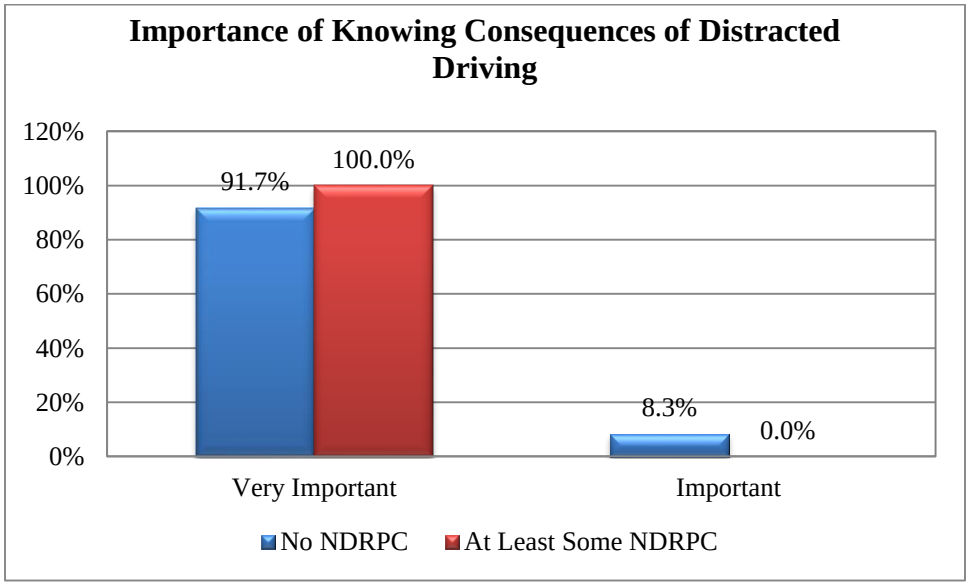

Figure 15 Importance of Understanding Consequences of Distracted Driving, by Curriculum

There was only one statistically significant difference when factoring for instructors that use the entire NDRPC curriculum and those that do not use it in its entirety. This significant difference also related to whether or not a segment in the curriculum involved parents. The difference was statistically significant at the 5% level (Chi-Sq.=5.599, df=1, p=0.018). Among those instructors that use the NDRPC in its entirety, 78.6% have a segment involving parents. In contrast, just 42.6% of instructors that do not use the NDRPC in its entirety have a segment that involves parents of teen drivers (Figure 16).

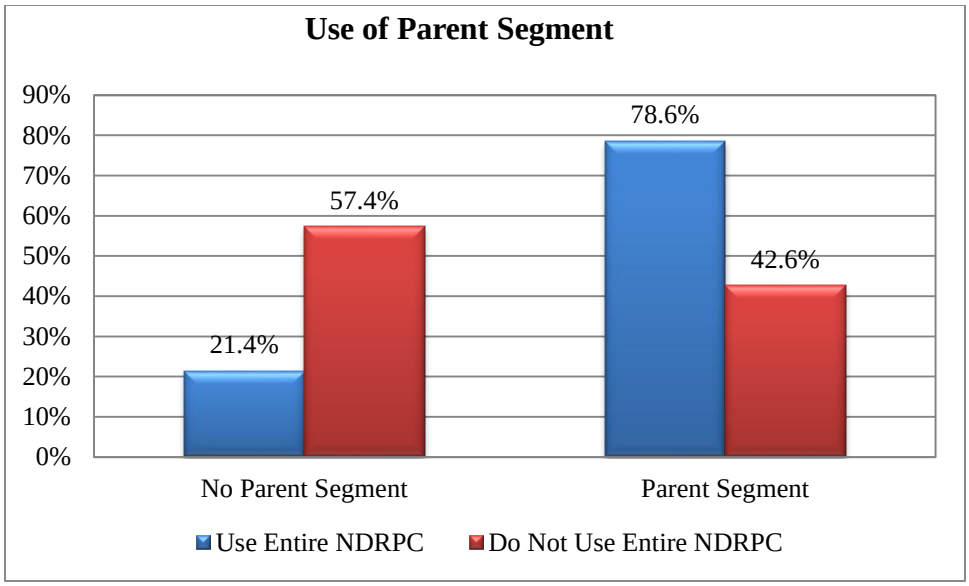

Figure 16 Use of Segment Involving Parents, by Entire NDRPC Use

Clearly, there are benefits of using the NDRPC. Those that use at least part of the NDRPC and those that use it in its entirety are more likely to involve parents, an aspect of driver's education that the State of North Dakota believes is vital for student driver success. Similarly, use of the curriculum appears to be related to the amount of time believed to be best for learning and practicing driving. The amount of time perceived to be best by driver education instructors meet state minimum standards, which indicates that instructors using the NDRPC adhere to current standards and are sufficiently preparing teen drivers.

8. RECOMMENDATIONS

The first recommendation for improving driver's education in North Dakota is to mandate that a parental segment be included in any curriculum. The NDDOT has been candid about the benefits that parental involvement can bring to teen drivers during the time in which they are learning and practicing driving. Parental involvement has benefits that emerge via a two-pronged approach: first, their involvement helps discourage and deter poor driving practices; and, second, their involvement promotes safe driving behaviors.

At present, roughly half of all driver's education instructors participating in this survey do not include a parental segment in their curriculum whatsoever. Though parents may be involved throughout their child's learning process via their own volition, it is recommended that a segment involving parents be mandated in order to explain the goals, objectives, and legislative changes that parents should be familiar with as their child learns and practices driving.

It should be reiterated that there were some noticeable differences among instructors when factoring for how they perceived factors such as driver preparedness, skill and behavior importance, and support for new legislation and licensing provisions. Instructors without a parental segment were less likely to support new GDL provisions stating that teen drivers under the age of 16 cannot drive between 9:00 p.m. and 5:00 a.m. Similarly, this same group was less likely to support the new provisions stating that teen drivers under the age of 16 should have a minimum of 50 hours of supervised driving experience prior to licensure. Including a parental segment may mitigate these differences and ensure that both the instructor and parent are up-to-date and knowledgeable about current licensing provisions.

Similarly, it is recommended that an initiative be taken to verify that the student driver has successfully completed at least 50 hours of supervised behind-the-wheel practice driving in various road situations in order to guarantee that the driver is prepared for licensure. Presently, there is no method for proving that the 50 hour minimum has been met. It is advocated that all Driver License Offices in North Dakota require proof of a valid "Practice Driving Log" such as the one provided in the NDDOT's "*North Dakota Parent Guide to Teen Driving Manual*."

The next recommendation is to improve the education and preparedness geared towards resisting unsafe peer pressure situations. Of the eight preparedness indicator questions that instructors responded to, the question regarding resisting peer pressure deviated most in its distribution of responses. Instructors were most likely to "strongly disagree" and most likely to "disagree" that students were prepared to resist such unsafe situations after completing driver's education in North Dakota. Similarly, instructors were least likely to "strongly agree" and least likely to "agree" that driver's education in North Dakota prepared teen drivers for resisting this unsafe situation. When compared to the other seven preparedness indicator questions, it was clear that resisting unsafe peer pressure situations was the most polarizing: it had a substantially different distribution than all other indicators. Furthermore, this particular indicator was the only one which had a statistically significant difference when factoring for demographic variables. As such, it is recommended that instructors spend more time focusing on ways to combat peer pressure and diffuse unsafe situations. At present, Module 6 of the NDRPC focuses briefly on the dangers of drinking, drugs, and driving. However, the lesson plan for this module calls for the instructor to reference peer pressure only once as it relates to state-level blood alcohol content laws. Driver's education instructors should spend additional time discussing how peer pressure situations can impact behavior outside of impaired driving and relate peer pressure situations to speeding, driving recklessly, texting while driving, talking on the phone while driving, and other unsafe situations. Results from the quantitative data analysis indicate that this is an especially important area to improve upon heading into the future.

Another recommendation is to reassess the amount of time that is mandated for teen drivers in North Dakota to spend learning and practicing driving. Results from this survey clearly indicate that there are two viewpoints among driver's education instructors within the state: some believe that current standards are sufficient and others believe that new drivers need as much time as possible learning and practicing driving prior to licensure. Perhaps the amount of time spent learning and practicing driving should be left to the discretion of the instructor; if students appear as though they need more time to fully grasp the skills and behaviors necessary to be a safe driver, instructors should be given the latitude to adjust their curriculum accordingly.

The next recommendation stems from themes that emerged during the qualitative analysis process. One such theme advocated that a library be created to house all of the videos and materials that are used in the NDRPC. These materials could be accessible to all instructors and could be checked out from the library as needed. The Transportation Learning Network (TLN), which is affiliated with the Upper Great Plains Transportation Institute at North Dakota State University, could serve as the entity in charge of an electronic library. The TLN serves the transportation interests of the region by providing access to information and expertise that is not readily available to transportation professionals in the region. The mission of the TLN is to support quality transportation by enhancing communication, education, professional development, technology transfer, and research; all of these are principles that align with the core of driver's education in North Dakota.

Additional themes from the qualitative analysis echo other recommendations that have been made in this report. Explicit throughout many of the comments received via the survey questionnaire was a need for parental involvement in the driver's education process. This reaffirms conclusions made in this report emphasizing the importance of utilizing parents as a resource for teen drivers. Another area highlighted during qualitative analysis was the suggestion that more stringent standards be used to evaluate the preparedness of teen drivers for licensure. This suggestion implies that students need more time to become prepared for licensure and that there is a need to reassess the time teen drivers spend learning and practicing driving. Finally, as mentioned in the quantitative analysis section of this report, there is a perception among driver's education instructors that having better enforcement and legislation with regard to distracted driving via cell phone use will improve safety among all drivers – especially those that have just obtained a permit or licensure.

9. DISCUSSION

Future research can be improved by integrating responses from additional driver's education instructors. Although this survey had sufficient response numbers to extrapolate some responses as being representative of all instructors in North Dakota, findings in studies such as this will have smaller margins of error with the incorporation of responses from additional participants. In the future, this survey should be provided via mail or online submission for instructors that are unable to attend the NDDTSEA's annual conference yet willing to provide input regarding how to improve driver's education in North Dakota. Furthermore, future research can be improved by including additional input from specific groups of driver's education instructors. For example, there were not enough responses from female driver's education instructors to extrapolate any data as being representative of the female instructor population in North Dakota. Inviting more females to take this survey questionnaire would allow results to be more robust and better represent the instructor population.

Among the statistically significant differences in driver's education instructor perceptions were a few common themes. For example, there were differences of opinion with regard to how prepared instructors perceive students to be in understanding the differences between urban and rural driving conditions. Along these same lines, instructors ranked the importance of highway driving differently depending upon one's gender. These issues are mentioned only briefly in Module 9 as they relate to visibility and in Module 7 as they relate to maneuvering through curves in the road. Future research about the perceptions of driver's education instructors towards urban and rural driving will be better understood if they dedicate more time to discussing these driving situations.

Perceptions about the importance of parking were distributed much differently among instructors than any other topic studied in this report. As a whole, the skill of parking was considered much less important than other driver skills and had some statistically significant differences when factoring for demographic characteristics of respondents. This is especially interesting when one notes how much of the current curriculum is dedicated to teaching and practicing this skill. The NDRPC incorporates parking into numerous final assessments, in-car activities, practice guides, lesson plans, and behavior outcomes. Perhaps the skill of parking is viewed negatively on account of the fact that instructors feel as though it is being over-utilized in the curriculum.

The most polarizing portion of the survey dealt with the new graduated driver's license provisions recently approved by the legislature. All three areas of the new provisions – that drivers under the age of 16 maintain their permit for at least 12 months, that drivers under the age of 16 have at least 50 hours of supervised practice driving, and that those under the age of 16 not be allowed to drive between 9:00 p.m. and 5:00 a.m. – had noticeably different levels of support when factoring for either gender, the number of years one has taught driver's education, or the amount of time one believes is best for new drivers to learn and practice driving. It is unknown why different demographics would hold varying levels of support for these measures. Perhaps the legislation is still too new and instructors are actively reassessing their views towards it. In order to better understand if these differences in views held by the demographics studied in this report are accurate, it would be wise to study perceptions of the new graduated driver's license provisions over time. A longitudinal analysis would provide a better understanding of the effectiveness of the legislation and support among instructors.

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APPENDIX A. SURVEY INSTRUMENT

Driver Education Instructor Survey

1. Time spent learning and practicing driving

How many hours of classroom instruction do you believe best prepares drivers?

☐ 0 – 9 ☐ 10 – 19 ☐ 20 – 29 ☐ 30 – 39 ☐ 40 – 49 ☐ 50+

How many hours of behind-the-wheel instruction (i.e. driving with driver education instructor) do you believe best prepares drivers?

☐ 0 – 4 ☐ 5 – 9 ☐ 10 – 14 ☐ 15 – 19 ☐ 20+

Upon receiving a permit, how many hours of behind-the-wheel practice driving (i.e. driving with parent supervision) should teens have until they are fully prepared for licensure?

☐ 0 – 9 ☐ 10 – 19 ☐ 20 – 29 ☐ 30 – 39 ☐ 40 – 49 ☐ 50 – 59 ☐ 60 – 69 ☐ 70 – 79 ☐ 80+

2. Curriculum

Are you currently using the North Dakota Driver Risk Prevention Curriculum (NDRPC)?

☐ No ☐ Yes, I use part of the curriculum ☐ Yes, I use the whole curriculum

Do you have a segment in your curriculum involving parents?

☐ No ☐ Yes

3. After taking driver's education, students are fully prepared for…

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
▪ Basic driving techniques (i.e. starting, stopping, turning)	☐	☐	☐	☐	☐
▪ Steering, braking, and accelerating in a timely manner	☐	☐	☐	☐	☐
▪ Understanding state and local motor vehicle laws	☐	☐	☐	☐	☐
▪ Knowing how attitudes can impact driving behavior	☐	☐	☐	☐	☐
▪ Resisting unsafe peer-pressure situations	☐	☐	☐	☐	☐
▪ Differences in urban and rural driving	☐	☐	☐	☐	☐
▪ Sharing the road with pedestrians, bicyclists, etc.	☐	☐	☐	☐	☐
▪ Being aware of motorcyclists on the roadway	☐	☐	☐	☐	☐

4. Please indicate the importance of the following skills/behaviors for teen drivers.

	Very Important	Important	Less Important	Unimportant
▪ Understanding signs, signals, and highway markings	☐	☐	☐	☐
▪ Knowing the consequences of impaired driving	☐	☐	☐	☐
▪ Understanding the consequences of distracted driving	☐	☐	☐	☐
▪ Knowing blind spots	☐	☐	☐	☐
▪ Highway driving	☐	☐	☐	☐
▪ Nighttime driving	☐	☐	☐	☐
▪ Winter driving	☐	☐	☐	☐
▪ Parallel parking, corner-backing, parking on hills/inclines	☐	☐	☐	☐

5. I support new Graduated Driver's License provisions stating that…

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
▪ Drivers under age 16 maintain their permit for 12 months	☐	☐	☐	☐	☐
▪ Drivers under age 16 have at least 50 hours of supervised driving	☐	☐	☐	☐	☐
▪ Those under age 16 cannot drive between 9PM and 5AM	☐	☐	☐	☐	☐

6. The new law banning texting while driving…

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
▪ Improves teenage safety	☐	☐	☐	☐	☐
▪ Is easily enforced	☐	☐	☐	☐	☐

7. Which of the following do you teach (check all that apply)?

☐ Classroom ☐ Behind-the-Wheel ☐ Simulation ☐ Multi-Car Driving Range

8. Gender: ☐ Male ☐ Female

9. Number of Years Teaching Driver's Education: _____

Include additional comments on back. Thank you for your time and participation.

APPENDIX B. MISSING RESPONSE FREQUENCIES

Q#	Question	Total Responses	Missing Responses
	Time Spent Learning/Practicing Driving		
1A	Hours of Classroom Instruction	65	1
1B	Hours of Behind-the-Wheel Practice	63	3
1C	Hours of Supervised Practice Driving	65	1
	Curriculum		
2A	NDRPC Use	62	4
2B	Parental Segment	61	3
	Preparedness		
3A	Basic Driving Techniques	65	1
3B	Steering, Braking, Accelerating	65	1
3C	State/Local Laws	65	1
3D	Attitude Impact	65	1
3E	Unsafe Peer-Pressure	65	1
3F	Urban/Rural Differences	64	2
3G	Sharing the Road	64	2
3H	Motorcycle Awareness	65	1
	Importance of Skills/Behaviors		
4A	Signs, Signals, Markings	65	1
4B	Impaired Driving	65	1
4C	Distracted Driving	64	2
4D	Blind Spots	65	1
4E	Highway Driving	66	0
4F	Nighttime Driving	66	0
4G	Winter Driving	66	0
4H	Parking	65	1
	Graduated Driver's License Provisions		
5A	Permit for 12+ Months	65	1
5B	50+ Hours Practice Driving	65	1
5C	No Driving from 9:00 p.m. to 5:00 a.m.	65	1
	Law Banning Texting-While-Driving		
6A	Improves safety	66	0
6B	Easily Enforced	64	2
	Demographics		
7	Type of Driver's Education Taught	63	3
8	Gender	57	9
9	Number of Years Teaching	66	0

Total n = 66