EDUCATING TEENAGE DRIVERS IN THE PACIFIC NORTHWEST REGARDING THE DANGERS OF DISTRACTED DRIVING (PHASE I)

FINAL PROJECT REPORT

by

David S. Hurwitz (PI)
Oregon State University

Linda Boyle (Co-PI)
University of Washington

Ahmed Abdel-Rahim (Co-PI)
University of Idaho

Shane Brown (Co-PI)
Washington State University

for

Pacific Northwest Transportation Consortium (PacTrans)
USDOT University Transportation Center for Federal Region 10
University of Washington
More Hall 112, Box 352700
Seattle, WA 98195-2700

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Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
2012-M-0007	01538112	

4. Title and Subtitle
Educating Teenage Drivers in the Pacific Northwest Regarding the Dangers of Distracted Driving

5. Report Date
September 15, 2014

6. Performing Organization Code

7. Author(s)
David S. Hurwitz, Linda Boyle, Ahmed Abdel-Rahim & Shane Brown

8. Performing Organization Report No.
7-739437

9. Performing Organization Name and Address

PacTrans
Pacific Northwest Transportation Consortium, University Transportation Center for Region 10
University of Washington More Hall 112
Seattle, WA 98195-2700

School of Civil and Construction Engineering
Oregon State University,
101 Kearney Hall,
Corvallis, OR 97331

10. Work Unit No. (TRAIS)

11. Contract or Grant No.
DTRT12-UTC10

12. Sponsoring Organization Name and Address
United States of America
Department of Transportation
Research and Innovative Technology Administration

13. Type of Report and Period Covered
Research 9/1/2012-7/31/2014

14. Sponsoring Agency Code

15. Supplementary Notes
Report uploaded at www.pacTrans.org

16. Abstract

The goal of this outreach project was to examine driver distraction among teenagers in the Pacific Northwest. Specifically, to identify secondary tasks they consider distracting and determine their self-reported engagement in those same secondary tasks while driving. A presentation was developed and administered to 1400 teenage drivers (approximately 500 participants in each of the three states Washington, Idaho, and Oregon). Of those participants, 1009 teenage drivers responded to a pre- and post-knowledge survey administered immediately before and two weeks after the presentation. The purpose of the survey was to measure the degree to which the demonstration improved teenage driver perspectives regarding the hazards of distracted driving. Results indicated that the presentation positively influence teenage driver perspectives regarding the dangers of distracted driving.

17. Key Words	18. Distribution Statement
Distracted Driving, Teenage Drivers, Transportation Safety, Education, Outreach	No restrictions.

19. Security Classification (of this report)	20. Security Classification (of this page)	21. No. of Pages	22. Price
Unclassified.	Unclassified.		NA

Form DOT F 1700.7 (8-72) **Reproduction of completed page authorized**

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OSU: Oregon State University
UW: University of Washington
WSU: Washington State University
UI: University of Idaho
PacTrans: Pacific Northwest Transportation Consortium

Acknowledgments

This project was funded by the Pacific Northwest Transportation Consortium (PacTrans) with matching funds from Oregon State University (OSU), the University of Washington (UW), the University of Idaho (UI), and Washington State University (WSU). All opinions are those of the authors and do not reflect the opinion of the PacTrans. The authors would like to recognize the contributions of time and technical expertise to the project made by graduate research assistants Mafruhatul Jannat and Erica Miller.

Executive Summary

The goal of this outreach project is to examine driver distraction among teenagers including what tasks they consider to be distracting as well as their self reported level of engagement in those same distracting tasks. This study differs from other teenage distracted driving studies in two significant ways; 1) pre-/post- survey responses were collected to assess the influence the interactive presentation has on student participants, and 2) the student sample was collected across a region of the country (the pacific northwest). This research effort addresses the following four objectives:

- Develop a presentation regarding teenage distrated driving that engages with a variety of student learning styles in an active classroom environment,
- Administer the presentation to a cross section of teenage highschool students across the Pacific Northwest,
- Determine existing self reported perspectives of teenage driver perspectives regarding the hazards of distracted driving, and
- Determine if the newly developed presentation improves those perspectives.

In total, almost 1400 teenagers from Corvallis, OR, Seattle, WA, Pullman, WA, and Moscow, ID participated in presentations, and 1006 returned the surveys. Results from the surveys demonstrated that:

- Teenagers perceived working on homework and text messaging to be the most distracting; while adjusting climate controls, eating/drinking, tuning the radio, and changing CDs to be the least distracting.

- 38% of respondents identified additional secondary tasks that they regularly engaging in while driving. Specifically, 27% of respondents stated that they changed clothes or shoes while driving.
- Paired t-tests showed that on average mean responses were higher in the post-survey, indicating improved perceptions of the risks associated with distracted driving.

Chapter 1 Introduction

In recent years there has been a huge influx in the availability and presence of in-vehicle devices, cell phones, and navigation systems brought into the vehicle. Additionally, advances in technology and public acceptance have expanded the influence of these devices onto driving performance. This engagement of tasks not specific to operating and maneuvering a vehicle has become known as distracted driving.

There are many factors that are associated with driver distraction. For example, Ranney, Mazzae, Garrott, and Goodman (2000) characterized distracted driving to include anything that distracts a driver from the primary task of driving and further categorized distraction into four types: visual (e.g., looking inside of a purse), auditory (e.g., engaging in conversation), biomechanical (e.g., adjusting the radio station), and cognitive (e.g., being lost in thought).

Engaging in distracting tasks while driving is a safety concern. Distraction-affected crashes contributed to over 3,300 fatalities in 2011 and a further approximate 387,000 motor vehicle injuries (NHTSA 2013). In the 100-Car Naturalistic study conducted by Virginia Tech Transportation Institute (VTTI), driver inattention and distraction was associated with 78% of crashes and 65% of near-crashes (Klauer, Dingus, Neale, Sudweeks, & Ramsey 2006). Distraction has been shown to lead to degradation in driving performance. For example, Cooper et al. (2003) found that the margin of safety for drivers was significantly reduced with the addition of distraction during a short-weave task and left-turn decision task.

The degree of risk for a task can be characterized by its frequency, duration, and context (NHTSA 2010a). Imagine the difference between grabbing one item on the floor versus continuing a conversation on the phone during heavy traffic. Not only do novice drivers lack the experience needed to understand task risk, but also driving is much less automated for them and

requires more of their attentional capacity (Lansdown 2002). Young [novice] drivers are particularly most vulnerable in addition because of their high propensity to engage in distraction. Teenage drivers are the strongest users of cell phones and tend to be early adopters of new technology (Lee 2007). They are more likely to use a hand-held cell phone while driving than any other age group (NHTSA 2010b). In an observational study, females were found to be 70% more likely to use a cell phone while driving as compared to males (Foss, Goodwin, McCartt, and Hellinga 2009). However both genders are at high risk, as males were found more likely to turn around while driving (Goodwin, Foss, Harrell, and O'Brien 2012). Overall, novice drivers have been shown to have some of the highest crash rate per mile (Sarkar and Andreas 2004).

Numerous strategies have been deployed to reduce distracted driving; including policies, in-vehicle technology, and educational campaigns. Many studies use simulators or on-road controlled studies to observe changes in driver performance with the onset of distracting tasks. Appropriate feedback can help diminish both the impact and the amount of risk-taking behavior (Donmez, Boyle, and Lee 2007, 2008a, 2008b). Video and parental feedback provided in an Iowa study showed that the number of safety-relevant events could be reduced (McGehee, Raby, Carney, Lee, and Reyes 2007). The presence of passengers has also been shown to effect driver engagement in distraction; increased risk taking by teenage drivers has been associated with the presence of teenage peer passengers (Curry, Mirman, Kallan, Winston, and Durbin 2012). This is why it is beneficial to educate all teenagers about distraction rather than just those who actively drive.

Many secondary tasks are difficult to examine in a controlled setting or unsafe to force into real driving conditions. Surveys can be particularly helpful in capturing self-identified behavior that may not otherwise be observed (Mann, Vingilis, Leigh, Anglin, & Blefgen 1986).

Although it is not known definitively that perceptions of a phenomena relate to actual behaviors for distracted driving, previous research has shown that in somewhat related transporation driver practices or behaviors that survey responses correlate strongly with actual behaviors in the field and simulator (Hurwitz and Knodler 2007). The use of an education presentation coupled with survey data collection provides an efficient and reliable means for evaluating driver distraction mitigation.

The goal of this study is to examine driver distraction among teenagers using self-reported data in a before and after information session. The information session is designed to expose students to a variety of evidence that a wide range of activities performed while driving can result in distractions that significantly impact driving performance.

This study differs from other teenage distracted driving studies in two significant ways; 1) the use of pre-/post- survey responses to assess the impact of an interactive information session on driver distraction, and 2) the inclusion of students from several high schools in four cities across three US States.

Chapter 2 Methods

2.1 Presentation Content

Educational interventions that have been succesful in changing student conceptions have included two complementary approaches: presentation of a diverse set of evidence and active engagement with the material (Vosniadou 1994; Vosniadou 2008).

A broad and diverse set of evidence suggests that engaging students in the learning process during a presentation is effective on changing their conceptions (Hake 2002; Prince 2004; Chi 2009). Active learning is characterized as asking students to engage in the presenation by doing sometihng other than listening and eliciting their prior experiences related to distracted driving in this process. *As such the distracted driving presentation was designed to model an active classroom environment*.

Additionally, students report preferences for a wide variety of learning styles. Numerous models have been proposed to describe these learning styles. Of these, the Felder-Silverman learning styles model (Felder and Silverman 1988) has gained significant traction in the engineering community. For our purposes, it is important to recognize that student learning outcomes can be improved if content is presented in a way that resonates across the diverse preferences of students. The spectrum of teaching styles described by Felder and Silverman include concrete and abstract content, visual and verbal presentation, inductive and deductive organization, active and passive participation, and sequential and global perspectives. *As such a variety of teaching styles were incorporated into the presentation*.

2.2 Survey Content

A four paged pre-survey and one page post-survey was developed for deployment at each school. Both the pre-survey and post-survey asked students to rate (on a seven point Likert scale) how distracting they perceived specific activities to be while driving. These two surveys also asked about general demographics such as gender, year in school and age. Additionally, the pre-survey asked more specific questions about driving history and experience, license type and training, driving frequency and duration, and how often and when they and/or their parent engage in specific secondary tasks. The pre-survey took approximately 10-15 minutes to complete, while the post-survey took approximately 5-10 minutes.

2.3 Procedure

To ensure consistency, an instructor's guide was developed for use by all presenters. These notes included summaries of the major points that needed to be communicated, the amount of time that should be spent, and the expected student outcomes for each slide. A video recorded presentation was also available for distance learning.

Immediately before the presentation, as the students entered the classroom or auditorium they were handed the pre-surveys. As soon as the students were seated, they were instructed to respond to the pre-survey by several researchers present in the classroom. Upon completion of the pre-survey, student researchers collected the surveys and the presentation was delivered. Hard copy surveys were used, as the increased response rate was determined to be worth the cost of additional transcription time.

2.4 Participants

Participants in this study were recruited from high schools in relative proximity to Corvallis, Oregon, Seattle and Pullman, Washington, and Moscow, Idaho (Figure 2.1).

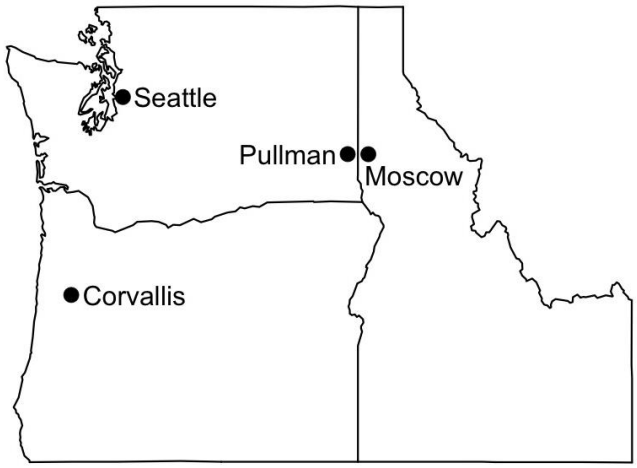


Figure 0.1 Locations of Data Collection Sites in the United States of America

In total, almost 1400 teenagers participated in the information sessions, and 1006 returned the surveys. The mean age of students was 16.17 years with standard deviation of 1.13 years. The percentage of males and females reported, were 47.4% (n=477) and 50% (n=503), respectively and this was fairly consistent across all four cities. On average, students drove 4.37 days per week with a standard deviation of 2.56. The years of driving experienced ranged from 0.64 years in Pullman, to 0.83 years in Seattle, 0.94 years in Moscow, and 2.32 years in Corvallis.

Subjects were not individually compensated for their participation. However, a raffle for a $50 gift card was used to link pre- and post- survey responses, and ultimately thank the participants for their participation. Detailed participant demographics are included in Table 2.1 and 2.2. This study was reviewed and approved by the Institutional Review Board at each participating institution.

Table 0.1 Participant Demographics

	Corvallis, OR n (%)	Moscow, ID n (%)	Pullman, WA n (%)	Seattle, WA n (%)	Combined n (%)
Total Participants	293 (29.1)	231 (23.0)	271 (26.9)	211 (20.1)	1006 (100)
Grade Level					
Freshman	0 (0)	36 (15.6)	72 (26.6)	37 (17.5)	145 (14.4)
Sophomore	0 (0)	65 (28.1)	57 (21.0)	51 (24.2)	173 (17.2)
Junior	132 (45.0)	67 (29.0)	74 (27.3)	70 (33.2)	343 (34.1)
Senior	142 (48.5)	62 (26.8)	67 (24.7)	48 (22.8)	319 (31.7)
Type of License					
None	11 (3.8)	27 (11.7)	79 (29.2)	30 (14.2)	147 (14.6)
Permit	37 (12.6)	68 (29.4)	61 (22.5)	77 (36.5)	243 (24.2)
Provisional	45 (15.4)	45 (19.5)	35 (12.9)	36 (17.1)	161 (16.0)
Full	124 (42.3)	90 (39.0)	87 (3.2)	56 (26.5)	357 (35.5)

Table 0.2 Participant Driving Experience

	Corvallis, OR n (%)	Moscow, ID n (%)	Pullman, WA n (%)	Seattle, WA n (%)	Combined n (%)
Drivers Education Training					
Yes	134 (45.7)	161 (69.7)	143 (52.8)	147 (69.7)	585 (58.2)
No	136 (46.4)	31 (13.4)	38 (14.0)	14 (6.6)	219 (21.8)
Not Yet	7 (2.4)	24 (10.4)	41 (15.1)	34 (16.1)	106 (10.5)
Crashes					
Yes	67 (22.9)	68 (29.4)	93 (34.3)	45 (21.3)	273 (27.1)
No	202 (68.9)	137 (59.3)	174 (64.2)	157 (74.4)	670 (66.6)
Moving Violations					
Yes	22 (7.5)	14 (6.1)	14 (5.2)	10 (4.7)	60 (6.0)
No	248 (84.6)	191 (82.7)	251 (92.6)	191 (90.5)	881 (87.6)

Chapter 3 Results

3.1 Driving Condition

Factors such as time of day, weather conditions, and trip purposes were considered. Figure 3.1 shows a dot plot that summarizes the influence that driving conditions had on the frequency teenage drivers would engage in distracted driving. Although the self-reported data shows high response rates for never engaging in secondary tasks, there is a notable spread in responses for engagement during stop and go traffic, at intersections, with passengers, to and from school, and at night.

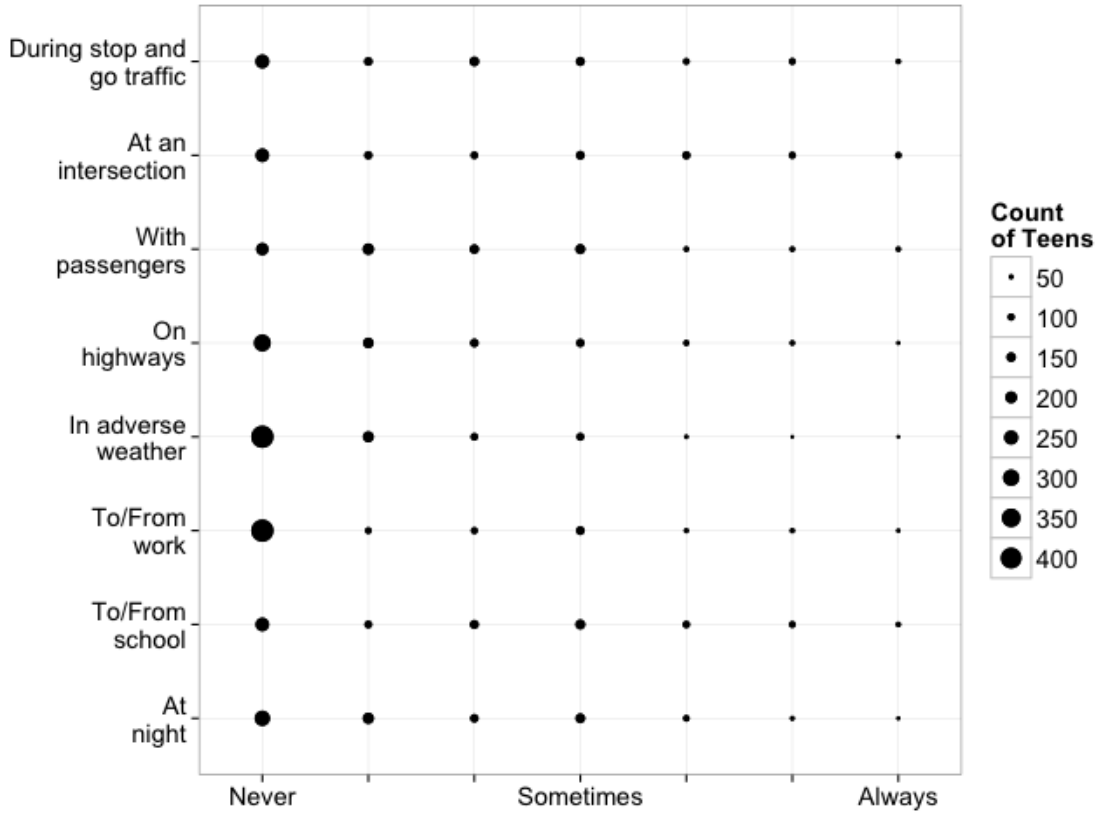


Figure 0.1 Performance of Secondary Tasks during Different Conditions

3.2 Distracting Activities

Descriptive statistics were compiled for the data collected by each University and for the entire data set. When considering the entire data set on a seven point Likert scale (low distraction to highly distracting), it was found that working on homework and text messaging were the two most distracting self-reported secondary tasks while driving. A similar trend was observed in the data when aggregated by each University. It was also found that teenage drivers perceived adjusting the climate setting, tuning the radio, changing CDs, eating/drinking to be the least distracting secondary tasks while driving. This trend suggests that activities related to on board in-vehicle technologies are perceived as inherently less distracting to teenage drivers rather than mobile devices. Results for each city on how distracting participants perceived specific activities while driving for before and after the information session are presented in Table 3.1. The data on how often the participants engaged in these secondary tasks is shown as a dot plot in Figure 3.2.

Table 0.1 How Distracting Participant's Perceived Specific Activities while Driving

		Response (% Change, Post-Pre)						
		1	2	3	4	5	6	7
		Strongly Disagre			Neutral			Strongly Agree
Activity	City	Δ	Δ	Δ	Δ	Δ	Δ	Δ
Talk on a mobile phone	Corvallis	**-2.34**	**-4.30**	**-5.08**	**-7.81**	**-7.42**	**-1.17**	10.55
	Seattle	6.35	0.00	**-4.76**	**-3.17**	4.76	9.52	**-9.52**
	Pullman	**-1.09**	**-6.01**	**-3.28**	**-3.83**	**-5.46**	0.00	4.37
	Moscow	**-3.90**	**-4.33**	2.16	6.93	4.33	**-2.16**	9.09
Dial a mobile phone	Corvallis	0.39	**-0.78**	**-2.73**	**-5.08**	**-8.59**	**-11.72**	10.94
	Seattle	7.94	0.00	0.00	0.00	**-7.94**	6.35	**-4.76**
	Pullman	**-2.73**	**-2.19**	**-4.37**	**-7.65**	**-5.46**	1.09	6.01
	Moscow	**-1.30**	**-3.46**	**-1.30**	3.90	3.03	1.30	9.96
Text message	Corvallis	0.39	**-3.13**	**-0.39**	**-2.34**	**-1.56**	**-8.20**	**-2.34**
	Seattle	9.52	1.59	**-3.17**	**-3.17**	3.17	**-14.29**	9.52
	Pullman	**-3.28**	**-1.64**	**-1.64**	**-1.64**	0.00	**-2.73**	**-4.37**
	Moscow	**-0.43**	0.87	**-1.73**	**-1.30**	**-4.76**	2.60	16.88
Eat or drink	Corvallis	**-3.13**	**-10.16**	**-8.20**	**-14.45**	**-3.91**	2.73	19.92
	Seattle	0.00	0.00	**-6.35**	**-3.17**	12.70	4.76	**-7.94**
	Pullman	**-2.19**	**-2.19**	**-6.56**	**-6.56**	**-3.28**	**-2.19**	7.10
	Moscow	**-6.49**	**-1.30**	1.73	8.66	6.06	1.73	1.73
Insert/Use CDs or DVDs	Corvallis	**-2.73**	**-9.77**	**-11.33**	**-14.84**	**-3.52**	0.78	22.27
	Seattle	6.35	**-6.35**	**-4.76**	**-4.76**	9.52	4.76	**-6.35**
	Pullman	**-1.09**	**-7.65**	**-2.73**	**-3.83**	**-4.37**	**-1.09**	4.92
	Moscow	**-4.33**	**-7.36**	6.49	10.82	3.46	1.73	1.30
Tune the radio	Corvallis	**-3.91**	**-12.11**	**-9.77**	**-14.45**	**-1.17**	1.56	20.70
	Seattle	**-3.17**	**-6.35**	**-12.70**	0.00	7.94	14.29	1.59
	Pullman	**-4.37**	**-7.10**	**-1.09**	**-3.83**	**-1.09**	**-2.19**	3.83
	Moscow	**-5.19**	**-1.73**	1.73	11.26	2.16	3.03	0.87
Change the climate setting	Corvallis	**-10.55**	**-13.67**	**-8.59**	**-8.20**	**-1.95**	1.56	21.88
	Seattle	**-4.76**	0.00	**-20.63**	9.52	6.35	11.11	1.59
	Pullman	**-7.65**	**-6.01**	1.64	**-3.83**	**-2.19**	1.64	1.09
	Moscow	**-8.66**	8.23	**-1.30**	8.66	3.90	**-0.87**	2.16
Read	Corvallis	**-1.17**	**-3.91**	**-1.95**	**-8.59**	**-9.77**	**-10.16**	16.02
	Seattle	6.35	1.59	4.76	**-9.52**	**-4.76**	**-4.76**	9.52
	Pullman	**-0.55**	**-2.19**	**-1.64**	**-4.92**	**-4.37**	**-4.92**	3.28
	Moscow	**-0.87**	**-1.73**	**-2.16**	0.87	0.43	4.76	10.82
Look for an item in bag	Corvallis	**-0.78**	**-0.39**	**-4.69**	**-8.98**	**-11.72**	**-8.20**	15.23
	Seattle	6.35	1.59	0.00	**-7.94**	**-3.17**	**-7.94**	11.11
	Pullman	0.00	**-2.19**	**-1.64**	**-4.37**	**-2.73**	**-3.83**	**-0.55**
	Moscow	**-1.30**	0.43	**-3.03**	1.73	**-0.87**	1.73	13.42
Use a device brought into the vehicle	Corvallis	**-1.17**	**-0.78**	**-2.73**	**-6.25**	**-7.03**	**-11.33**	8.98
	Seattle	3.17	4.76	0.00	**-1.59**	**-6.35**	**-4.76**	6.35
	Pullman	**-1.09**	**-2.19**	**-2.19**	**-1.64**	**-0.55**	**-9.84**	1.64
	Moscow	**-0.87**	**-1.30**	**-0.87**	0.43	**-3.90**	4.76	13.85
Work on homework	Corvallis	**-2.34**	0.00	**-2.34**	**-1.17**	0.00	**-5.47**	**-8.59**
	Seattle	9.52	**-1.59**	1.59	**-1.59**	**-7.94**	3.17	**-1.59**
	Pullman	**-1.09**	**-1.64**	0.00	0.00	**-0.55**	**-2.19**	**-9.29**
	Moscow	0.43	0.00	**-0.43**	**-1.73**	**-7.79**	1.30	19.91
Daydream	Corvallis	**-3.13**	**-3.52**	**-8.59**	**-6.64**	**-16.02**	1.56	16.80
	Seattle	1.59	1.59	**-14.29**	**-7.94**	**-1.59**	14.29	6.35
	Pullman	**-6.01**	2.73	0.00	**-0.55**	**-3.83**	**-1.64**	**-6.01**
	Moscow	0.43	**-1.73**	**-2.60**	3.90	**-0.43**	5.63	6.93
Other Complex thinking	Corvallis	**-3.91**	**-3.91**	**-9.38**	**-12.50**	**-12.11**	0.00	22.27
	Seattle	**-1.59**	1.59	0.00	**-9.52**	**-3.17**	1.59	14.29
	Pullman	**-1.64**	**-4.92**	0.55	**-4.92**	**-4.37**	**-2.19**	1.64
	Moscow	**-4.33**	0.87	**-4.33**	7.79	5.63	1.73	4.76
Apply make-up or shave	Corvallis	**-1.95**	**-0.78**	0.39	**-5.47**	**-7.42**	**-8.59**	4.30
	Seattle	7.94	1.59	0.00	**-6.35**	4.76	**-1.59**	**-4.76**
	Pullman	**-3.83**	0.00	0.55	**-4.37**	1.64	**-11.48**	2.73
	Moscow	0.00	0.43	**-1.73**	1.30	**-7.79**	0.87	19.05

Note: Bold values represent shifts to more post responses than pre responses

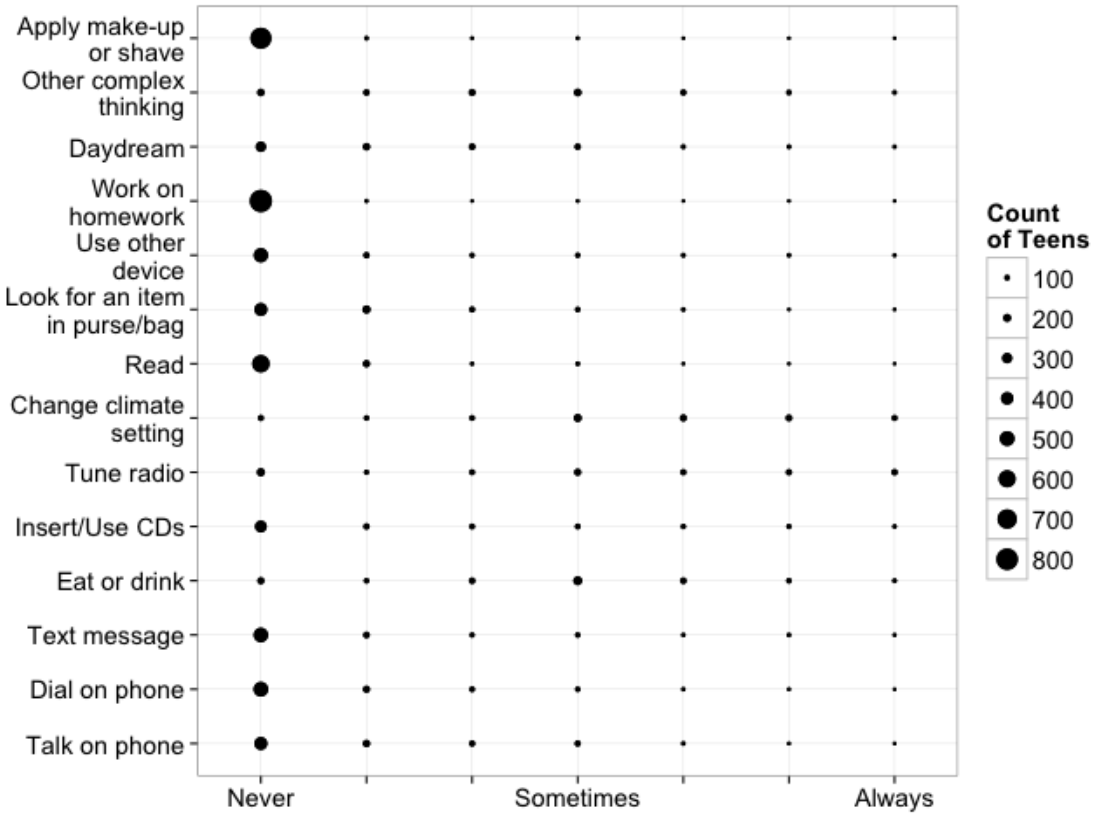


Figure 0.2 Self-Reported Frequency of Secondary Driving Tasks, Pre-survey Results

Beyond the secondary tasks explicitly described in Table 3.1, students were asked to describe other secondary tasks that they commonly engaged in while driving (Figure 3.3). Approximately 38 percent of the respondents described additional secondary tasks. It was found that almost 27 percent of respondents changed clothes or shoes while driving, which was followed by singing or dancing in the car, and interacting with passengers. Other activities during driving included cleaning, a variety of personal grooming tasks, changing contact lenses, and other activities.

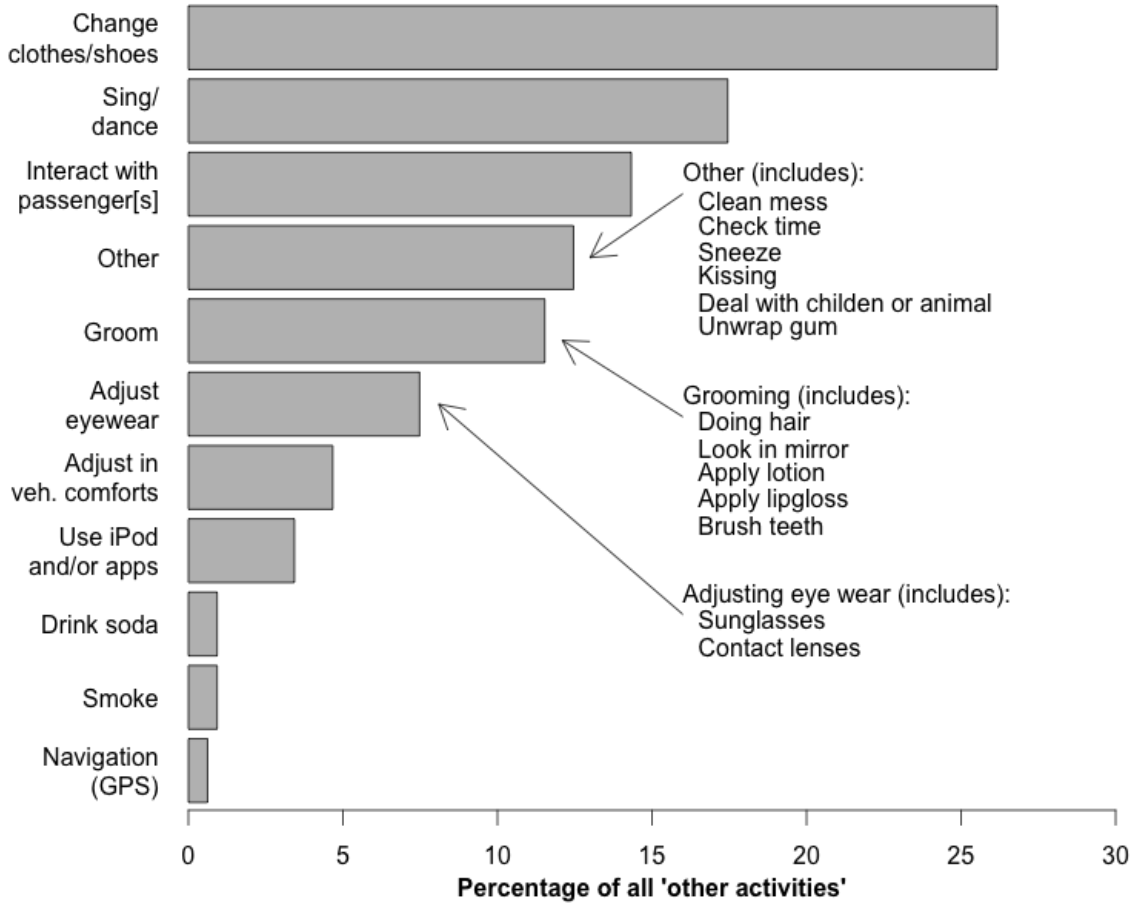


Figure 0.3 Other Distracting Activities during Driving

3.3 Impact of Interactive Demonstration

To determine if the interactive demonstration improved teenage driver perceptions regarding the hazards of distracted driving, we conducted a Paired t-test between the results of the pre- and post-surveys. The analysis was conducted both at the aggregate level and on a per city basis. Table 3.2 summarizes the mean values of the differences between the pre- and post-survey responses. There was a notable difference in significant p-values for the institutions that gathered post-survey data immediately after the information session as compared to those that

waited two weeks. This suggests that the impact of the information presented decreased over time for the students.

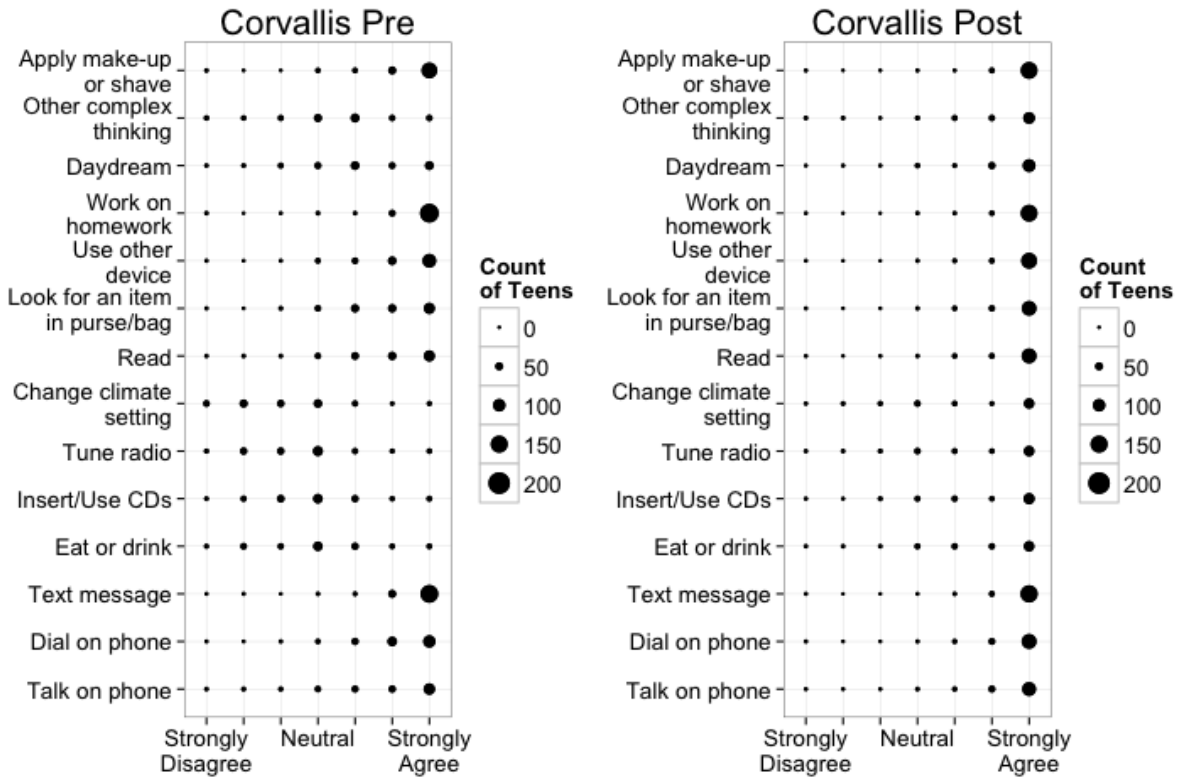
Table 0.2 Change in Mean Responses Between the Post- and Pre-Surveys

	Corvallis		Seattle		Pullman		Moscow		Combined	
Activity	p-value	Mean Diff. Differences	p-value	Mean Diff. Differences	p-value	Mean Diff. Differences	p-value	Mean Diff. Differences	p-value	Mean Diff. Differences
Talk on a mobile phone	<0.001	**-0.712**	0.668	0.147	0.025	**-0.342**	<0.001	**-0.491**	<0.001	**-0.453**
Dial a mobile phone	<0.001	**-0.383**	0.351	0.322	<0.001	**-0.471**	<0.001	**-0.451**	<0.001	**-0.346**
Text message	0.066	**-0.188**	0.305	0.344	0.276	**-0.155**	<0.001	**-0.457**	0.004	**-0.195**
Eat or drink	<0.001	**-1.162**	1.00	0.00	0.008	**-0.344**	<0.001	**-0.503**	<0.001	**-0.652**
Insert/Use CDs or DVDs	<0.001	**-1.137**	1.00	0.00	0.007	**-0.331**	<0.001	**-0.503**	<0.001	**-0.626**
Tune the radio	<0.001	**-1.176**	0.004	**-0.742**	0.006	**-0.331**	<0.001	**-0.442**	<0.001	**-0.712**
Change the climate setting	<0.001	**-1.428**	0.006	**-0.721**	0.032	**-0.290**	<0.001	**-0.394**	<0.001	**-0.764**
Read	<0.001	**-0.655**	0.722	0.115	0.181	**-0.187**	<0.001	**-0.491**	<0.001	**-0.402**
Look for an item in	<0.001	**-0.566**	0.761	0.098	0.620	**-0.071**	<0.001	**-0.474**	<0.001	**-0.334**
Use a device brought into	<0.001	**-0.393**	0.566	0.194	0.320	**-0.143**	<0.001	0.520	<0.001	**-0.299**
Work on homework	0.395	**-0.091**	0.259	0.387	0.962	0.007	<0.001	**-0.460**	0.154	**-0.098**
Daydream	<0.001	**-0.88**	0.054	**-0.541**	0.413	0.122	<0.001	**-0.423**	<0.001	**-0.466**
Think about something	<0.001	**-1.049**	0.104	**-0.443**	0.332	**-0.143**	<0.001	**-0.497**	<0.001	**-0.597**
Apply make-up or shave	0.005	**-0.343**	0.177	0.452	0.114	**-0.214**	<0.001	**-0.442**	<0.001	**-0.234**

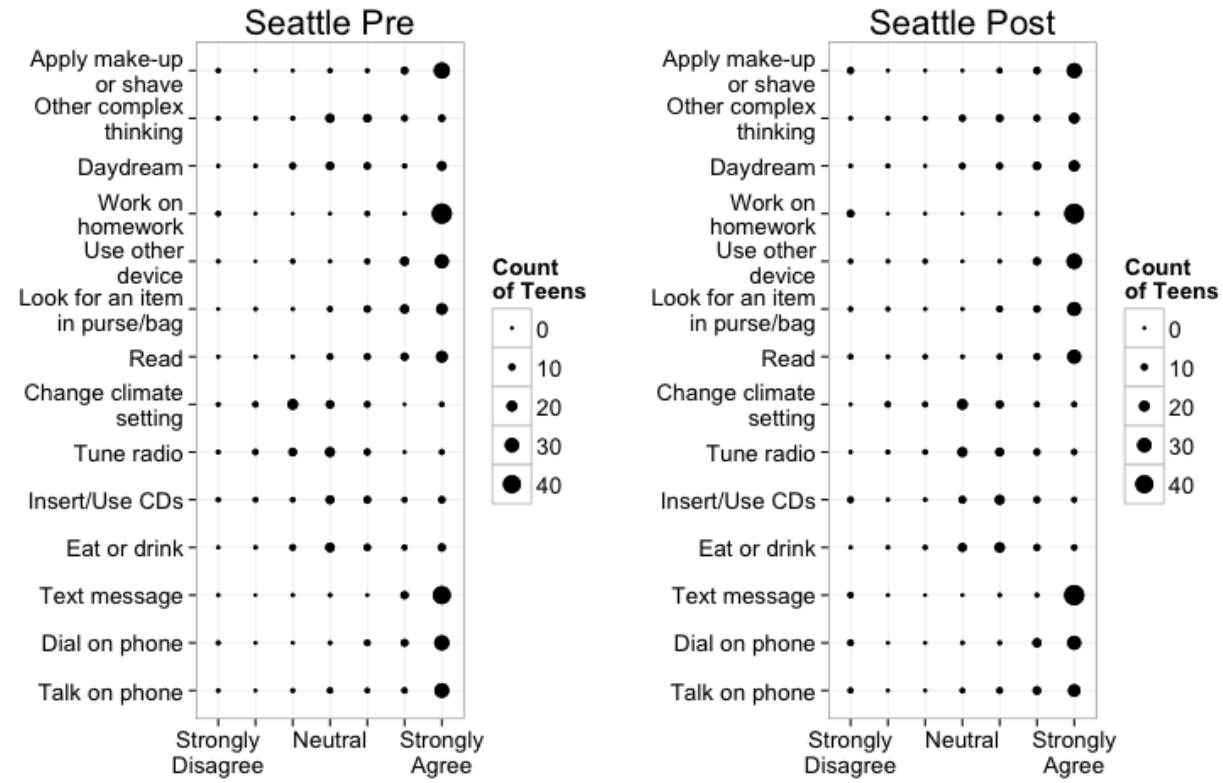
Note: Bold values represent reduction in perceived distraction

Figure 3.4 (a, b, c, d, e) shows the responses for the pre- and post-survey question "which of the following do you think is a distraction while driving," both at the aggregate level and for each university. The plot on the left shows pre-survey data, while the right plots display the corresponding post-survey responses. Again, these are based on a seven point Likert scale with

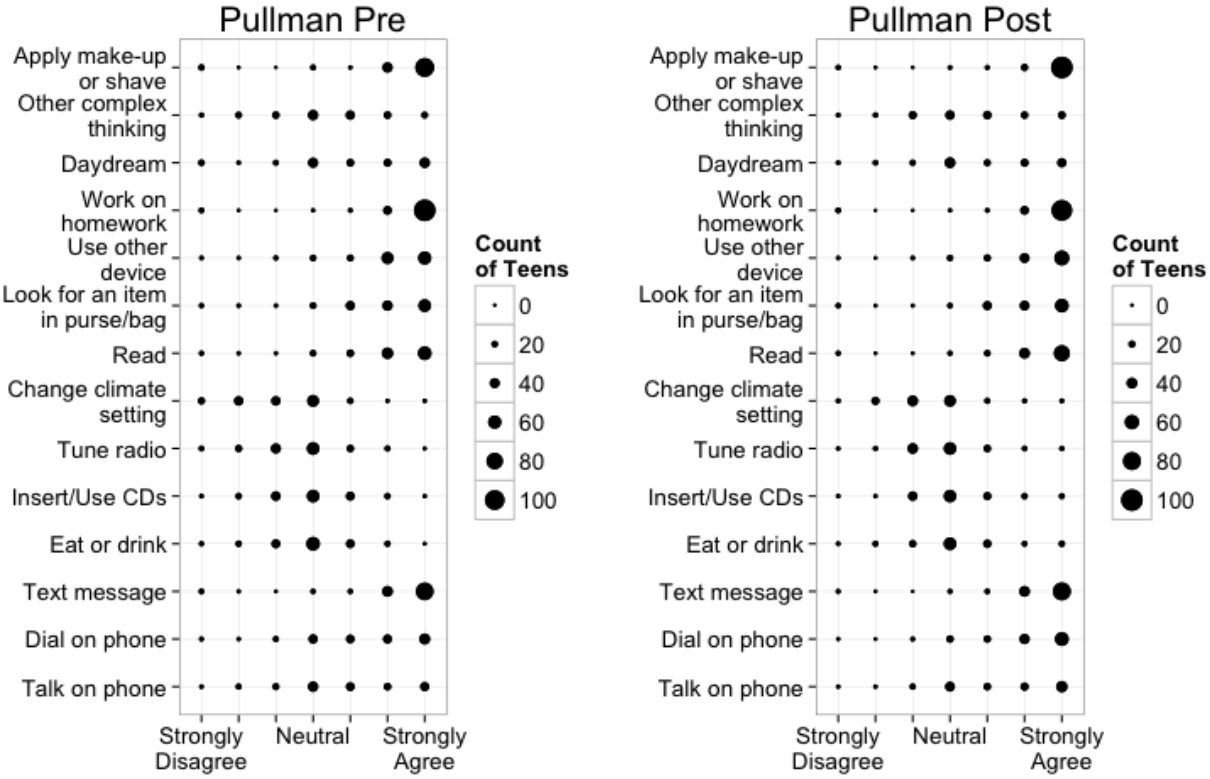
no perceived distraction corresponding to 1 and highly distracting at 7. Shifts towards the right in responses for each activity demonstrate increased perceived level of distraction.



(a)


Seattle Pre
Seattle Post
Apply make-up or shave
Other complex thinking
Daydream
Work on homework
Use other device
Look for an item in purse/bag
Read
Change climate setting
Tune radio
Insert/Use CDs
Eat or drink
Text message
Dial on phone
Talk on phone
Strongly Disagree
Neutral
Strongly Agree
Count of Teens
0
10
20
30
40

(b)


Pullman Pre
Pullman Post
Apply make-up or shave
Other complex thinking
Daydream
Work on homework
Use other device
Look for an item in purse/bag
Read
Change climate setting
Tune radio
Insert/Use CDs
Eat or drink
Text message
Dial on phone
Talk on phone
Strongly Disagree
Neutral
Strongly Agree
Count of Teens
0
20
40
60
80
100

(c)

(d)

Figure 0.4 Summary of the Responses to Distracting Activities in Pre- and Post-Survey

Chapter 4 Conclusions and Recommendations

In total, almost 1400 teenagers from Corvallis, OR, Seattle, WA, Pullman, WA, and Moscow, ID participated in presentations, and 1006 returned the surveys. Results from the surveys demonstrated that:

- Teenagers perceived working on homework and text messaging to be the most distracting; while adjusting climate controls, eating/drinking, tuning the radio, and changing CDs to be the least distracting.
- 38% of respondents identified additional secondary tasks that they regularly engaging in while driving. Specifically, 27% of respondents stated that they changed clothes or shoes while driving.
- Paired t-tests showed that on average mean responses were higher in the post-survey, indicating improved perceptions of the risks associated with distracted driving. It was also determined that the shifts in perspectives were more significant for students who responded to the presentation immediately after as compared to two weeks after.

This outreach project has demonstrated that it is feasible to shift self-reported teenage driver perceptions regarding the hazard of distracted driving, however more work needs to be done in this area. Future work should consider the following:

- 1400 students participated in these efforts but thousands more need to be engaged if social norms are to be influenced. To achieve this dozens of additional presentations need to be conducted by members of the project team as well as others trained in this content area.

- The presentations as well as the facilitators guide should be made readily available to be so that high school teachers and others can continue to engage high school students with the presentation around the region.
- The results from the pre- and post-survey provided critical data that can contribute to the development of full scale driving simulator studies providing a means of directly observing teenage driving behavior in the Pacific Northwest.

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