

Addressing issues of driver distraction in traffic offender management

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ABSTRACT: This paper presents a driver distraction curriculum that has been developed for use with traffic offenders caught using mobile phones, smartphones and similar nomadic communications devices. The curriculum integrates with similar materials developed for use with high school students (pre-driver), learner drivers, solo novice drivers, and fleet drivers. The development of a driver distraction curriculum followed the Conference on Traffic Offender Programs in December 2011, which provided an up-to-date summary of traffic offender management in New South Wales and included accounts of the curricula used in offender programs. Interestingly, while programs addressed issues of alcohol or other drug impairment, speeding, driver fatigue, and occupant restraint, no previous traffic offender intervention program included a curriculum element relating to driver distraction. An example of the use of the driver distraction curriculum for an individual offender (a bus driver) is presented and discussed.

Introduction

A key element of the Safe System approach to driving and use of the road transport system in Australia is access or admittance to the roads transport system as a licensed vehicle operator. Access to the road transport system is regulated through a number of processes – the driver licensing system (ensuring knowledgeable and well-trained drivers), the vehicle registration system (ensuring crashworthy and roadworthy vehicles), the traffic law compliance systems (traffic policing, the demerit points process in drivers licence administration), and the justice system (for traffic offenders). This is reflected within the national Austroads Guides that were adopted in New South Wales in July 2009 and which require the State Government to improve the systems used to obtain a government-issued drivers licence to operate a motor vehicle on public roads in New South Wales. Drivers who do not comply with road traffic laws are subject, when detected for traffic offences, to various sanctions. These commonly include fines and loss of demerit points, but for offences that have been defined by legislators as serious or major offences, or for drivers who repeatedly commit traffic offences, the sanctions can be severe, such as loss of a drivers licence, de-registration of a vehicle, vehicle impoundment, vehicle forfeiture, and custodial penalties for the driver.

Under the Safe System approach, the identification of “access to the system as a licensed vehicle operator” means that the frame of reference for access to the road transport network into driver licensing is not limited to questions concerning new drivers. It requires a comprehensive assessment of the effectiveness and efficiency of the operation of the licensing system throughout a driver’s licence tenure, that is, for the lengthy period extending from the time when a driver is issued a learner licence and on through the regulation and management of ‘whole of driving life’ to the time when a driver ceases to drive permanently. While New South Wales has a sound record of improving its driver licensing system over the past 40 years with a blue ribbon graduated driver licensing system where to obtain a full vehicle

operator licence for the first time means a novice driver has passed at least five separate tests to progress from pre-driver to fully licensed [1], “access to the system as a licensed vehicle operator” includes those drivers who commit a traffic offence or multiple offences and as a result are excluded from holding a drivers licence for a period and who then re-enter the system.

Generally, regaining access to the road transport system in New South Wales following an offence or a number of offences is administered by Roads and Maritime Services (where the administrative demerit point system alone is involved). However, many people who lose their drivers licence are dealt with by the Courts – notably drink drivers and drug drivers, but increasingly offenders who seek a decision by the Courts regarding the loss of their drivers licence for other traffic offences. In these cases, the “access to the system” also involves the Attorney General’s Department and may involve participation in an approved course under the Traffic Offender Intervention Program in New South Wales.

Unfortunately, while the first entry into the driver licence system for new drivers consists of a graduated driver licensing scheme involving many hours of training, recorded accumulation of driving experience and several stages of provisional licensing that are subject to various restrictions, a drivers licence re-issue process for a traffic offender may involve just waiting in a queue, paying a fee, having a photo taken and collecting a new drivers licence. Indeed, it may only involve the resumption of driving: that is, the exclusion from being a licensed vehicle operator within the road transport system involves retaining the actual “plastic” – the drivers licence – and simply undertaking to not drive for a specified period. Such processes for the resumption of driving apply equally to persons who have lost their licence for the accumulation of demerit points (for repeated instances of speeding at less than 30 km/h over the posted maximum speed limit, for seat belt and child occupant restraint offences, for parking offences), or for persons who have incurred an immediate loss of a drivers licence for a drink drive offence, a drug driving offence, or for speeding at 30 or 45 km/h over the limit. Currently, for traffic offenders who lose their drivers licence but who are not required to attend Court, or who do not seek a relief from a Court for a variation on their driver licensing penalty, there is no possibility of a referral to a traffic offender course under the Traffic Offender Intervention Program.

Offenders who do undertake a traffic offender course under the Traffic Offender Intervention Program receive a general curriculum that does not necessarily address their individual offending behaviour. Historically, traffic offender programs were developed as a voluntary option that could be used by magistrates as a pre-sentencing intervention for drink drivers. Accordingly, most traffic offender programs placed an emphasis on alcohol and driving, and this approach has continued following the introduction of the Traffic Offender Intervention Program in 2008. A recent review reported that issues such as driver fatigue, speeding, and occupant protection (use of seat belts and child restraints for drivers, use of helmets and protective clothing for motorcyclists) received lesser coverage in traffic offender program curricula, and that no program provider appeared to address issues of driver distraction in a systematic manner [2].

It is recognised that these practices are in need of improvement in order to enhance government policies for reissuing driver and rider licences to traffic offenders, and to provide a safer road network in New South Wales in the 21st Century.

Traffic offenders and driver distraction

Australian media recently broadcast footage of a bus driver, carrying passengers on a scheduled route service, holding and examining information on a smartphone while driving through a section of major commuter motorway where roadworks were in progress [3]. The driver was quickly identified, and his driving authority suspended. The bus driver's employer subsequently contacted the Blacktown Traffic Offenders Program (TOP) to request the driver's admittance to its general program for traffic offenders, which is an approved course under the Traffic Offender Intervention Program. The Blacktown Traffic Offenders Program accepted the driver into its program, and indicated it would work with the bus company to develop a focused and individualised intervention to address the particular issues of work-related driving, driving of a public passenger vehicle, driver attention and distraction, and mobile phone or smart use by drivers.

This paper outlines a driver distraction curriculum that has been developed for use with traffic offenders caught using mobile phones, smartphones or similar nomadic communication devices. As such this paper offers an insight into how the management of traffic offenders might work in the future, utilizing a general approach that can be individualised, as needed, for identified offender categories or offence types.

The curriculum elements

Earlier work has identified the need for an extension and enhancement of existing curriculum documents for novice driver training used in New South Wales, allowing one general curriculum to be adapted and used not only by professional driving instructors, parents (and other accompanying drivers, including driver mentors) and fleet managers [4].

The curriculum was developed from the current New South Wales learner driver log book published by the then Roads and Traffic Authority in New South Wales, which features 19 learning goals where learner drivers should gain knowledge and experience (an additional goal relates to preparing for the driving test). In the current New South Wales learner driver log book, these areas are organised in terms of four levels commencing with preparing to drive (part of the Building a Foundation category), through to country, city and motorway driving (part of the Building Experience category).

The expanded curriculum has been subject to trials in programs for high school students (pre-driver), learner drivers, solo novice drivers, and fleet drivers in a western Sydney metropolitan local government area [5].

The approach taken continues the organisation of the current New South Wales learner driver log book, with a hierarchical structure of categories, learning goals, and the topic areas used to present the learning goals and content:

Category	e.g, Building a foundation
Learning goal	e.g, Preparing to drive
Topic area	e.g., Driver check and external check of vehicle

TRAVELLING SAFELY WITHIN THE ROAD TRANSPORT SYSTEM	BUILDING A FOUNDATION FOR DRIVING	TRAFFIC SKILLS INVOLVED IN DRIVING	LOW RISK DRIVING	BUILDING EXPERIENCE AS A DRIVER	YOUR ROLE AND RESPONSIBILITIES AS A DRIVER
<ul style="list-style-type: none"> 1. The safe system approach 2. Commentary driving and being aware of changing situations 	<ul style="list-style-type: none"> 3. Preparing to drive 4. Vehicle controls 5. Moving off and stopping 6. Steering 7. Changing gears 8. Scanning 9. Reversing 	<ul style="list-style-type: none"> 10. Simple traffic situations 11. Parking 12. Complex traffic situations 13. Changing lanes 	<ul style="list-style-type: none"> 14. Speed management 15. Road positioning 16. Decision making 17. Responding to hazards 	<ul style="list-style-type: none"> 18. Driving at night 19. Driving in adverse conditions 20. Country driving 21. City and motorway driving 	<ul style="list-style-type: none"> 22. Preparing for solo driving 23. Being a passenger 24. Trip planning and congestion 25. Alcohol – Impaired driving 26. Drugs other than alcohol – Impaired driving 27. Driver fatigue – Impaired driving 28. Driver distraction 29. Occupant protection 30. Children as passengers 31. Other drivers and other road users 32. Vehicle modifications 33. Financial issues and considerations 34. Police and other traffic enforcement 35. Motor vehicle and driving offences 36. Involvement in a crash 37. Work-related driving 38. Driving with a disability 39. Eco-driving 40. Alternatives to driving – public transport and non-motorised travel 41. The future of driving

Figure 1: Curriculum levels and learning goals (from Faulks, 2010).

In its current iteration (see Figure 1), the curriculum elements are organised into six categories (rather than four) and include 41 learning goals (rather than 19), with an overall learning content featuring over 200 topic areas. For each topic area, the learning content and supporting content is organised under the following headings:

- Review / Revise
- Introduce
- Demonstrate / Discuss
- Practice / Rehearse
- Practice environment
- Recap / Debrief
- Background
- Other relevant topics / subtopic (prerequisite, concurrent, advanced)
- NSW Log Book reference (if appropriate)
- References and further readings

An intervention for a bus driver offender using a smartphone

The curriculum levels, goals and topic areas that are relevant to a focus on the identified issues of the particular issues of work-related driving, driving of a public passenger vehicle, driver attention and distraction, and mobile phone or smart use by drivers, are outlined below. The curriculum choices for the intervention were based on the direct observations of the bus driver's behaviour in using the smartphone and driving on a congested motorway, as filmed by a bus passenger, together with a review of relevant literature regarding distracted driving [6].

In all, 64 topic areas relating to distracted driving were identified in the curriculum as relevant for an individualised course of instruction for a bus driver offender identified as using a smartphone while driving (see Appendix). Indeed, the topic areas covered over half of the learning goals and all six of the category areas in the general driver curriculum [7].

The individualised course of instruction for a bus driver offender using a smartphone while driving was designed to supplement the general approved traffic offender course offered at Blacktown, which includes sessions on:

- Ambulance Presentation – the importance of first aid training; awareness of drug and alcohol abuse; driver's responsibility; how to avoid being a road statistic.
- Police Presentation – aimed to develop a better understanding role of the New South Wales Police Force and other agencies; personal role and responsibility around road safety; major causes of road trauma and impact on community.
- Road Safety – the identification of the human and other factors causing road crashes; risk factors (e.g., speeding, drink, fatigue); defensive driving; road rules; road trauma figures; and developing a positive attitude.
- Drug and Alcohol - aimed to develop a better knowledge and understanding of the effects of drugs and alcohol on individuals and society; effects on central nervous system; how drugs and alcohol affect driving; and social education about harm minimisation.
- Insurance – an outline of insurance and criteria for eligibility; Insurance Contracts Act 1984; basis for denial of claims; consequences of no insurance.
- Legal Issues - how to present in court and information required; material court uses to determine a sentence; matters considered as aggravating an offence; penalties; the

2004 guideline judgment concerning drink driving; custodial sentences and dangerous driving; and habitual offender declarations.

- Spinal Injury Prevention – an understanding of spinal cord injuries and accidents; consequences of accidents; permanent effects; life as a wheelchair bound person, responsibility for actions.
- Motor Maintenance – the importance of understanding owner’s manual and good maintenance; reducing operating costs; correct tyre pressure; effects of rain on roads; battery maintenance and safety items [8].

The additional, individualised topic areas would be covered in one-on-one (or if desired, small group) sessions at the bus company. It was also noted that it would be possible to develop a web-based intervention for the bus driver offender which he could access either in work time at the depot or in his personal time – such a web-based intervention, however, was beyond the scope of this project.

Discussion

The Traffic Offender Intervention Program in New South Wales is regulated under the Criminal Procedure Act 1986 by the Criminal Procedure Amendment (Traffic Offender Intervention Program) Regulation 2007. The Traffic Offender Intervention Program is not overly prescriptive, and it is simply stated that the aim of the program is to provide offenders with the information and skills necessary to develop positive attitudes towards driving and develop safer driving behaviours. It is a Local Court based program targeting offenders who have pleaded guilty to (or been found guilty of) a traffic offence. In the normal course of events, on application by the defendant, the defendant’s legal representative, or the Court’s own motion, magistrates can make a referral to an approved traffic course provider. The case will be adjourned for sentencing, allowing sufficient time for the nominated course to be completed. As noted earlier, while traffic offender programs under the Traffic Offender Intervention Program in New South Wales address issues of alcohol or other drug impairment, speeding, driver fatigue, and occupant restraint, no current traffic offender intervention program include a curriculum element relating to driver distraction.

In this paper, an example of the use of the driver distraction curriculum with an individual offender (a bus driver) has been presented and discussed. Despite legislation banning the use of handheld devices for phone calls and text messages, many drivers do report engaging in these tasks in the car on a daily basis, and smartphone owners are more likely than non-smartphone owners to engage in these types of tasks while driving [9].

Bus drivers are faced with particular challenges, as identified in a recent study reporting a hierarchical task analysis for bus driving [10]. Tasks that bus drivers currently perform while operating buses can be categorised into seven key goal-based categories (preparation tasks; physical vehicle control tasks; cognitive vehicle control tasks; route/timetabling tasks; passenger-related tasks; communication tasks; and personal comfort tasks), and the sources of bus driver distraction affecting the performance of these tasks were identified. Many of the sources of distraction that are representative of violations (i.e., discretionary activity that is in contravention of company policy or road transport law while the vehicle is in motion) are related to use of technologies such as a radio, or a phone, or other nomadic communications device.

In general, what a road user understands about the sensibility and appropriateness of a road rule and what they accept as being sufficiently “safe” for travel, may not be what is desired by

the community. That is, drivers don't necessarily know or fully understand why a particular traffic law is in place ("what's it for"), and drivers can often have a misplaced faith or expectation that the road on which they are driving, their vehicle, and other drivers are all sufficient to provide a "safe" place, seemingly independent of the manner in which they themselves are driving [11]. Some drivers are violators and intend to behave in illegal and non-compliant ways (because they think they won't get caught or they do not care about the consequences arising from being caught), but many people commit driving violations because they apply a rule, but in the wrong context (make a mistake), they forget the rule (a lapse), or they intend to comply but they are distracted, inattentive or not alert (a slip). This cannot, however, be argued when a driver is at work and performing the tasks involved in driving a bus, as workplace policies typically require additional knowledge and understanding of safety practices and impose restrictions on unacceptable behaviour.

The most common policy in place for bus operators and transit is for a blanket ban on the use of nomadic devices (phones, smartphones, etc.), regardless of whether the bus run is with passengers or empty. For many bus companies, the use of a phone or smartphone is prohibited if the driver is sitting in the drivers seat (i.e., to use the phone, the driver must move and sit in a passenger seat or exit the bus completely). A request for advice on fleet management policies, issued via the LinkedIn social media application to a specialist fleet safety discussion group, drew eleven responses. All respondents accepted that an immediate response was needed. There were two clear lines of thought regarding that response: the first, as advocated by most respondents, was a zero tolerance approach proposing the driver's employment should be terminated for use of the smartphone or nomadic device; and the second approach was for a moderated response involving a management and rehabilitation process (presumably, if successful, leading to a resumption of driving, or if the driver is not responsive to the measures taken, then a termination process). A recent review of distracted driving involving commercial vehicles reported similar views [12].

The issues addressed in this paper may have a wider importance. Some Australian States and Territories (e.g., Queensland) permit a "work licence" that allows a driving offender to use a vehicle to travel to work or perform driving at work when otherwise disqualified from operating a vehicle. New South Wales is considering the introduction of a similar driver licensing practice. This paper provides a potential mechanism whereby offenders may become eligible for issue of a "work licence" to drive subsequent to completion of an individual traffic offender program based on their offender category or offence type.

Concluding note

In the example used as the basis for this paper, while the bus driver had not been found guilty of a traffic offence before a Local Court at the time of application to undertake the Blacktown Traffic Offenders Program, the suspension of his authority to drive a public passenger vehicle was considered sufficient to permit his attendance at the program. However, despite putting in place arrangements for the bus driver subject to the case study reported in this paper to attend the Blacktown Traffic Offenders Program, and the development of a driver distraction curriculum with traffic offenders caught using mobile phones, smartphones and similar nomadic communications devices, he has not, to date, entered the program.

References

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Appendix

Topic areas relating to distracted driving identified as relevant for an individualised course of instruction for a bus driver offender observed using a smartphone while driving.

Category

TRAVELLING SAFELY WITHIN THE ROAD TRANSPORT SYSTEM

Learning goal

1. Safe system

LEARNING CONTENT:

Topic areas

1.1 The safe system approach

2. Commentary driving

2.1 Commentary driving

2.2 What is a hazard

2.3 Scanning

2.4 Managing space and time

BUILDING A FOUNDATION

3. Preparing to drive

LEARNING CONTENT:

3.11 Introduction to, and use of, communication controls – mobile phone use for calls or texting (prohibition)

6. Steering

LEARNING CONTENT:

6.7 Hand position on the steering wheel.

8. Scanning

LEARNING CONTENT:

8.1 Scanning the driving environment including: Distance; Surface; Sides; Mirrors; Instruments

TRAFFIC SKILLS

10. Simple Traffic

LEARNING CONTENT:

10.8 Maintain at least three second following distance behind other vehicles.

12. Complex traffic

LEARNING CONTENT:

12.1 Using lanes including meanings of lane markings and types of lanes (bus lanes, transit lanes etc.)

12.6 Other road rules (lane markings, edge lines, advisory signs etc.)

13. Changing lanes

LEARNING CONTENT:

13.1 Meaning of lane lines: safe and legal places to change lanes and overtake stopped vehicles.

13.2 Selecting a safe gap to change lanes.

13.3 Lane changing procedure

13.4 Merging.

13.6 Reducing speed to respond to the changing conditions.

LOW RISK DRIVING

14. Speed management

LEARNING CONTENT:

- 14.1 Speed limits and speed zoning
- 14.2 Excessive and illegal speeds
- 14.3 Set and maintain a three second gap from the vehicle in front.
- 14.4 Increase gap and reduce speed in poor conditions.
- 14.5 Keep a car length from the vehicle in front when stopped behind it.
- 14.6 Reduce speed when vision is limited (crests and curves)
- 14.7 Reduce speed when it is not possible to create space (buffer) from parked or oncoming vehicles.
- 14.8 Maintain traffic flow.

16. Decision making

LEARNING CONTENT:

- 16.3 Lane change decisions.

17. Responding to hazards

LEARNING CONTENT:

- 17.1 Change speed by: setting up the brakes, covering the brakes or easing off (pausing from the accelerator).
- 17.2 Change position by: buffering from the hazard or changing lanes.
- 17.3 Checking your mirrors before changing speed or position.

BUILDING EXPERIENCE

19. Driving in adverse conditions

LEARNING CONTENT:

- 19.3 Increase following distance from three seconds to four or more.
- 19.7 Increased crash avoidance space required in adverse conditions to respond to hazards so set up earlier.
- 19.8 Reduce speed to respond to the changing conditions.

21. City and motorway driving

LEARNING CONTENT:

- 21.2 Driving on motorways
- 21.3 Low risk driving on freeways including increased following distance for speed and avoiding blindspots of other drivers.

UNDERSTANDING YOUR ROLE AND RESPONSIBILITIES AS A DRIVER WITHIN THE ROAD TRANSPORT NETWORK

22. Preparing for solo driving

LEARNING CONTENT:

- 22.10 Issues typically faced when driving for work-related reasons

28. Driver distraction

LEARNING CONTENT:

- 28.1 Attention and inattention
- 28.2 Sources of distraction within a vehicle
- 28.3 Sources of distraction outside a vehicle
- 28.4 Use of in-vehicle communications systems (mobile phones, etc.)
- 28.5 Use of in-vehicle entertainment systems

31. Other drivers and other road users

LEARNING CONTENT:

- 31.8 Bus drivers
- 31.9 School buses

34. Police and other traffic enforcement

LEARNING CONTENT:

- 34.9 Application of occupational health and safety law

35. Motor vehicle and driving offences

LEARNING CONTENT:

- 35.1 "Traffic" offences
- 35.2 Criminal offences relating to motor vehicles
- 35.3 Traffic Infringement Notices (TINs)

- 35.4 Court attendance
- 35.5 Traffic Offender Intervention Program (TOIP)
- 35.6 Repeat offences
- 35.8 Habitual traffic offender
- 35.9 Driver licence sanctions
- 35.10 Vehicle registration sanctions

36. Involvement in a crash

LEARNING CONTENT:

- 36.2 Exchange of driver and vehicle information
- 36.3 First aid – DR ABC
- 36.4 Reporting a crash
- 36.5 Emergency services and their roles
- 36.6 Police investigations
- 36.7 Insurance claims
- 36.8 Extent of crash-related costs that may be incurred

37. Work-related driving

LEARNING CONTENT:

- 37.1 Occupational Health and Safety

41. The future of driving

LEARNING CONTENT:

- 41.1 Developments in road technologies
- 41.2 Developments in vehicle technologies
- 41.3 Developments in behavioural technologies
- 41.4 Road safety strategies and planning
- 41.5 Thinking about how driving and the driving environment may change