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# Cyclist-related content in novice driver education and training

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### ABSTRACT

In Australia, the increasing public profile and policy interest in cycling contrasts with variable cycling participation rates across jurisdictions (Australian Bicycle Council, 2017) and lack of cyclist-specific infrastructure. Cyclists and drivers often share road space, usually without indication from the built environment about how to maximise each other's safety and utility. Yet despite this regular interaction, cyclists are largely absent from the driver licensing process in Australia. That is, novice drivers are not taught how to share the road with cyclists. This case study used a mixed methods approach to examine the cyclist-related content in the Graduated Driver Licensing System (GDLS) in the Australian Capital Territory (ACT). The case study was conducted in four stages: 1) content analysis of all documents used through the GDLS; 2) observations of the *Road Ready* course and learner driver lessons; 3) online survey; and, 4) semi-structured interviews. Cyclists are rarely mentioned in the GDLS in the ACT and references often constructed cyclists as problematic or were based in instructors' personal opinion (rather than scripted responses). Outcomes from this study have directly informed a new vulnerable road user driver licence competency in the ACT and findings include recommendations for greater inclusion of cyclists in the driver licensing system.

#### 1. Introduction

In emerging cycling countries, like Australia, cycling rates vary across jurisdictions (Australian Bicycle Council, 2017) as concerns about safety remain a major and persistent barrier. Cyclists often feel at risk from motorists and cyclist crashes, especially those resulting in serious injuries, are increasing (Henley and Harrison, 2009). Beyond fatality and injury crashes, there are many unreported collisions and near-collisions which impact on cyclists, potential cyclists (Aldred, 2016) and motorists. While changes to the physical road environment are fundamental to a safe cycling environment, such change takes time. In the interim, more is needed to maximise cyclist safety.

Driver education and training is often recommended as one measure to reduce motor vehicle-bicycle crashes and improve relations between cyclists and motorists (Oxley et al., 2004; Daley et al., 2007; Garrard et al., 2010). In many European countries, cyclist-related education and training has been incorporated into the driver licensing process and reinforced through theory or competency testing (OECD, 1998; Genschow et al., 2014). The extent and nature of cyclist-related content instructs drivers on how to interact with cyclists and influences whether and how drivers think about cyclists.

Australian jurisdictions differ in their driver licensing processes and

the information they provide to pre-learner and novice drivers. We know that cyclist-related content varies between each state and territory and, with the exception of the Northern Territory and South Australia, there is no mandated theory or competency testing in relation to cyclists. However, to date, there has not been any investigation into the explicit instructions given to pre-learner and novice drivers about interacting with cyclists or the type of information current drivers believe to be helpful. Further, there are implicit messages about cyclists embedded in driver licensing processes and these messages participate in constructing relations between drivers and cyclists.

#### 1.1. Driver licensing systems: content

There are ongoing discussions about what 'aspiring drivers' should learn, when they should learn it and the level of emphasis placed on particular content. Graduated driver licensing systems (GDL/GDLS) have moved beyond car handling skills to include hazard perception, situation awareness and scanning skills while goal directed education (GDE) systems address each of these skills as well as self-assessment (Hatakka et al., 2002). Content tends to be discussed in general terms such as requiring training in 'situation awareness' rather than that specific situations be included in education and training. Some content

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will be context specific but interactions between diverse roads users, such as cyclists and pedestrians, is a global issue that is largely absent from the driver education and training literature.

Over the past two decades several reviews of novice driver education and training have focused on or at least acknowledged cyclist-related content (OECD, 1998; Jonsson et al., 2003). Northern European countries are notable for their instruction, theory testing and competencies relating to cyclists. The report by the OECD (1998) on all member countries noted instructions for interacting with cyclists (and pedestrians) in a handful of European countries (Great Britain, Finland, Sweden, Denmark and The Netherlands) while a review of driver education and training in Denmark, Finland, Germany, Great Britain, Iceland and Norway also commented on cyclist-related instruction for novice drivers (Jonsson et al., 2003).

Despite some variation most driver education and training in these countries included the need for novice drivers to have an understanding of the physical vulnerability of 'unprotected' road users, to watch out for cyclists (and pedestrians) and to demonstrate care and attention on the road. The traffic situations identified for particular care included passing bicyclists in a safe way, looking out for cyclists when driving next to a cycle lane or when turning left or right especially across a cycle lane. In Great Britain, additional advice included recognising weather and road conditions which create problems for cyclists. Advice in The Netherlands focused on explaining the rationale for specific road rules, social and responsible driver behaviour and identifying places drivers are likely to encounter cyclists. Similar advice has been developed and disseminated by government and non-government organisations in Canada although it targets drivers (and cyclists) generally rather than novice drivers (Winters et al., 2013).

More recently, Genschow et al. (2014) examined novice driver preparation in 38 countries including teaching plans, curricula and testing at national and, where applicable, sub-national levels. Four jurisdictions were mentioned for curriculum and testing related to cyclists and pedestrians: Quebec, Canada, a curriculum component on 'Sharing the road with vulnerable road users (e.g. pedestrians or cyclists)'; Belgium and Germany align theory test contents to the EU directive on risk factors relating to vulnerable road users (VRUs); and, Queensland, Australia references pedestrians and cyclists in relation to hazard perception testing (Genschow et al., 2014: 59, 104). This review foregrounds the lack of consistency in cyclist-related driver education and training while others have noted a complete lack of content (Avenoso and Beckman, 2005) or questioned the evidence base of the advice being disseminated (Winters et al., 2013).

Successive evaluations of Australian novice driver programs (e.g. Zask et al., 2006; Senserrick and Mitchell 2013) have not included any discussion of cyclists or vulnerable road users. A recent review of the *Road Ready* program in the Australian Capital Territory (ACT) was the first to note that there is 'scope within the program to include additional material that addresses vulnerable road users (e.g. pedestrians, motorcyclists)' (CARRS-Q, 2014: 3).

Scant research has been conducted into cycling-related content of driver education and training. The research that has been conducted is largely limited to the specific advice given to novice drivers. It does not provide insight into when and where the advice is given or how it is related to theory and competency testing. Further, existing research does not examine the representation of cyclists, or other road users, in driver education and training materials and the potential impacts of these representations on drivers, cyclists or the broader cultural context. These research questions are especially important for emerging cycling countries like Australia, Canada and the United States.

The aim of this study was to examine the driver licensing process to understand how new drivers are taught (or not taught) about how to drive safely on the road with cyclists. The research focused on the GDLS currently operating in the Australian Capital Territory (ACT). The ACT has a population of 400,000 people (Figure 3) and the highest cycling participation rates in Australia (Australian Bicycle Council, 2017). It has an extensive, long established network of off-road cycling paths and on-road bicycle lanes have been installed more recently. In 2014, the ACT Government conducted an Inquiry into Vulnerable Road Users prompted in part by an increase in the number of crashes involving VRUs and a concern to increase participation in active travel (Australian Capital Territory, 2014).

The current research was a first step in developing cycle-awareness materials and informing VRU testing and competencies for learner drivers. Importantly, it extends existing research by examining not only the advice given, but also when it is given, what additional advice could be given and implicit messaging which accompanies existing advice.

#### 2. Materials and method

This case study of the ACT GDLS used a mixed-methods approach comprising the following four components: content analysis, observations, online survey, and semi-structured interviews.

The GDLS program known as Road Ready is exclusive to the ACT and comprises three stages: pre-learner, learner and provisional driver. It commences with a pre-learner classroom based component delivered either at school or in the community which must be successfully completed before applying for a learner driver licence. The pre-learner component includes broad principles of road safety, an overview of key road rules and instructions on how to interact with other road users (focusing on other motorised road users). To obtain a learner driver licence, individuals must pass a road rules test. Learner drivers practice driving with a fully licensed driver for up to two years. They proceed to the provisional driver stage by completing a competency based training assessment with an accredited driving instructor or by taking a practical driving test with an ACT Government Licence Examiner. The three-year provisional driving stage has some restrictions and drivers must display a provisional licence plate on their cars. Successful completion of the three (3) hour Road Ready Plus workshop allows provisional license holders to drive without displaying a 'P' plate on their vehicle and gives

Table 1	L
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Road ready documents.

Document	Content	Licensing stage
Road Rules Handbook	ACT road rules with diagrams	All
Learner Licence Course [LLC]: Facilitator Guide	Lesson plans for community based classroom Road Ready component	Pre-learner
Teacher Resource Book	Lesson plans for school based classroom Road Ready component	Pre-learner
Student Workbook	Tasks and resources for school based classroom Road Ready component	Pre-learner
Preparing your Pre-learner for Driving	Advice to supervising driver. Pre-learner passenger engaged in 'commentary driving', scanning, observing and commenting on the road environment	Pre-learner
Towards your P's in the ACT	Overview of the 22 competencies learner drivers are required to demonstrate before gaining a Provisional licence	Learner
Learning through Practice	Car handling, identifying and responding to traffic situations	Learner
Supervising your Learner Driver	Advice to supervising driver including initial lessons focus on car handling and manoeuvring and hazard perception	Learner
Road Ready Plus (P Off): Facilitator Guide	Lesson plans for Provisional Driver workshop	Provisional

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