

Educating upwards – empowering children to be custodians of their safety on the road

Venera Owens, Christine McKenna, Damia Makari

National Roads & Motorists Association (NRMA)

Abstract

The *Towards Zero* goal highlights safe attitudes and behaviours. As these are formed in childhood, school programs can play a role in reducing road trauma. The NRMA Science & Road Safety program, launched in 2014 has educated 213,206 children across 523 primary schools. The program which was completed in schools typically over eight weeks was evidence-based, curriculum linked and designed by educators and road safety experts. Education resources were provided to students and teachers, an interactive road safety show was used to deliver memorable learning to students, parents and teachers. Parents were included in the program to deliver whole of school learning.

Background

By the time children commence schooling many have assumed the responsibility of everyday road safety tasks such as putting on a seatbelt, exiting a car and fitting a bike helmet.

Concerned by data that suggested 50% of children were incorrectly restrained (Brown, Hatfield, Du, Finch & Bilston, 2010) and that half of young cyclists aged 0-19 years involved in a crash were not wearing a helmet (Bambach, Mitchell, Grzebieta & Olivier, 2013), the NRMA created a road safety program for primary school students. The program's objectives were to increase students' ability to discriminate between safe and unsafe behaviours, to know and apply safe strategies and to be empowered to speak up when they saw unsafe behavior amongst family and friends.

The program

The NRMA Science & Road Safety program was aligned to best practice in school road safety education (Principles for School Road Safety Education: Government of Western Australia, 2009). It featured elongated learning, educator created student workbooks for use across the program, teacher education resources, interactive road safety shows that presented students with real world scenarios they could relate to, pre and post-program student surveys which teachers' administered during class time and a teacher online evaluation which was used to refine the program as it developed. Parents were integrated into the program using a variety of means to build a whole of school road safety program.

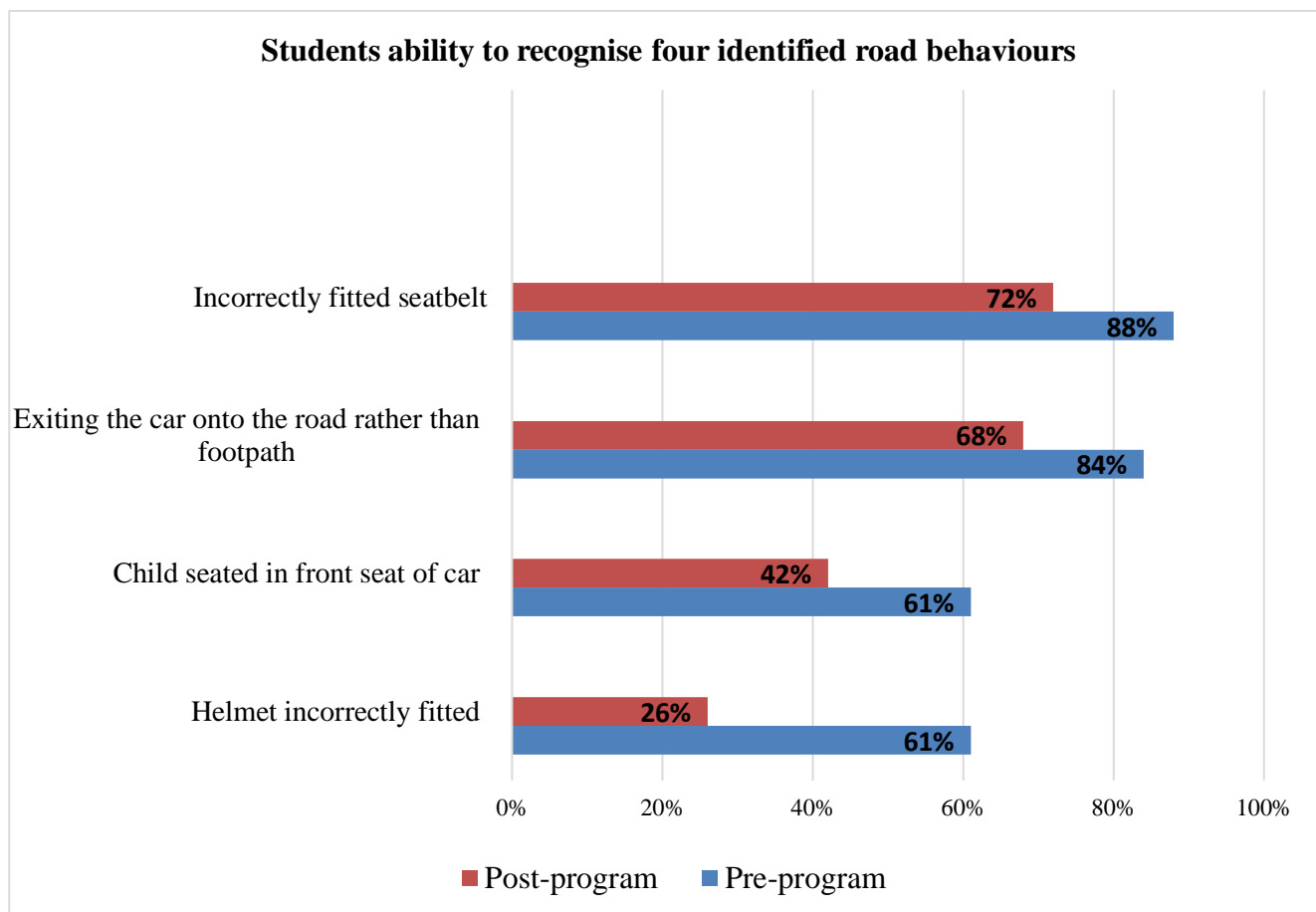
The program focused on teaching students how to identify unsafe behaviours and taught them safe strategies to implement on the road. A key element was the explicit teaching of how to correctly fit seatbelts and bike helmets. The road safety shows enhanced the students' visual learning and helped them to remember and embed the road safety messages. The show's presenters were trained educators who used science demonstrations to help children understand the forces acting on them in motion.

Evaluation and Results

The program ran from 2014 to 2017 and educated 213,206 students across 523 schools in New South Wales and the Australian Capital Territory.

Four behaviours were identified as impacting on children’s safety (Figure 1). Analysis of pre (n = 26,312) and post (n = 7,676) student data collected online from 2015 to 2017 found an average overall percentage increase in their ability to identify safe behaviours of 56% across the four behaviours.

Figure 1: Changes in students’ knowledge before and after completing the program



Additional data was collected from 1,436 students from August to December 2017 indicating that 61% of students had applied a safety strategy and 50% had shared a safety strategy with their family or friends.

Data collected from 444 teachers in the period August 2016 to December 2017 found that the program had increased teachers’ knowledge, skills and confidence to teach road safety (Table 1).

Table 1. Teacher online feedback survey administered after the program

Question 1: As a result of this program do you as a teacher have more...	Yes
• knowledge about child road safety?	89%
• knowledge about the science behind road safety?	91%
• have more skills in teaching road safety in the classroom?	90%
• confidence in explaining the WHAT, HOW and WHY of road safety to children than before?	92%

Conclusion

The NRMA Science & Road Safety program met its objectives to increase students’ ability to recognise unsafe behaviours, to apply safe strategies and to share their knowledge with others. In

addition, the program helped teachers, who are central to quality school road safety education increase their knowledge and skills. NRMA will continue to deliver this program within schools in an effort to reduce the road toll.

References

- Bambach, M.R., Mitchell, R., Grzebieta, R., & Olivier, J. (2013). The effectiveness of helmets in bicycle collisions with motor vehicles: A case-control study. *Accident Analysis and Prevention*, 53C, 78-88.
- Brown, J., Hatfield, J., Du, W., Finch, C. F., & Bilston, L. E. (2010). The characteristics of incorrect restraint use among children traveling in cars in New South Wales, Australia. *Traffic Injury Prevention*, 11 (4), 391-398.
- Government of Western Australia. (2009). Principles for School Road Safety Education: A Research Summary. Western Australia: Author.