Avoiding the TSE resource stagnation

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Abstract

The launch of a new resource for road safety education usually occurs as a result of the need to update existing resources, often seen to be out-of-date, or to reflect the introduction of new curriculum.

The development, production and implementation of new resources come at great expense to road safety and education practitioners, particularly knowing their life-span can be limited and subject to changing government policy and ongoing educational reform.

Victoria has taken a new approach to resource development. Traffic safety education resources and programs are developed on a 'core' and 'enrichment' model. Core resources provide schools with the essential learning (minimum amount) that students need at given stages of childhood development, matched with exposure to traffic and trauma outcomes. They also focuses on parent engagement at these times.

New and existing resources and programs are linked to the core program to enrich learning in any given area of traffic safety education.

This paper will describe the research underpinning the new approach, the steps taken to develop a new resource for secondary schools based on behaviour change principles, the actions being taken to incrementally enrich the resource to provide it with longer currency and higher levels of relevancy to both teachers and students, and preliminary evaluation outcomes.

Keywords

Traffic safety education, resource development, school resources

Introduction

Victoria has taken a new approach to resource development. Traffic safety education resources and programs are developed on a 'core and enrichment' model. Core resources provide schools with the essential learning (minimum amount) that students need at given stages of childhood development, matched with a likely exposure to traffic and trauma outcomes. The core resources also focus on parent engagement at these stages. They are developed in partnership with key road safety agencies and are focus at the stages of pre-school, early primary school, transition from primary to secondary school and secondary school at Year 10.

Other new and existing resources and programs are linked to the core program to enrich learning at other stages of childhood development and in any given area of traffic safety education.

As an example of the approach to TSE in Victoria, this paper describes the research underpinning the new approach, the steps taken to develop a new resource for secondary schools based on behaviour change principles, the actions being taken by the TAC to incrementally enrich the resource to provide it with longer currency and higher levels of relevancy to both teachers and students, and preliminary evaluation outcomes.

The context

Victoria's road safety strategy, *arrive alive 2008-2017,* aims to achieve reductions in road fatalities and serious injuries by 30% through the provision of the safest road system possible through engineering, enforcement and education.

Victoria's approach to traffic safety education is partnership based. Underpinning the approach is the premise that resource and program development is based on evidence and sound educational principles.

The aim of traffic safety education in Victoria is to support children and young people to develop knowledge, skills, attitudes and behaviours conducive to safe road use.

In providing school-based resources and programs, along with appropriate levels of professional development for teachers and others in the community, traffic safety education enables children and young people to:

- acquire knowledge of the traffic environment
- develop appropriate skills to manage the risks associated with being in traffic
- develop safe behaviours and responsible attitudes.

The key traffic safety education partners in Victoria include the Transport Accident Commission (TAC), VicRoads, Department of Education and Early Childhood Development (DEECD), Department of Transport, Department of Justice, the RACV and Metlink. Representatives of each organisation participate in the Traffic Safety Education Reference Group, which is chaired by VicRoads. The group's activities respond to the TSE Directions and Action Plan under Victoria's *arrive alive* road safety strategy, specifically in the strategy's key focus area of safer road users.

There are almost 3,000 schools in Victoria. Just over 1,600 are primary, 360 are secondary and 205 are P-12. A further 102 are language or special education schools. Victorian government schools account for almost 70 percent of all schools. The balance is made up of Catholic and independent schools.

Of the 565 secondary schools in Victoria, 308 (almost 55 percent) are Victorian government secondary and P-12 schools.

Victoria introduced a new curriculum framework at the beginning of 2006, the Victorian Essentials Learning Standards (VELS), which commences with Level 1 at Prep and culminates in Level 6, which is taught at Years 9 and 10. Students in Years 11 and 12 undertake either the Victorian Certificate of Education (VCE) or the Victorian Certificate of Applied Learning (VCAL).

In 2008, 66,710 students are enrolled at Year 9 and 64,100 students are enrolled at Year 10 in Victoria. Victorian government schools accounted for almost 60% of all students in Years 9 and 10.

Teaching of traffic safety education is not a requirement of the Victorian Department of Education and Early Childhood Development (DEECD).

The recent research

In 2004, on behalf of the Victorian traffic safety education partners, the TAC commissioned Barry Elliott (2004) to undertake a review of the best practice delivery of traffic safety education with a view to informing future requirements and delivery strategies in the context of Victoria's road safety strategy, *arrive alive.*

This was particularly relevant given the first stage of the road safety strategy, *arrive alive 2002-2007!,* was well into action and that many of the resources and programs developed and promoted by the traffic safety education partners were approaching ten years of age without significant review. Further, the Victorian Government had announced the new school curriculum, the Victorian Essential Learning Standards (VELS).

Essentially, Elliott (2004) conducted an international literature review along with a comprehensive examination of the existing Victorian traffic safety education framework; evaluations of traffic safety education delivery; key research on children's learning and development; and the key road safety issues and trauma outcomes for children and young people.

Elliott (2004) recommended a new approach for Victoria, based on Pareto's 80:20 principle. 'From our perspective, the *80/20 Principle* suggests that we might be able to accomplish most of what we want in TSE, perhaps up to 80 percent of our target – with only a modest amount of effort or resources – perhaps with only 20 percent of effort so long as we target where we put our 20 percent of effort/resources. This means avoiding the natural temptation to inject equal amounts of money, resources, time into every aspect of TSE and every child in every year in primary and secondary school.

'If we believe that the *80:20 Principle* is a more efficient philosophy of resource allocation (and most businesses do) then the essential task facing the development of a strategy for TSE in a limited or decreasing budget environment is to prioritise and focus our resources in such a way to achieve a better result than trying to reach every child every year with TSE.'

Elliott's recommendation of implementing a program based on this approach was supported by the road trauma statistics of children and young people. 'The 80:20 Principle emerges clearly when one examines the accident statistics, e.g.

- Boys are grossly over-represented in a number of categories but exposure may account for this situation (e.g. Ward et al [1994] in the UK found that whilst boys aged 5-15 were 1 ½ times more at risk than girls. When exposure is taken into consideration boys and girls aged 5-9 have similar casually rates for kilometres walked. However girls aged 10-15 years have the highest casualty rate of any age group).
- 17-18 year olds (in two years of life) account for as many fatalities as the 0-16 years age group (in sixteen years of life).

The 80:20 Principle would also suggest focussing resources where they can have the greatest influence in developing skills and safe attitudes rather than devoting resources to idealistic or difficult goals.'

A case for 'core and enrichment', a new approach to TSE

Ideally traffic safety education should be delivered sequentially and match children's stages of physical and cognitive development. Until recently in Victoria, this equated to targeting all children in each year level of school, with a multitude of traffic safety education resources developed and promoted by a range of organisations with an interest in road safety. Agencies 'competed' for TSE space in schools and schools responded that their curriculum was already crowded.

According to Elliott (2004), 'from an equity perspective we desire to reach every child with TSE but do we need to reach them every year. Further, if West et al (1999) are correct, that the major cause of children's road accidents is inadequate socialisation, not lack of skills, and there is some evidence that they are, then maybe we should forgo some equity and identify and then concentrate on these children most likely to be involved in road trauma.

Based on Elliott's (2004) review, Victoria has taken a new approach to traffic safety education, including resource development. Taylor (2005) prepared an implementation plan resulting in a 'core and enrichment' delivery model.

Taylor recommended that traffic safety education agencies review the need to achieve a sequential, age graded and on-going experience for Victorian school children from K to 12. Instead a targeted approach was proposed to:

*'Enable **a minimum level of traffic safety education** to be provided for all kindergarten children, junior year primary school children (Prep to Year 2), children transiting from primary to secondary school (Years 6 & 7) and all Year 10 secondary school students'.*

Core resources provide schools with the essential learning (minimum amount) that students need at given stages of childhood development, matched with exposure to traffic and trauma outcomes. It also focuses on parent engagement at these stages.

As a result, the core and enrichment model has resulted in:

- recognition that the VicRoads program *Starting Out Safely* is the core resource for pre-school and kindergarten
- identification of the need for a new resource for primary schools, *Kids on the Move*, focuses on children in Prep to Year 2 when they are commencing school and establishing learning patterns, and at Year 6 when they transition to secondary school.
- identification of the need for a new secondary school resource, *Traffic Safety Essentials,* which focuses on pre-licence education at Year 10.

The challenge at secondary school level

Elliott (2004) reported in his review that teaching approaches for Year 10 students need to be developed to meet the learning styles of young adults. 'Year 10 is a unique window of opportunity because:

- before year 10, students are not really interested in road safety and "know it all" - interest is largely focussed on gaining a licence
- beyond year 10, the students tend to be a far less homogeneous target group and break into a myriad of strands including discontinuing formal schooling
- year 10 is when students are ready and keen because they dream of their freedom which is right at hand – getting a licence in the next 2 years is a reality and salient
- teachers and principals believe students are ready, tuned in, and motivated because of the significance to them of gaining a licence
- at this point in time students are more willing to listen and learn about matters pertaining to road safety and especially a motor vehicle because it is to become a significant aspect of their lives
- many students in year 10 are eagerly awaiting the time when they can get their learner's permit
- by year 10 they are keen to have an educational experience which is more focussed on their immediate circumstances and is different to the last few years of secondary school
- teachers and principals believe students in year 10 are ready, keen and need TSE as a preparation for their up and coming new role as drivers
- year 10 reaches most students, unlike years 11 and 12.'

Taylor (2005) commented that, 'much of the research surrounding traffic safety education has identified that activities and experience in the real road environment are important elements in establishing understanding of risk, and applying and practising safe behaviours'.

Further, Taylor stated that, 'for the pre-driver group of adolescents it is clear that schools are not appropriate as a venue for driver training and driving practice which requires participation by parents and the driving instruction industry. In this area schools can provide understanding amongst students of safe driving behaviours, analysis of hazards and exposure to issues which will increase the crash risk for the young driver.'

Based on Elliott's (2004) review and Taylor's (2005) recommendation for a 'core and enrichment' model, it was clear in Victoria that a new resource needed to be developed. Given the recent introduction of the new curriculum, the Victoria Essential Learning Standards, and the announcement of the new graduated licensing measures, the Victorian TSE partners took the opportunity to develop a new core TSE resource for secondary schools that focused on the key window of opportunity at Year 10.

Discussion - developing a new TSE resource with currency in mind

On the back of the work of Elliott 2004 and Taylor in 2005, the TAC on behalf of the Victorian TSE partners, funded the development of a new resource for primary schools, *Kids on the move*. As the 'core' primary school resource, it focuses only on key traffic safety education for children in Prep to Year 2 and Year 6 and their families.

This new resource commenced implementation in Victorian schools in 2006 using a professional development approach targeting Principals and teachers. The resource also provided teachers with a rationale for implementing a TSE program and information to assist them in identifying and discerning good practice activities.

Based on the success of the primary school resource development and implementation, in 2007 the TAC funded the development of the new secondary school resource, *Traffic Safety Essentials*. The resource focuses on the key road safety issues for young people at the pre-licence stage and is promoted to teachers of Year 10 students.

The new resource was developed to meet several objectives:

- provision of a minimum amount of TSE at Year 10
- reflect the Victorian Essential Learning Standards
- address key young driver safety issues that underpinned Victoria's new Graduated Licensing System
- provide teachers with information on the 'core and enrichment' approach to enable an understanding of how Victoria's TSE strategy was structured
- provide teachers with information on what is best practice TSE and why
- identify and refer schools to other enrichment programs and resources offered by the Victorian TSE partners and an understanding of where they fitted in the strategy's delivery model.

In developing the new resource, the contractors consulted with the key road safety partners, taking particular note of the key issues related to the new Graduated Licensing System.

The resource comprises six units that includes background information for teachers on the key road safety issue, underpinning research where required to demonstrate validity and definition of key terms and complex concepts related to road safety. The activities are structured in three sections that move students through a process based around behaviour change theories and research (Fishbein 2003, Dunn 2003).

The three sections are 'problem recognition', 'problem solving' and 'taking action'. In 'problem recognition', students explore the issues by undertaking research; such as by using the Internet, conducting experiments or carrying out surveys. This is designed to provide them with an understanding of why, for example, speed is linked to the severity of a crash. In 'problem solving' they consider community responses to the issue in Victoria and elsewhere in Australia and/or internationally. In 'taking action' they are challenged to think about what it means for them and their own behaviour, now and in the future, and to consider strategies to avoid or minimise risk.

The units have been developed to be able to be delivered in accordance with the principles of learning and teaching, which are fundamental to the new Victorian Essential Learning Standards (VELS) and which are designed to develop skills, knowledge and behaviours to enable positive contribution to society. In doing so, the activities address standards across the Domains and Dimensions of the curriculum (key learning areas) including, Science, Physics, Civics, Health and Personal Development, as well as in areas of thinking, information technology and communication.

In focusing on the core TSE for Year 10 students, the resource importantly provides information and guidance to schools on 'enrichment' programs and activities that could be delivered to enhance the learning within the structure of the strategy.

So, how has the resource been developed to avoid becoming stagnant and dated within three to five years?

Firstly, the resource provides the essential TSE relevant to young people in Year 10. It does not attempt to deliver anything beyond the key road safety issues for young drivers and passengers. Accordingly, the resource was cost effective to develop and produce (approximately $80,000), is compact, easy to use and follows a set format to assist delivery. This provides an opportunity for enrichment resources and programs to 'fill gaps' not addressed by *Traffic Safety Essentials* such as public transport and cycling.

This also enables room for the development of additional enrichment resources and programs to address emerging road safety issues or to address changes in the curriculum and priorities of schools.

For example, recently the TAC has developed online TSE materials to reflect the standards for VELS Level 6 (Years 9 and 10) in English, Health and Civics. Similarly, new materials for VCE Health and updated materials for VCE Legal Studies have also been developed as enrichment resources to the core resource.

All of the online materials utilise the TAC's *Muck up Day* DVD documentary, developed in 2001 and which most secondary schools have. Many also utilise the *Make a film. Make a difference.* short films, which have been produced as part of the TAC competition for young film makers. In promoting these enrichment materials to schools, teachers are provided with information on the 'core and enrichment' approach and how the activities are designed to enhance the *Traffic Safety Essentials* units.

Secondly, the implementation strategy included a comprehensive professional development program for teachers conducted by the Department of Education and Early Childhood Development Senior Program Officers (TSE). The program provides schools with a clear understanding of the key road safety issues and the best practice approaches for TSE based on research and evidence. This provides teachers with confidence to deliver the resource to meet its objectives.

The Senior Program Officers are part-time senior educators, often retired principals, who each have responsibility for a DEECD region in which they work with schools to achieve implementation targets for *Traffic Safety Essentials* and other activities for the TSE partners. Based on Senior Program Officer targets, the TAC and DEECD expect that 50% of secondary schools will have implemented *Traffic Safety Essentials* by the end of 2008.

The Senior Program Officers use a range of approaches to provide schools with information on the TSE strategy, the research underpinning the resources and activities, and how and where enrichment programs fit within the structure of the approach. Some approaches to implementation have involved targeting principal and curriculum networks across a city or municipality, attending individual or school cluster information sessions and participating in region-wide professional learning opportunities delivered by DEECD.

Finally, commitment to the TSE approach by the key traffic safety education partners in Victoria ensures that core and enrichment resources are developed through consultation and where needs emerge. This significantly reduces the chance of schools being bombarded by a range of resources that to all intents and purposes are trying to achieve the same outcome. Teachers develop a greater understanding of what they should be teaching, at what stage and with which resources.

So, what TSE is happening in schools now?

In the school census of 2007, the Victorian Department of Education and Early Childhood Development reported that 88 per cent of all Victorian government schools (primary and secondary) implemented traffic safety education in the curriculum. The school census questions reflect the core TSE focus recommended by Taylor; Prep to Year 2, Year 6 and Year 10.

At Years 9 and 10 in government secondary schools, the rate of TSE varied from 32 per cent for public transport education to 65 per cent for pre-licence education. This intense delivery resonates with Elliott's (2004) views, occurring at the time when many young people turn 16 years of age and become eligible for the Learner driver permit. It is also the last year of compulsory education in Victoria.

Evaluating the implementation of *Traffic Safety Essentials*

As noted earlier, the 2007 DEECD School Census reported that 65% of Victorian government schools implemented pre-licence education in their curriculum. What isn't known is the quantity or quality.

To verify the census data, the TAC with DEECD is currently undertaking a survey in a random sample of schools, which are not yet using the new *Traffic Safety Essentials* resource, to gain a better understanding of school pre-licence education activities and programs. Results of this survey will be presented at the conference.

The Senior Program Officers (TSE) have reported that in the first two terms in 2008, *Traffic Safety Essentials* has been implemented in 34% of all Victorian secondary schools (government and non-government). What isn't known is the level of implementation and whether some units or activities are favoured more than others.

To gain an understanding of the extent to which *Traffic Safety Essentials* is being implemented, an in-depth qualitative study of a sample of secondary schools is planned for late 2008 and early 2009. The findings of this study, along with responses gained from the current survey, will provide the TAC and its TSE partners with information to inform future delivery strategies and development of additional enrichment materials.

Conclusion

One of the greatest risks in developing an implementing a new TSE resource is that it becomes stagnant and dated in a relatively short period of time, given the required investment. The approach Victoria has taken to TSE is a 'core and enrichment' model where resources are developed that target the key road safety issues for children and young people consistent with their stage of development and likely exposure to the road system.

In doing so, the investment usually required is limited and partners have significant opportunity to develop resources that enrich the core learning or fill gaps to address emerging issues or changes in school priorities such as a new curriculum.

An essential component of the Victorian model is to take an evidence-based approach, where possible, and ensuring that further research is conducted to evaluate the effectiveness of the 'core and enrichment' model in facilitating the teaching of TSE in schools.

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