Expanding Young People's Horizons as Leaders of Change in their Community: How Could Critical Pedagogy Improve Australasian Transport Safety Education?

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Abstract

Transport safety education programs in Australasia using traditional pedagogical approaches continue to exist despite the lack of evidence of their effectiveness in improving safety learning outcomes. Top down traditional approaches promoting a singular view of 'proper' attitudes and behaviours are didactic and position young people as needing to be controlled (Kincheloe, 2004). Embedding critical pedagogical approaches within transport safety education could reposition young people as the experts who know how to make a difference to their own and others' safety. Given critical and creative thinking opportunities, young people could produce transport safety knowledge for their wider community. This paper critically analyses traditional and critical pedagogical approaches used in rail and road safety education program design in Australasia, and explores why a shift towards critical pedagogy could enable young people to drive change and make real-world contributions to improving safety on our roads, and near train and tram tracks.

Defining transport safety education and pedagogy

Safety education is an injury prevention activity which "can be targeted at whole populations or groups in particular settings or at high risk individuals" (Mulvaney, Watson & Errington, 2012). In a review of safety education in the United Kingdom, McWhirter (2008) defines safety education as "…all education interventions intended to prevent accidents and injuries [accidental injury] for 5-16 year olds. It also includes aspects of personal safety, such as the prevention of bullying, physical aggression, and child abuse" (p. 2-3). McWhirter also includes risk education within this definition of safety education, which offers learners opportunities "to recognise hazards, assess risk and take steps to manage or control risk" (McWhirter, 2008). In an Australian review of safety education literature Saltmarsh (2010) noted a focus on the safety of individuals and safety prevention strategies. She categorised safety education programs as a strategy "for accident/injury prevention, including issues pertaining to teaching various aspects of safety" (Saltmarsh, 2010, p. 289).

Transport safety education in Australasia (Australia and New Zealand), as a type of safety education, exists to contribute to the prevention of accidents or accidental injury in traffic and public transport infrastructure and environments such as roads; footpaths; pedestrian crossings; tram tracks; railway tracks; level crossings; and pedestrian level crossings. It involves education about safety around private and public transport modes, such as on foot (pedestrians), bicycles, cars, trains, trams, and buses. Transport safety education in this paper refers to programs run for, in or by schools; as distinct from awareness campaigns, such as advertisement, video, poster and social media campaigns, designed to increase public awareness about a particular aspect of transport safety.

The success of any education effort is dependent on pedagogy, the term used to describe the process of teaching and learning. Alexander (2008) defines pedagogy as when a teacher engages "with three distinct but related domains of ideas and values" (p. 48) including "what is to be taught, by whom and how" (p. 48): children, learning, teaching and the curriculum; the institutional and legal context in which it takes place: school and policy; and its purposes and values: community, culture and self (p. 48).

Traditional pedagogy and its history in transport safety education

Traditional pedagogy is an approach to teaching and learning where knowledge or information is imparted from the teacher to the learner using one way communication methods. It is also known as transmission pedagogy (Cope, 2014) or didactic pedagogy (Cope, 2014), referring to its top-down nature of traditional direct instruction (Alexander, 2008). Traditional pedagogy does not allow creative or critical thinking by either teachers or students. Students do not have the ability to question and enquire about the subject matter: instead they are told the facts as a set of right versus wrong truths by a person or institution. Kincheloe (2004) argues traditional or positivist pedagogues believe there is one way to teach; that all knowledge is scientific and can be measured; that there is one true reality; and that the role of an educator is to deliver the information about that reality to students (Kincheloe, 2004).

Many transport safety education programs across Australasia have existed for decades using traditional pedagogical approaches; even today programs using traditional pedagogy continue to be developed and funded. In traditional pedagogy, the physical space in which the learning takes place is set up in a way which positions the teacher at the front of the room, so they can 'give out' the knowledge (Cope, 2014). Students face the front, and there is no interaction between peers (Cope, 2014).

In transport education programs using traditional pedagogy, representatives of industry based road or rail organisations; law enforcement officers such as police; or volunteer community groups, deliver transport safety messages to students. They often use presentation style delivery methods, either in a one-off school visit or excursion. The presentation is delivered by a guest presenter from the organisation in groups ranging from one class (up to approximately 30 students) in a classroom to a whole school (sometimes more than one thousand students) in an auditorium or assembly area. Knowledge is delivered in various passive ways, with presentations sometimes including videos or in-person testimonies from victims; visual presentation slides; or the use of puppets. Some examples of these approaches include the 'Streets Ahead' program run by the Royal Automotive Club of Queensland (RACQ, n.d.); South Australia Police's road safety education program (South Australia Police, n.d.); Australian Federal Police's Constable Kenny program in the Australian Capital Territory (Australian Federal Police, n.d.); Queensland Rail's RailSmart Community Education Program (Queensland Rail, n.d.); Public Transport Authority of Western Australia's Right Track Program session 'Jonathan's Story' (Government of Western Australia Public Transport Authority, n.d.); Aurizon's 'Barry the Ball' program (Aurizon, n.d.); and Road Safety Education (RSE) Limited's RYDA program in both Australia and New Zealand (RSE Limited, n.d.; n.d.-b).

It should be noted that there is some differentiation in the content and educational value of the aforementioned programs, however overall these programs use traditional pedagogical methods and at their core simply deliver information regarding transport safety to young people or students. "Interactive presentations" (Aurizon, n.d.), where the presenter asks participants questions within a presentation, do not create genuine opportunities for creative or critical thinking, and do not allow students to think for themselves or offer an alternative way of thinking to the reality presented by the person out the front of the classroom. Neither do "interactive sessions" which "balance [the skill of controlling and manoeuvring a vehicle] with the skill of critical thinking" (RSE Limited, n.d.; n.d.-b): whilst the RYDA program does incorporate group discussions between participants in some sessions, interactions between students are at a surface level, and are done during a time limited session. Students are not given an opportunity to create their own meaning and therefore stretch their learning from surface level to deep level, or use critical or creative thinking practices. According to the 'Critical and Creative Thinking Learning Continuum' published by the Australian Curriculum Assessment and Reporting Authority (ACARA), this involves a four step complex process of inquiring, generating ideas, reflection and analysis for Year 10 students and above

(ACARA, n.d.); perhaps much more complex a process than can be achieved in a short session on a single day of learning.

Research on road safety education programs (Masten & Peck, 2004) and drug education programs (Botvin, 2000) have shown approaches which give information, especially when used alone, are not effective in changing or influencing behaviour. Despite this, the language used in marketing materials for some programs using didactic approaches convey an expectation that an increase in knowledge will lead to an increase in appropriate and safe behaviour. Queensland Rail "aims to positively influence the attitudes and behaviours of school students and communities to act safely at railway stations and level crossings" (Queensland Rail, n.d.). Jonathan Beninca tells his story "in the hopes of saving people from making dangerous choices and ending up a double amputee like him, or worse" (Government of Western Australia Public Transport Authority, n.d.). Kincheloe criticises top down didactic approaches as "mere window dressing, a public relations campaign for particular political operatives." (2004, p. 22).

Transport safety education programs which use a traditional pedagogical approach are not designed based on extant evidence of how young people most effectively learn about safety, such as the evidence synthesised by the Government of Western Australia (2009; 2009a); Harris (n.d.); and the New Zealand Transport Agency (NZTA) (n.d.-a). They are also not likely to have an effect on the behaviour of young people that are likely to take risks. Reyna and Farley (2006) showed in their research that regardless of the fact that high risk adolescents are already aware of their risk when engaged in higher-risk activities, they still engage in those behaviours. This shows that providing this particular group with information about the risks will not prevent them from doing risky behaviours. Behaviour change is so complex that any expectations of behaviour change for a safety education program are probably too high (Twisk, Vlakveld, Commandeur, Shope & Kok, 2014). A safety education program may actually do more harm than good if it creates "a false sense of safety, overconfidence, denial or rejection" (Twisk et al, 2014, p. 60).

International efforts to evaluate road safety education programs in terms of their effectiveness are well documented (Assailly, 2015; Dragutinovic & Twisk, 2006; Twisk et al, 2014). Evaluations of transport safety education programs using traditional pedagogy in Australasia at both a program and process level are not fully documented publically, if carried out at all, particularly in rail safety education. Therefore there is no evidence available to demonstrate that using top-down didactic approaches positively change knowledge, skills, attitudes or behaviour; or indeed have any positive impact on student learning in transport safety.

Moving away from traditional pedagogy in transport safety education: Best practice model development

Transport safety education is evolving with advances in the understanding of pedagogy and the important role it plays in ensuring education efforts are effective for the intended audience. In the last decade there has been a shift from an emphasis on behaviour change towards a focus on developing knowledge, skills and understanding of transport safety, to enable young people to make safe choices. SDERA's development of the *16 Principles for School Road Safety Education* (Government of Western Australia, 2009) and its research summary (Government of Western Australia, 2009a); as well as the subsequent Victorian and New Zealand summaries of research for "effective community and school based road safety for young people" (Harris, n.d.; NZTA, n.d.-a) have created a comprehensive body of evidence to enable program developers and policymakers to create new programs or improve existing programs to ensure these best practice principles are embedded in transport safety education program materials.

Consideration needs to be made to the evidence and how it applies to transport safety education policy and program implementation, particularly those programs which are developed and run by

community or industry bodies. When 'safety education' is used in, by and for schools, the focus needs to move away from facilitators pointing out risks and consequences, with learners subsequently assessing these risks and their associated consequences. Better outcomes may be achieved if the focus was more on curriculum based learning (Government of Western Australia, 2009), where teachers can support learners to use their own unique strengths, and develop the knowledge and skills they require to make safe choices (ACARA, 2016). If young people were viewed less as a 'safety problem' and more as 'agents of safety change', could students identify their own personal and community strengths and resources, to improve transport safety for themselves and others in their own communities?

In their fact sheet synthesising an in-depth literature review, the NZTA emphasises that transport safety education should enable young people to use their learning to make a difference for themselves and others (NZTA, n.d.-a). In light of this evidence, the NZTA has consequently designed a series of curriculum based learning resources available on their 'Education Portal' (NZTA 2011; 2013; n.d.-b). The NZTA appear to have recognised something that few other government organisations or industry bodies have achieved to date: that transport safety education needs to enable young people themselves to apply creative and critical thinking, and by doing so they can contribute to solving transport safety issues which exist in their local community. In New Zealand, students as young as five are positioned as the producers of knowledge and the drivers of social change in their own community; whilst the resources have not yet been formally evaluated, case studies reveal young people themselves are making a tangible difference to their own and others' safety in their communities as a result of participating in NZTA's lessons (New Zealand Curriculum Online, n.d.).

In Australia, the TrackSAFE Foundation's (TrackSAFE's) rail safety education program 'TrackSAFE Education' has been designed using the same principles, using in the NZTA Education Portal as its benchmark (TrackSAFE, n.d.). Whilst also yet to be evaluated, at their core the resources offer learning intentions with tangible opportunities for students to think critically and creatively (TrackSAFE, n.d.-a.), and for young people to use their learning to make a difference for themselves and others, a best-practice approach mentioned in the literature (NZTA, n.d.-a).

With this in mind, could other transport safety education programs be developed to even further improve the learning intentions? A different pedagogical approach is needed to change the power dynamics and enable students to become critical and creative thinkers and *producers* of knowledge, to solve complex transport safety problems. Critical pedagogy might be one approach to help facilitate this change in Australasian transport safety education.

What is critical pedagogy?

Scholars of critical pedagogy such as Paulo Freire and Henry Giroux challenged the status quo when it came to thinking about pedagogy, the way schools are influenced by power, and the concept of knowledge (Kincheloe, 2004). These scholars were influenced by Foucault and his notions of power and discourse (Kincheloe, 2004). In his comprehensive book on critical pedagogy, Kincheloe (2004) draws on Freire and Giroux's works, describing fifteen themes or "central characteristics" (p. 5) of critical pedagogy as a complex definition. In this definition, Kincheloe describes the enormous undertaking teachers have: more than simply being "managers of the predetermined knowledge of dominant cultural power" (2004, p. 5); and more than simply learning the requirements of the curriculum and a few techniques to appease different learning styles. He stresses that critical pedagogy is grounded in "social, cultural, cognitive, economic and political contexts" (p. 6) which cannot be ignored when teaching and learning occurs. A teacher who is a 'critical pedagogue' has a responsibility to rethink the fundamental purpose for which education exists, including power dynamics; how students relate to knowledge; what humans are capable of;

and the relationship between learners and teachers, so that teaching and learning "facilitates the empowerment of all students" (Kincheloe, 2004, p. 4-6).

Critical pedagogues create meaning for students and investigate meanings offered up by others: there is no final or 'correct' meaning outside of the historical and social context (Kincheloe, 2004). They use teaching methods specifically designed for the unique needs of the students they are teaching. They acknowledge other forces beyond their control, for example family situations or other pressures which might affect a student's learning capability at a given time (Kincheloe 2004).

Kincheloe (2004) argues that in a critical pedagogy it is important to be mindful of the context within which the educational activity occurs. When a critical teacher unpacks "the contexts and relationships connecting the learner, culture, teaching, knowledge production and curriculum" (Kincheloe, 2004, p. 32), they are able to understand complexity and view learning as a dynamic, changing, and unpredictable process rather than applying a 'how to' model of learning and teaching. He says when complex systems interact with many contexts, creative innovation can occur, and in that sense context might be more significant than content (Kincheloe, 2004).

Freire's concept of "praxis" explains the importance of context in critical pedagogy: "It is not enough for people to come together in dialogue in order to gain knowledge of their social reality. They must act together upon their environment in order to critically reflect upon their reality and so transform it through further action and critical reflection." (Freire Institute, n.d.). Therefore encouraging critical reflection, or critical thinking, is a key feature of a critical pedagogy. Hipkins, Bolstad, Boyd, and McDowell (2014) ask, "How often does a simple right-or-wrong judgement….serve to conceal and discourage more insightful critical thinking about how the world actually works? (p. 59). Indeed, by imposing right or wrong thinking, are program owners and designers impeding any chances of improving transport safety for young people?

How transport safety education programs look when they use a critical pedagogy approach

Critical pedagogy has not yet been specifically implemented as a pedagogical approach in transport safety education programs in Australasia. However, existing research about critical pedagogy suggests that, by its very nature, this approach could improve transport safety learning outcomes for students if it were to be applied to transport safety education programs. The NZTA and TrackSAFE programs use a number of educational methods which align with critical pedagogy and the research behind the effectiveness of this approach in education generally. Two of the key underlying principles of critical pedagogy are discussed here: that students learn most effectively through producing their own knowledge; and that when students are respected and empowered, they are better positioned to use their expertise for change.

Students learn to be the teacher, pose problems and produce their own knowledge

Hattie (2009), after reviewing over eight hundred meta-analyses relating to student achievement indicates that, "the biggest effects on student learning occur when teachers become learners of their own teaching, and when students become their own teachers" (Hattie, 2009, p 22). Within a critical pedagogical approach, teachers see students as people with real knowledge and embed the use of students' knowledge in the curriculum, asking students to "become the teacher for a day" (Kincheloe, 2004, p. 15) and share their knowledge with others. Students sharing knowledge with each other is a well-known effective learning strategy described by Vygotsky, which supports the inclusion of cooperative learning strategies in the classroom (Doolittle, 1995).

The TrackSAFE Education 2017 Science, Technology, Engineering and Mathematics (STEM) Competition created an opportunity for teachers to become learners of their own teaching. Students were tasked with a project to research a pedestrian level crossing safety issue in their local community, and create a STEM design to improve safety at that crossing (TrackSAFE, n.d.-b).

Participating teachers were not expected to be rail safety experts, only experts in their relevant STEM field. They were given the chance to see students as real people with real knowledge, both within STEM and rail safety, because students had to conduct the research themselves and teach *them* about the rail safety subject matter, and how it related to STEM. The top entry in each category won a prize (TrackSAFE, n.d.-c).

The winning entry of the Year 7 & 8 Category was a design by three students from Year 7 at Plympton International College in South Australia. Their 'Railway Safety Sensor' was a new type of gate with a sensor to address distraction at pedestrian level crossings via mobile phones and tablets. When the train passes over the first sensor, the light is red, and when it passes over the second sensor, the light turns green, the gate opens and the pedestrian can cross the tracks. (TrackSAFE, n.d.-c).

The winners of the Year 9 & 10 Category were four students from Year 9 at Indooroopilly State High School in Queensland. The team designed a reflective barrier to address distraction by mobile phones at pedestrian level crossings. When a pedestrian approaches the crossing looking down at their phone or listening to music, the reflective material reflects light and catches the pedestrian's attention. They then have to manoeuvre through the barrier, causing them to stop and look around. (TrackSAFE, n.d.-c).

The STEM Competition project also enabled students to become their own teacher and a teacher of others, as part of the task was to create a YouTube video pitch about their rail safety design solution to share with the wider community (TrackSAFE, n.d.-d). The top five entries were shortlisted and opened for public voting via the YouTube channel between 14th and 20th August 2017 to celebrate Rail Safety Week, and had a total of 1600 views by the end of the week (TrackSAFE Education, n.d.). These entries continue to be available for viewing, enabling these students to not just become the 'teacher for a day', but well into the future.

Kincheloe (2004) argues that in a critical pedagogy, when a student knows the knowledge they have is valuable, they start to understand their capacity to learn, and they can build on this awareness to look at other potential things to learn and how those things might be helpful within their everyday lives (Kincheloe, 2004). In a critical pedagogical approach in a transport safety education context, students could start to recognise that their ideas about safety are valid, and that what they have to offer could be useful in their everyday lives as active users of the transport system, not to mention of value to the wider community. For the STEM competition, the value to the wider community was visible, both due to the potential their design had to improve people's safety, and through the potential exposure of their STEM based pedestrian level crossing safety solution to voters through the 'People's Choice Award' voting process during Rail Safety Week (TrackSAFE, n.d.-b.).

Paulo Freire used the concept of 'generative themes' to help students make a link between what they read and the world around them (Kincheloe, 2004, p. 17). Kincheloe summarises Freire's ideas:

> After exploring the community around the school and engaging in conversations with community members, Freire constructed generative themes designed to tap into issues that were important to various students in his class. As data on these issues were brought into the class, Freire became a problem poser. In this capacity, Freire used the knowledge he and his students had produced around the generative themes to construct questions. The questions he constructed were designed to teach the lesson that no subject matter or knowledge in general was beyond examination. We need to ask questions of all knowledge, Freire argued, because all data are shaped by the context and by the individuals that produced them. Knowledge, contrary to the pronouncements of many educational leaders, does not transcend culture or history. (Kincheloe, 2004, p. 16)

Freire focusses on what is important for students and becomes a problem poser so the students learn to question knowledge and incorporate culture and history into their body of knowledge. If his students also then became problem posers, they could apply critical analysis or thinking to a problem and become problem solvers (Kincheloe, 2004).

Transport safety education programs using traditional pedagogy and a 'knowledge giving' delivery style limit the ability for students to understand that knowledge is always questionable, because knowledge is presented to students as a set of 'facts'. Whilst students are usually given the opportunity to ask questions of the presenter during or at the end of the presentation, this does not give them a chance to explore, enquire and find out the 'facts' for themselves, or make any meaningful link between the information and their world, or the culture and history of the community in which they live, attend school and travel. Hattie (2009) says the curriculum should provide opportunities for a balance between surface and deep understanding, based on specific learning intentions and success criteria. Hattie (2015) also emphasises that surface understanding (the content), as well as deep understanding (the relationship between the content) need to first be in place before enquiry based learning methods are employed, for enquiry based learning to be effective.

In the TrackSAFE Education STEM Competition example, students were asked to gain surface level understanding of both the rail safety issue and STEM design principles, then gain deep understanding by relating rail safety and STEM design to each other. This enabled students to use enquiry based techniques to create their own STEM based design solution specific to their particular rail safety issue of choice. Students demonstrated they had conducted their own research and gained a deep understanding of the rail safety issues facing young people in their communities: every entry in the shortlist focussed on solving the problem of distraction at pedestrian level crossings, for example through the use of mobile phones (TrackSAFE, n.d.-c; TrackSAFE Education, n.d.). Interestingly, overall students demonstrated only a surface level understanding of how to apply the STEM design principles to their ideas, and appropriate ways of pitching their design to the judges, evidenced by the relatively poor quality video footage and editing (TrackSAFE Education, n.d.), particularly in the Year 7 and 8 category. The latter was not a criterion spelled out in the competition materials (TrackSAFE, n.d.-d) and neither component is as important as the surface and deep understanding gained in rail safety when considering the educational value of this project in terms of rail safety outcomes. Teachers and students were provided with specific learning intentions and success criteria via the competition information, including an assessment rubric which allowed teachers to track student progression from surface to deep understanding (TrackSAFE, n.d.-d).

Kincheloe (2004) says critical teachers have dialectical authority where teachers are not providers of truth like in a traditional authoritative role, but "facilitators of student inquiry and problem posing" (p. 17), and that this authority actually gives students freedom "to become self-directed human beings capable of producing their own knowledge" (p. 17).

Rowan and Bigum (2010) expand this idea with Bigum's framework of "Knowledge Producing Schools" (KPS) (p. 192). They argue pedagogy needs to move away from traditional pedagogy where "fridge door assignments" (Rowan & Bigum, 2010, p. 200) are common: students' work is shared with an audience of two or three people, such as the teacher and parents or carers, and is not meaningful to students or useful to the community. They state:

> The traditional relationships between schools and knowledge, between schools and teachers, between teachers and students and between students and their community have produced a particular set of educational practices suited to those students who possess the cultural capital necessary for "doing school". Working to improve the outcomes of

> schooling more broadly requires attention to the ways in which we give students the opportunities to get good at "doing life". (Rowan and Bigum, 2010, p. 192)

Instead, they say students should be actively involved in the production of knowledge from as early an age as possible, and they should work on "authentic tasks which have relevance and appeal to a wider community" (Rowan & Bigum, 2010, p. 193).

KPS allows educators to recognise and respond to the circumstances unique to their communities using student-driven projects with genuine tasks for real world audiences, and access experts in whatever real world project they are undertaking so they receive genuine expertise and guidance and authentic feedback. Both the NZTA (n.d.-a) and TrackSAFE Education (TrackSAFE, n.d.-a) program materials utilise authentic tasks and encourage students to access experts to help them solve. For example, in the 2016 TrackSAFE Education Rail Safety Week Competition, primary school students created picture books to help younger children learn about how to be safe around trains and railway tracks (TrackSAFE, n.d.-e). As part of their research on the writing process, year six students Heila and Nicola contacted a published author via email to get some advice on writing their picture books (TrackSAFE Education, 2016). They also asked TrackSAFE Education staff for some advice on the rail safety content of the competition (Heila and Nicola, personal communication, 27 July, 2016).

Bigum's KPS framework gives transport safety education program designers the ability to come up with lessons which transform the learning experience for students by asking, "Are students positioned as the producers or the consumers of knowledge? Are students positioned as active or passive? Are students provided with a real world audience? Do all students and all forms of knowledge have a chance to be valued? Does this audience facilitate their connection to a broader community?" (Rowan & Bigum, 2010, p. 195).

Guiding students to use their expertise to make a difference to their own and others' safety

Kincheloe states, "critical pedagogy is grounded on a social and educational vision of justice and equality" (2004, p. 6). Whilst this might seem heavy in the context of transport safety education, it is highly relevant. Youth are looked down upon, disenfranchised simply because of their age and the low expectations imposed upon them, when transport safety education program designers promote social regulation and 'proper' attitudes, and fail to view young people as "empowered, learned, highly skilled democratic citizens who have the confidence and the savvy to improve their own lives and to make their communities more vibrant places in which to live, work and play" (Kincheloe, 2004, p.8). Kincheloe's view is that "students do not need to be tamed, controlled and/or rescued; they need to be respected, viewed as experts in their interest areas, and inspired with the impassioned spirit to use education to do good things in the world" Kincheloe (2004, p.8).

Young people can use their expertise to make positive changes to transport safety in the world around them in a critical pedagogical approach. In New Zealand, through the NZTA's resources, school students are producing knowledge in transport safety and driving social change in their own communities. One example which illustrates this is when primary students at Khandallah School in Wellington, with the NZTA resources to guide them and their teacher, completely transformed the way students at their school travelled safely to school. By designing and conducting a survey, they discovered sixty eight per cent of students travelled to school by car, and from that stemmed a number of health and safety issues (Brown, 2013; NZTA, 2012). The students decided to instigate the upgrading of the local subway so more students would walk to school (NZTA, 2012). The students presented their ideas to the Wellington City Council, and the council funded the project (NZTA, 2012). They worked with local artists to improve the look and added lighting to improve safety of the subway, as well as teaching the other students and parents at the school the health and environmental benefits of using active transport options to get to school (Brown, 2013; NZTA,

2012). As a result of this project, underpinned by a critical pedagogical approach to learning, these students made a genuine positive change in their community.

Kincheloe (2004) argues that we stunt the potential of students when we use "the pedagogy of low expectations" (p. 7). Transport safety education programs which lecture information to students are built on a foundation of low expectations: they deliver information aimed at the lowest common denominator of student understanding; they promote right and wrong answers relating to knowledge, skills, attitudes and behaviours; and they do not encourage student voice or thinking about what might work to improve safety in the context of their own community. Instead, when designing transport safety education programs within critical pedagogy, program designers could firstly ask, "What kind of young person do we want to promote?" and design the content around the underestimated - yet extraordinary - capabilities of young people.

Through an NZTA high school resource, "students learned how to contribute as citizens towards improving the road system, a public asset with a tangible link to their own well-being" (NZTA, 2014). The students were concerned for their own safety because drivers did not slow down near their school, so, armed with traffic counter data they arranged with council engineers themselves, they campaigned for lower speed limits (NZTA, 2014). As they progressed their proposal through the council and successfully achieved a reduction in speed limit, their school grew community ownership of safe travel with parents also getting involved (NZTA, 2014). One student, Kate, said, "The thing that I enjoyed most about the process of researching, planning and writing to the NZ Transport Agency is that by doing this it might, and probably will, save someone's life" (NZTA, 2014).

Discussion

Transport safety education has existed for too long within a traditional or didactic pedagogical approach. Program design is shifting, however didactic methods continue to be a popular way of 'reaching' large numbers of students, and in some instances coexists alongside some more 'interactive' teaching methods within the one program.

Rather than a top down, 'one size fits all' program, both the NZTA and TrackSAFE offer an evidence based option for schools through a variety of transport safety education lessons within a critical pedagogical approach. These differentiated and flexible resources enable teachers to make appropriate choices for their students, taking into account the diverse needs and abilities of their students.

At the present time no studies are known which specifically investigate the effect of critical pedagogical approaches within transport safety education. Opportunities for qualitative research into the effectiveness of this approach in context should be explored in order to determine the true impact of this approach. Program and process evaluations into these two programs using elements of critical pedagogy should also be conducted, to ascertain the effect critical pedagogical approaches have on student learning in the context of transport safety education, and if this approach is viable for implementation on a wider scale.

Moving to programs designed with a critical pedagogy may be one way for transport safety education to improve transport safety outcomes. If program owners and developers used curriculum based authentic tasks and set clear and realistic expectations for the learning intentions and success criteria of their programs rather than delivering presentations; if their aims were genuine learning success rather than behaviour change; if they put students at the centre of the learning instead of imposing right or wrong judgements on them; if their focus was more on the critical nature of the pedagogy and less on public relations activities; and if they were to apply the extant evidence about which teaching and learning practices are effective in engaging and motivating students to make

change in their own communities, there may be more of a chance to see an improvement in transport safety knowledge, skills and understanding for young people.

The evidence about critical pedagogy clearly shows the benefits of moving away from a traditional pedagogical approach by respecting young peoples' expertise and ensuring they know their ideas are valid and valuable through the program design. A shift from 'knowledge giving' to 'knowledge producing' has the potential to help students make tangible, meaningful contributions to transport safety in their communities.

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