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**“My ideas are important too!”:  
Student perceptions of a transport safety education experience  
based on a critical pedagogical approach to learning**

A thesis  
submitted in partial fulfilment  
of the requirements for the degree  
of  
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## **Abstract**

School students are the key audience or target group for transport safety education programmes in Australia. These programmes aim to instil in young Australians an understanding of how to stay safe across various aspects of the transport system. Yet insights into how students learn best do not always form part of policy making, ethos or design of current transport safety education programmes. Moreover, there is little understanding as to how these young people actually view and respond to transport safety education experiences.

As a transport safety educator, I was curious to find out more about students' thoughts as core participants and informants. What comments would students have about content; methods employed for interacting with students; and the relevance of the learning experiences? In other words, from the students' perspectives, are we getting it right?

The research question, therefore, was: how does a class of thirteen to fourteen-year-old students in a rural school in New South Wales (NSW), Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning? Taking an interpretivist approach with a critical stance, I adapted and taught a short transport safety unit with year eight students in a rural high school setting in New South Wales, Australia. Evidence gathered and analysis in this study included observations and products of students' responses to transport safety lessons and student views from focus groups.

Student participants in this study had a level of pre-existing knowledge about and understanding of transport safety, including hazards, risks and consequences, appropriate for their age and circumstances. The whole class, both male and female, acknowledged they knew some risky behaviours were against the law and unsafe. They also exhibited an awareness of the importance of having an audience. Student lived experience of transport systems and safety, as reported, is not neatly bounded by agency segregation (such as rail, road, or farm safety).

Developing trust and rapport with the students was an integral part of the whole pedagogical experience. Teachers listening without judgement, being open to talk about things that 'adults' may try to shut down or disapprove of can be mutually beneficial for students and teachers: students get to speak openly, and the teacher learns more of students' current beliefs and behaviours. Evidence in this study also advocates active, collaborative learning and that involves novelty and use of technology when appropriate. Students in this study were also keen for educational experiences outside the classroom.



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## **Dedication**

I dedicate this research to my father and inspiration, Graham Thwaite. Ever since I was little I looked at his Master's Degree on the wall in his office and thought, "Wow, maybe I can do that too one day!" He has encouraged me, supported me, listened to my tears and fears, and advised me with many pearls of wisdom about study and life. I can only hope that one day I can also be an inspiration to your grandchildren. I love you Dad.

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## Chapter One: Introduction

### *Background*

School students are the key audience or target group for transport safety education programmes in Australia. Typically, students are expected to sit through a presentation or participate in sets of learning activities designed by ‘experts’ employed by not-for-profit or government organisations. These programmes aim to instil in young Australians an understanding of how to stay safe across various aspects of the transport system. Yet insights into how students learn best do not always form part of policy making, ethos or design of transport safety education programmes. As such there is little understanding as to how these young people actually view and respond to transport safety education experiences.

This study was designed to seek student voice regarding their experiences of transport safety programs, by asking: how does a class of thirteen to fourteen-year-old students in a rural school in New South Wales (NSW), Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning?

### *Motivation for the study*

As a transport safety educator, it is important to me to continually question and reflect on my own practice and how it relates to theory, both known and emerging: as Freire says, “critical reflection on practice is a requirement of the relationship between theory and practice. Otherwise theory becomes simply “blah blah blah,” and practice, pure activism” (1998, p. 30). I have been a rail safety education practitioner for over a decade, both in NSW—where I designed and ran face to face programs for school students—and Australia wide, as a designer and manager of a national curriculum-based programme for a registered charity. In 2012 to 2013 I observed every rail safety education programme in Australia, as well as multiple road safety education programs, with an aim to develop a new strategy and subsequently a new national rail safety education programme to address inconsistencies across programs in Australia.

The research used to inform the programme design was from Australian, New Zealand, and other international research on best practice road or transport safety education. When this programme was developed, small pilot studies enabled teachers to provide feedback to inform any necessary changes, and there was a limited amount of student input into the content and learning activities through this process. Moreover, no rural schools were involved in the pilot studies.

Since then, I have been curious to find out more about students' thoughts as core participants and informants. How do they feel about learning about transport safety? What are their perceptions of their experiences learning about transport safety? What insights can students give us that might make us question the design of our programmes? What comments would students have about content; the level the content is pitched at; age-appropriateness; pedagogical techniques used; methods employed for interacting with students; and the relevance of the learning experiences? In other words, from the students' perspectives, are we getting it right?

### *Definitions*

Before looking at the research context, I will define the terms used throughout this study. Safety education is an activity or strategy "for accident/injury prevention, including issues pertaining to teaching various aspects of safety" (Saltmarsh, 2010, p. 289) which "can be targeted at whole populations or groups in particular settings or at high risk individuals" (Mulvaney, Watson, & Errington, 2012). Safety education encompasses "...all education interventions intended to prevent accidents and injuries [accidental injury] for 5-16 year olds" (McWhirter, 2008, pp. 2-3) including "personal safety, such as the prevention of bullying, physical aggression, and child abuse" (p. 3), and provides chances "for learners to recognise hazards, assess risk and take steps to manage or control risk" (p. 3). Thus, safety education has a wide remit.

Transport safety education in Australia consists of programmes which intend to contribute to preventing accidents and accidental injury wherever a person

interacts with the transport system. For the purposes of this study, ‘transport safety education programmes’ refer to land transport education programmes for children enrolled in formal schooling between Foundation to Year 10 (ages five to sixteen), either taught in schools (curriculum-based classroom lessons or incursion, where a facilitator comes to the school), or outside of school grounds (for example, excursion).

‘The transport system’ includes land transport in road environments (such as public and private roads, and footpaths); off-road environments (such as farms and bush trails); and public transport environments on land (such as train tracks and station platforms, tram tracks and stops, bus stops and terminals); water (such as ferries and ferry terminals); and other water transport environments (such as rivers and oceans). Transport safety education programmes focus on safety when using private and public modes of transport, including:

- as a pedestrian<sup>1</sup> on foot or in a wheelchair, pram or other mobility device;
- as a rider of a bicycle or scooter;
- as a rider of a small motorised vehicle such as e-scooter, e-bike or Segway;
- as a motorcycle passenger or rider;
- as a passenger or driver of a car or other motorised vehicle;
- as a passenger or driver of a boat or other water craft; and
- as a passenger on public transport such as trains, trams, buses and ferries.

The above list highlights that transport safety education is for those in control of the particular transport and those who have a more passive involvement.

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<sup>1</sup> According to the World Health Organisation (2013), “A pedestrian is any person who is travelling by walking for at least part of his or her journey. In addition to the ordinary form of walking, a pedestrian may be using various modifications and aids to walking such as wheelchairs, motorized scooters, walkers, canes, skateboards, and roller blades. The person may carry items of varying quantities, held in hands, strapped on the back, placed on the head, balanced on shoulders, or pushed/pulled along. A person is also considered a pedestrian when running, jogging, hiking, or when sitting or lying down in the roadway” (p. 3). For the purposes of this study, these categories have been separated.

The demographic scope for transport safety education programmes differs depending on funding, resourcing, and location, ranging from early childhood through to seniors.

Finally, pedagogy is the process where a teacher engages with three separate yet related areas of ideas and values, including: children, learning, teaching and the curriculum (who and what gets taught, who teaches it, and how they teach it); school and policy (the institutional and legal context in which it takes place); and community, culture and self (its purposes and values) (Alexander, 2008).

### *Context of the study*

This study took place in a remote rural town in NSW, Australia. For the purposes of anonymity, I have changed the name of the town to “Grevillea” and I will provide general statistics—rather than specific—about this place in order to protect the identity of participants. According to the 2016 census (Australian Bureau of Statistics (ABS), 2017), the population of the Grevillea is a little over one thousand four hundred people, with nearly 9 percent of the population identifying as Aboriginal or Torres Strait Islander, compared with the national average of 2.8 percent. Approximately 6 percent of this town's population are between 10 and 14 years old, which is consistent with the national average. Also consistent with the national average, 49 percent of the population are male, and 51 percent are female (ABS, 2017). The students participating in the study attended “Grevillea High School”, the only high school in the town.

### *Research scope and aims and scope*

The transport safety education programme used in this study is a curriculum-based land transport education programme designed for school students in Year 7 or 8. It is a mini unit-of-work, featuring three lessons taught by the class teacher. For this research, myself, as the researcher and a transport safety educator planned and taught the three lessons in the year 8 class at Grevillea High School. The content of this unit did not include water transport, novice driver training programs, or awareness campaigns designed to increase public

awareness about transport safety, such as advertisements, videos, posters, brochures, marketing material, or social media campaigns.

This study aimed to discover students' perceptions of their transport safety education experiences through asking the research question: How does a class of thirteen to fourteen-year-old students in a rural school in NSW, Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning?

Through observations of classroom interactions and engagement prior to and during the short transport safety unit, I aimed to delve into the thoughts, feelings and reactions of students. By becoming the classroom teacher and teaching the class a series of three lessons, I intended to give students the ability to experience first-hand the programme I had in mind to research.

Two focus groups and an interview with the class's usual teacher for Personal Development, Health and Physical Education (PDHPE), provided further evidence of these students' views on transport safety education. Another aim was to analyse the way critical pedagogy appears in the context of the transport safety education experience, and to what extent these characteristics align with students' views. Finally, through this study I sought to discover insights which may help readers understand what is important to students in this context, and therefore may help inform future transport safety education programme design.

### *Overview of what lies ahead*

In Chapter Two, in order to situate this study within the field of transport safety education and to provide a foundation of understanding about what is known about target participant student group, I review the relevant extant literature about adolescents and transport safety. I investigate the history and context of transport safety education in Australia, and explore the relevant developmental aspects scientists currently know about adolescents' brains.

In Chapter Three, I give an overview of critical pedagogy as a vision for learning. I explain what is known about teaching and learning relating to certain aspects in

critical pedagogy, and how these might be relevant in the context of transport safety education.

In Chapter Four, I outline the methodology for this study, including my research paradigm, the research methods used for the study, the ethical considerations made, and the methods of analysis.

In Chapter Five, I describe my observations during three transport safety lessons the students did with me as their teacher. Evidence is presented, with a focus on how students responded to the learning experiences.

Chapter Six presents a detailed description based on the focus group evidence of the views the students had about the transport safety lessons they experienced as part of this study, as well as learning more generally.

Chapter Seven is the discussion chapter. I discuss the insights found through this study from the research evidence in the context of the literature, highlighting potential opportunities for future transport safety education programme development.

Finally, in Chapter Eight, I present my conclusions, including a summary, limitations of the study, and my recommendations.



## **Chapter Two: Adolescents and Transport Safety: A Literature Review**

### Chapter overview

A literature review involves choosing published research and other relevant unpublished documents on the subject being studied, and evaluating the ideas, information, data, and evidence in these documents (Hart, 1998). Documents located and reviewed for this study included journal articles, books, e-books, data from government publications, conference proceedings, online articles and web pages. I searched online databases and library catalogues through The University of Waikato, Macquarie University, and the State Library of NSW. As there are multiple ways to describe several of the terms I was searching for I used a combination of keyword searches, which enabled me to narrow down the literature to focus on what was relevant. For example, to ensure relevance for 13 to 14 year olds, I included the keywords “child\*” (for child, children, child’s, child’s); “adolescen\*” (for adolescent, adolescence); “teen\*” (for teen, teens, teen’s, teenager, teenagers); “young person” and “young people”. This enabled me to narrow my focus to exclude any literature specific to early childhood or primary. I also noted that ‘transport safety education’ is a topic without a standard name, so my searches included “transpor\* safety” (for transport, transportation); “road safety”; “rail safety”; “train safety”; “tram safety”; “level crossing safety”; “motorcycle safety”; “motorbike safety”; “pedestrian safety”; “cycl\* safety” (for cycle, cyclist, cycling); “bicycle safety”; PLUS “education\*” (for education, educational, educative); and “teach\*” (for teach, teaching, teacher); and “pedagog\*” (for pedagogy, pedagogue, pedagogical). The most useful database was ProQuest, yielding several articles on education and on the adolescent brain.

There were limitations to the number of keywords included in a search, so several searches were conducted. In addition to library and database searches, I used reference lists of other publications to identify any articles which may not have come up in my searches. I did find several which may have been useful,

however I could not find them in any of the databases or catalogues searched. This limitation occurred due to the articles being internal documents, older publications, not published online, or only available at a single, distant library on inter-library loan.

The aim of a literature review for a Master's level thesis is to provide an "analytical and summative" chapter (Hart, 1998, p. 15) covering theoretical issues of research relevant to the topic (Hart, 1998). There is a lot of theory on children's learning, so for this review I elected to concentrate on adolescents. Therefore, this chapter provides an overview of what is known about 13 to 14 year old adolescents and their brain development. Reviewing this literature is important because effective education programs must take into account what is known about the development of the children being educated.

This chapter then provides an overview of the evidence around the world regarding effective transport safety education programs, and an overview of the historical context of transport safety education in Australia. Finally, a chapter summary provides an overview of what is to be noted from this literature review for this study.

### What we know about 13 to 14 year old adolescents

Recent research and theorising has focused on developing an understanding of why school students, in particular adolescents, behave in certain ways and take risks (Blakemore, 2019; Reyna and Farley, 2006; Jensen, 2015; Ryan, 2001; Siegel, 2014). We know that this age group take risks in transport environments, and this behaviour may be able to be understood by looking at what is known about their brain function at this age.

Adolescents are also known as 'teenagers', 'teens', and 'young people', and for the purposes of this study, are defined as people aged between 12 and 24 (Siegel, 2014). These years are a time of major changes in a person's life, most notably in the brain. Adolescents have a reputation for being moody, disengaged, and oppositional—these are stereotypes that adults tend to perpetuate, inadvertently or blatantly. But what are they really like? Why do

they make the decisions they make? Do we as adults automatically see ourselves as experts, simply because we have all been teenagers at one point in our life? Miller (2017) says stereotypes about adolescents are easy to buy into, but they are not often useful. I thought it would be interesting to look at the science behind how teen brains function, to see if it could shed some light on aspects of risk taking and pedagogy, and open up ideas for learnings to inform practice in transport safety education.

There are some useful resources available, written in plain language, to assist us to understand adolescents' brains. Siegel (2014), a clinical psychotherapist and father from the United States (US), looks in depth at both the purpose and the power of adolescents' brains. His book, aimed at parents or anyone who works with teenagers, gives an in-depth guide to the changes in the brain and what we can do to help teens through this period. Jensen (2015), a neuroscientist and mother also from the US, discusses what happens to adolescents as a result of their brains developing in her book about the teenage brain and how to survive as a parent of adolescents, but her advice is equally useful to teachers. In her book from the United Kingdom (UK), Blakemore (2019) also gives a neuroscientist's perspective on brain development in adolescence, and discusses the many opportunities this period encompasses with regard to creativity. While these books give insight from different perspectives, they are all written in a way that makes it easy for people from a non-medical background to understand. I will draw on these books throughout this chapter, as well as other authors' works, in order to give a measured insight into adolescents' development.

There are myriad myths regarding adolescence. Such myths include that hormones cause teens to go crazy, whereas in fact hormones do increase but are not the cause of changes in adolescence (Blakemore, 2019; Jensen, 2015; Morgan, 2013; Siegel, 2014). Another myth is that adolescents are just immature, whereas changes in the brain's development are the cause of changes in behaviour (Blakemore, 2019; Jensen, 2015; Morgan, 2013; Siegel, 2014). One more myth is that adolescents need to move from dependence to total independence, while a healthier path is to move towards independence via

adults (other than parents or primary caregivers, who they tend not to respond to) (Blakemore, 2019; Jensen, 2015; Morgan, 2013; Siegel, 2014). These myths serve to position adolescents as people who are fully in control of their thoughts, feelings and actions, whereas in fact, they are not.

Brain development is seen by these authors as an important factor in how children at different ages think and behave. This is therefore an important point to remember when thinking about teaching and learning. As Siegel points out, “A fifteen-year-old isn’t simply a ten-year-old with five additional years of experience. Brain development means that as adolescents we can think in conceptual and abstract ways a ten-year-old cannot even imagine” (2014, p. 92). We cannot expect students to learn concepts beyond their biological thinking age, and as such need an understanding of where adolescents are at developmentally before designing education programmes.

The changes that happen in the brain over a person’s life have been happening throughout history, and even across species (Blakemore, 2019); it is only recently that modern brain-imaging techniques and psychological advances have assisted scientists to understand these changes in some detail (Jensen, 2015; Siegel, 2014). Between the ages of twelve and twenty-four, human brains are naturally changing the way they “remember, think, reason, focus attention, make decisions, and relate to others” (Siegel, 2014, p. 5). The brain is becoming more integrated. According to Siegel (2014) the pre-frontal cortex (the part of the brain that “links input from the body itself and other people” (p. 89) and coordinates and balances “energy and information from the cortex, limbic area, brainstem, body, and social world” (p. 89) is developing.

There are numerous barriers for adolescents to overcome, including exhaustion due to what is happening to them biologically, and the mainstream media in many cultures often casting teens in a negative light (Miller, 2017). Neuroscience and psychology confirm these barriers, explaining that our brains establish four important qualities in our early teens, and each of these qualities have positive and negative aspects (Siegel, 2014). These qualities are now discussed.

### *Novelty seeking*

'Novelty seeking' in adolescence—also known as sensation seeking—has been found to be a consistent trait across countries and cultures, most recently in a worldwide study of 11 countries (Steinberg et al., 2018). Novelty seeking desires rise from age 10, peak at age 19, and fall again during the twenties (Steinberg et al., 2018). When this desire increases, adolescents gain intrinsic motivation to try new things and engage more with life, which stems from the circuits in their brain increasing their desire for rewards (Siegel, 2014). This leads teens to develop a greater sense of adventure, ambition to design new methods of doing things, and be more accepting of change (Siegel, 2014). It also increases impulsive behaviour, that is, where an idea suddenly leads to an action, without stopping to weigh up the potential consequences (Siegel, 2014). In this way, adolescents are wired to take risks, no matter how much we tell them about the consequences of risky behaviour. On the other hand, increased novelty seeking means adolescents are also open to leading for positive change.

### *Increased social engagement with peers*

Adolescence is a time when social groups, who we are, and how we are viewed by others, are constructed (Blakemore, 2019). Teens form new friendships through an increase in connecting with others (Siegel, 2014). According to Siegel, these new supportive bonds are proven to increase lifelong happiness, wellbeing and longevity (2014). However, developing these new bonds with peers can also lead to a complete rejection of adults, adult knowledge and reasoning. In turn, this leads to teens surrounding themselves with other teens, which increases their risky behaviours (Siegel, 2014). In other words, teens are not receptive to what adults want them to know: they want to be with and listen to other teens. These peer relationships are really important to them. These emerging connections make the decision-making process highly complex, involving multiple cognitive processes (Siegel, 2014).

The need for increased social engagement also creates a level of vulnerability to conforming with social norms. In their study on adolescent autonomy, Steinberg

and Silverberg (1986) tested resistance to peer pressure using separate indices for anti-social behaviour compared with neural matters. For the purposes of this study, this might include entering the tracks to applying graffiti to a train, while neural matters could be choosing an activity after school. They confirmed that in the transition from childhood to adolescence, young adolescents have a need to conform to their peer group, with this need reducing as they get older (Steinberg & Silverberg, 1986). They noticed also that young adolescents gained more emotional autonomy from their parents, started seeing their parents in a less idealistic way, were less dependent on them, and were developing a more separate sense of self (Steinberg & Silverberg, 1986). These authors also found that emotional autonomy peaked in year eight with respect to their peers, bringing with it an increasing vulnerability to the influence of peers of a similar age. Adolescents' developmental need to conform to peer norms peaks at this age, and this need makes them vulnerable to peer pressure (Steinberg & Silverberg, 1986).

#### *Increased emotional intensity*

Emotions may make us act in particular ways, and even as adults we may not have insight into these emotions driving our behaviour (Blakemore, 2019). Emotions are controlled in the limbic system, the same place where sex hormones (testosterone, oestrogen and progesterone) are also very active (Jensen, 2015). An increase in emotional intensity during these years can cause impulsive behaviour, mood swings, and extreme adverse reactions (Siegel, 2014). Adolescents may therefore struggle to control their impulses, moods and reactions to things. On the other hand, they may also get an upsurge in their vitality, leading to an increased zest for life and intensity of emotions during these years (Siegel, 2014).

#### *Creative exploration*

Teens develop an increased awareness and cognizance, allowing conceptual thinking and abstract reasoning to arise (Siegel, 2014; Blakemore, 2019). This leads teens to think innovatively, creatively, and laterally, and question the status quo, which can cultivate a sense of the normal being exceptional (Siegel,

2014). It can also create an identity crisis, loss of direction, indifference, and an increased susceptibility to peer pressure (Siegel, 2014). Therefore, whilst this aspect of teens' brains can help them challenge thinking, it can also leave them vulnerable.

The concept of identity is so intertwined with friendships at this age, to go against the norm would create problems from a peer-group perspective. Ryan (2001) confirms the peer group is an important influence on the way adolescents' beliefs and behaviours are developed, in the context of risk-taking behaviour. She says that young adolescents are particularly vulnerable to peer group influence (Ryan, 2001).

### *A note about bullying*

One negative outcome of the increased intensity described by Siegel can be bullying. In their book about bullying, Smokowski and Evans provide a comprehensive definition of bullying:

*Unwanted behavior that occurs between a more powerful perpetrator(s) and weaker victim and usually occurs repeatedly over time; the behavior is intended to harm the victim and does cause harm to the victim, bystanders, and/or culture and climate within the environment where the bullying occurs (emphasis in original) (2019, p. 8).*

Smokowski & Evans suggest that as bullying is so prolific—affecting up to 75% of some populations across the world—it should be regarded as a major public health priority (2019, p. 248).

Bullying takes the form of direct (overt) and indirect (covert) hierarchical, aggressive behaviour (Smokowski & Evans, 2019). It can be classified into four types: physical bullying (including hitting or pushing); verbal bullying (including teasing and threatening via oral or written communication); relational bullying (including publically releasing images or exclusion, with the intent to harm the victim's reputation or relationships); and bullying by property damage (including stealing) (Smokowski & Evans, 2019, p. 9). Smokowski & Evans (2019) use the term "playground politics" in the title and throughout their book to describe the

bullying dynamic, as it often stems from a want for social status in early to middle childhood in the school playground, and continues throughout life.

In Australian schools, the latest data shows 4 out of 10 (43%) Year 8 students reported being bullied weekly or monthly (AIHW, 2019). Research has shown that school bullying can have an ongoing effect on people, including witnesses to bullying (NSW DoE, 2019-a), and the entire school community (Smokowski & Evans, 2019). School bullying can occur on school grounds (such as in the classroom or playground) or online (NSWDoE, 2019-a). I would like to see this definition updated to include bullying outside of school grounds (such as while travelling to or from school), in the same way as bullying in workplaces can extend beyond the work environment (Heads up, n.d.). This is because I have seen countless instances of school student-to-school student bullying on trains as a law enforcement officer and passenger on the NSW rail network, where bullies are able to freely operate on the unsupervised trip to or home from school. Whenever I spoke with victims, a common response was they would tell a teacher at school, but no action would be taken to stop the bully, in particular if the bully was from a different school. Perhaps this limited response is because the definition provided by the Department of Education (NSWDoE, 2019-a) does not incorporate this particular version of school bullying.

Between 80% and 88% of bullying cases involve someone who is a bystander, a person who is not directly involved in the incident as the bully or victim, but is a witness (Smokowski & Evans, 2019, p. 90). Smokowski and Evans found that a witness takes one of three courses of action: verbally encourages them or joins in with verbal or physical harassment (“negative bystander”); takes no action or waits until the bullying has finished and comforts the victim (“passive bystander”); or confronts the bully, intervenes to help the victim, or gets a teacher (“upstander”) (2019, p. 88). Australian students are actively encouraged to be *upstanders* (Commonwealth of Australia, n.d.) and in NSW are urged to speak up and tell the bully to stop, distract the bully, or tell a teacher, if it is safe (NSW DoE, 2019-b).



The motivation for a young person bullying others can be to gain social status through social capital, or power or domination through humiliation or intimidation (Smokowski & Evans, 2019). Victims are usually people who don't 'fit in' for reasons such as differences in their body, appearance, race, sexuality or social skills (Smokowski & Evans, 2019). "Bully-victims" are those who both bully others and are bullied (Smokowski & Evans, 2019, p. 28).

The Australian Student Wellbeing Framework provides teachers with evidence-based guidelines which stress the strong connections between student safety, student wellbeing, positive relationships and learning (Commonwealth of Australia, n.d.). The likelihood of bullying happening is reduced when the whole school community is caring, respectful and supportive (NSWDoE, 2019-a), and this can be achieved through the five components of the framework: leadership; inclusion; student voice; partnerships; and support (Commonwealth of Australia, n.d.). This framework helps support the idea that teachers and other adults in schools can play a strategic role in reducing bullying. Smokowski and Evans (2019) say that for personnel working in schools, talking with students about the imbalance of power is a crucial measure that can help adults understand the dynamics of bullying at play amongst students, and they suggest adults should attempt to find out how the students involved in the bullying dynamics view the distribution of power.

### Teaching adolescents about transport safety

Whilst the qualities and features of adolescents' brains can be seen as problems, they can also be seen as opportunities. Siegel (2014) says by knowing the positive qualities of the teen brain, the decision lies with all of us as to how to guide teens. These positive qualities include their increased sense of adventure; ambition to design new ways of doing things; ability to be accepting of change; increased connections and social relationships with peers; ability to channel their emotions in positive ways; and ability to think innovatively, laterally and creatively (Siegel, 2014). We can then work together with teens to ensure these positive aspects work for our goals (Siegel, 2014). There is an opportunity here to

tap into and harness the positive aspects of the teen brain when designing transport safety education programmes.

Likewise, it gives us the chance to check our own attitudes and ensure we perpetuate positive messages to and about teens. According to Siegel (2014), many adults project both indirect and direct negative attitudes towards teens, and when teens are constantly taking in these negative messages, they may live that reality out, rather than striving to achieve their real potential. Miller (2017) says the way we can start to change the negative rhetoric about and attitudes towards teens is to stop “spreading moral panic...policing and patronising them” (para. 18), and start sharing positive stories about and connecting with them.

Attachment may be another strategy which could be used in the school context to support adolescents to connect. Siegel (2014) discusses the benefits of attachment from the perspective of parenting, however his arguments are also highly relevant for teaching and learning. He talks about using the strategy of “structure with empowerment” (Siegel, 2014, p. 33) to simultaneously support adolescents, allow them to discover their own voices, and create boundaries learnt from our own life experiences. He says a student of his once advised him, “Just let them be who they are at the time, not who you expect they should be” (Siegel, 2014, p. 34), and acknowledge the ebb and flow that each day can bring in intensity of emotions, sense of identity, levels of interaction, and engagement with life.

Based on my experience working with and having in-depth conversations with teens over a decade in my roles on the Sydney rail network as a law enforcement officer, as a representative for my employer at Youth Justice Conferences (an alternative to court for young offenders in NSW), and in the classroom during face-to-face rail safety education workshops, I have learnt that many of the *intentional* unsafe behaviours teens demonstrate in transport contexts stem from one main idea: how will I look in front of my peers? The evidence presented from neuroscience and psychology clearly suggests this is a much more complex concept than it appears at face value.

Therefore, designing transport safety education programmes with consideration of the evidence about how adolescents' brains develop may have more chance of having effective educational outcomes.

### What we know about adolescents and transport safety incidents

Before looking at the pedagogy, it is important to understand the extent of the transport safety issues for school students. Young people do not dominate statistics of all types of serious injuries and fatalities related to transport in Australia.

Road traffic crashes cause 1.35 million fatalities worldwide each year (World Health Organisation (WHO), 2018): more than half of these are vulnerable road users, including pedestrians, cyclists, and motorcyclists (WHO, 2018). Road traffic injuries are the primary cause of death for children and young adults aged 5-29 years internationally (WHO, 2018).

In Australia, 1,145 people died on the road in 2018 (Bureau of Infrastructure, Transport and Regional Economics (BITRE), 2019). 52 (4.5 percent) of these people were aged 0-16 years (BITRE, 2019). Between 2001 and 2010, an average of 7853 people sustained a high threat to life injury due to a road traffic crash in Australia per annum, and 444 (5.6 percent) of these people were aged 0-14 (Henley & Harrison, 2015).

The transport safety story is grim for Aboriginal and Torres Strait Islander peoples. According to the Australian Institute for Health and Welfare (AIHW), unintentional injury related to transport crashes was the second leading cause of fatal injury for Aboriginal and Torres Strait Islander peoples, accounting for 23% of all injury deaths (Henley & Harrison, 2019). In the 10-14 age group, fatalities amongst indigenous males occur at 2.6 times the rate of non-indigenous males, and this increases to 2.8 times the rate for indigenous versus non-indigenous females (Henley & Harrison, 2019). The serious injury rates are slightly more on par, with indigenous males seriously injured at 1.4 times the rate, and indigenous females seriously injured at 1.1 times the rate of their non-indigenous counterparts (Henley & Harrison, 2019).

Pedestrians, as vulnerable road users, are at risk on our roads. According to the Department of Infrastructure and Regional Development (DIRD), between 2005 and 2014, pedestrians aged between 0 and 16 years old represented an average of 9 percent of all pedestrian fatalities across Australia, the lowest number across the age groups (2015, p. 8). Male pedestrians have a higher frequency of fatality than female pedestrians (DIRD, 2015).

In Australia fewer people are injured in incidents involving trains and trams compared to other road related injuries. Between 2009-10 and 2013-14, a total of 2044 people with serious unintentional injuries involving a train, an average of 170 per year (Henley & Harrison, 2017, p. 3). Of these, 178 people were seriously injured due to a level crossing collision, an average of 36 per year (Henley & Harrison, 2017, p. vi). Excluding occupants of a train, of the 237 people seriously injured in this group, six pedestrians and five vehicle occupants aged 0-14 were injured in a collision with a train; compared with 40 pedestrians, 25 vehicle occupants, 5 motorcyclists and 2 pedal cyclists aged 15-24 (Henley & Harrison, 2017, p. 18).

A significant portion of train related injuries are in NSW. 295 (36%) of the 812 people with serious injuries involving a train Australia wide were hospitalised in NSW during this five year period (Henley & Harrison, 2017, p. 15). Of these, pedestrians injured in a collision with a train hospitalised in NSW numbered 29 (21%) (Henley & Harrison, 2017, p. 15). Age specific data broken down by state and territory is not cited in the available reports.

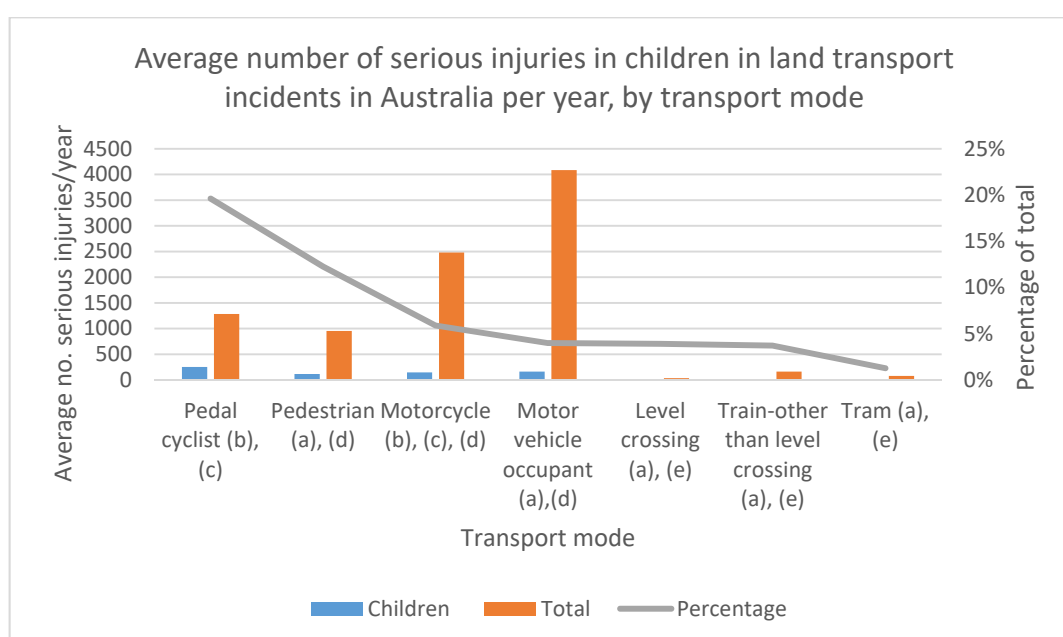
Trams represent the smallest number of serious injuries. According to Henley and Harrison (2017), 397 people were seriously injured in unintentional cases involving a tram between 2009-10 and 2013-14 (p. 28): five people aged 0-14 and twelve people aged 15-24 years (p. 29), with no significant difference between males and females in these age groups (p. 27).

Pedal cycling is the leading cause of serious injuries in Australian children as a percentage of the average total per year, followed by pedestrians and motorcycles (Table 1; Figure 1), which are the most vulnerable road user groups.

**Table 1** Average number of serious injuries in children in land transport incidents in Australia per year, by transport mode

Transport mode	No. of serious injuries		
	Children	Total	Percentage
Pedal cyclist (b), (c)	252	1285	20%
Pedestrian (a), (d)	117	955	12%
Motorcycle (b), (c), (d)	146	2480	6%
Motor vehicle occupant (a), (d)	163	4086	4%
Level crossing (a), (e)	1.4	36	4%
Train-other than level crossing (a), (e)	6	162	4%
Tram (a), (e)	1	79	1%
<b>Total</b>	<b>686.4</b>	<b>9083</b>	<b>8%</b>

**Notes** (a) Children = 0-14 years. (b) Children = 5-14 years (due to statistically insignificant numbers under 5). (c) Includes traffic and non-traffic crashes. (d) Source: Henley & Harrison (2015). 'High threat to life' serious injuries. (e) Source: Henley & Harrison (2017). Serious injuries.



**Figure 1** Chart representing average number of serious injuries in children in land transport incidents in Australia per year, by transport mode

**Notes** (a) Children = 0-14 years. (b) Children = 5-14 years (due to statistically insignificant numbers under 5). (c) Includes traffic and non-traffic crashes. (d) Source: Henley & Harrison (2015). 'High threat to life' serious injuries. (e) Source: Henley & Harrison (2017). Serious injuries.

Gender is very clearly a factor. The number of males seriously injured in incidents involving a train Australia wide was significantly greater than females: five times greater in the 10-14 age group, and 3 times greater in the 15-19 age group (Henley & Harrison, 2017, p. 14). This is consistent with the findings of an informal study of train drivers' observations in 2014, in which the TrackSAFE Foundation found that the majority of incidents in the rail corridor involve males, and only a small percentage were thought to be children or adolescents (N. Frauenfelder, personal communication, November 14 2019).

An interesting point to note is that the rates tend to increase from the 'child' to the 'youth' age groups, particularly when trains are involved. For example, on roads, the 17-25 age group represented an average of 14% of pedestrian fatalities over the reported ten year period, which is one and a half times the rate of the 0-16 age group (DIRD, 2015). In serious injuries with trains between 2009-10 and 2013-14, children aged 0-14 represented 4% of serious injuries, increasing almost 5 times to 17% for ages 15-24. In serious injuries with trains at a level crossing between 2009-10 and 2013-14, children aged 0-14 represented just 4%, jumping to 27% in the 15-24 age group, which means older adolescents were injured at almost 7 times the rate of children and younger adolescents (Henley & Harrison, 2017, p. 24). These statistics relate to all people of these age groups: whether or not they attend school is not reported.

Whilst children represent the smallest group in the data on road fatalities and serious injuries, the rates increase into adolescence, and then increase even more into adulthood. As the National Road Safety Strategy 2011-2020 says, "No person should be killed or seriously injured on Australia's roads" (Australian Transport Council, 2011, p. 31). Life-long education, underpinned by a clear understanding of the developmental changes faced by adolescents and grounded in appropriate pedagogical frameworks to allow adolescents to flourish, may be able to play a role in making this vision happen.

### Why does transport safety education matter?

*Education is not a 'silver bullet'*

Education should not be expected to change behaviour or reduce statistics on its own. Lammers (1996) says affecting health behaviours with curriculum on its own may not be a reasonable objective: health behaviours are dependent on myriad factors to influence behaviours in adolescents, as we have seen in Part One of this chapter. She concludes that a comprehensive approach may be needed to address health behaviours, with education being just one of these factors (Lammers, 1996). Behaviour change is so complex that any expectations of behaviour change for a safety education programme are probably too high (Twisk, Vlakveld, Commandeur, Shope & Kok, 2014). Pike and Smith (2019) referred to behaviour change in British Columbia, Canada on a 'social issues continuum', where behaviour change for other social issues such as anti-smoking, seat belts, and recycling are at various points on the continuum. When awareness and engagement for injury prevention is low, it will be an ongoing process over 30 years from the start of a multifaceted engagement strategy until mass engagement is likely to occur (Pike & Smith, 2019). For this reason, education programmes should never be tasked or considered as the 'silver bullet' for 'fixing' the problem of or reducing the rate of adolescents being involved in transport incidents, either in the short term or on their own.

### *Education as a key input in a safe system*

If education cannot change statistics or behaviour on its own, how does education play its part? 'Education and information' is considered as one key input to the 'safe system' approach to reducing road safety incidents, along with innovation; standards; coordination; data, research and evaluation; road rules and enforcement; and licencing and registration (National Road Safety Strategy, 2018). These key inputs surround the interactions of safe people (which transport safety education impacts) safe roads, safe speeds, and safe vehicles; are supported by work to prevent crashes that result in serious injury or fatality, which encircle the human tolerance of crash impacts (National Road Safety Strategy, 2018). Perhaps the safe system approach, which is focussed only on road safety in this strategy, could be applied consistently across all transport

modes and environments by the relevant policy makers, to ensure consistency across all transport sectors.

### What is known to be 'effective' in transport safety education internationally?

There are a range of publications that evaluate or describe through the literature a number of approaches known to be effective in achieving an increase in students' knowledge and skills relating to road safety. In France, Assailly (2017) showed that if road safety education is based on good practices, forms part of a lifelong learning approach, and involves both knowledge and life skills, it can have positive effects. Dragutinovic & Twisk (2006) published a literature review through the SWOV Institute for Road Safety Research in The Netherlands, after examining road safety education initiatives for 3-11 year olds in The Netherlands, United Kingdom, France, Spain, Scandinavian countries, Croatia, Estonia, Latvia, Lithuania, Belarus, Czech Republic, Australia and New Zealand. They concluded that road safety should start before school and continue throughout primary and secondary school, and that smaller bites of practical lessons are effective to develop a concept based on action. In an evaluation of five road safety education programmes for adolescent pedestrians and cyclists, Twisk et al. (2014) found that cognitive approaches were more effective than fear-based approaches in The Netherlands and USA. Raftery & Wundersitz (2011) conducted a review of the efficacy of road safety education approaches in Australia, Canada, US and Norway, and found that it was difficult to state whether programmes worked or did not work as the evaluations in the original studies were not rigorous enough, but they could say that programmes that addressed the underlying causes of risk taking behaviour showed potential.

It is worth mentioning that a majority of the research about road safety education programmes for adolescents incorporate driver training programmes under the umbrella term 'road safety education': they may not be specifically relevant to other transport safety issues such as pedestrian safety, but are



incorporated into the literature and recommendations for what works and what does not work in road safety education, and as such are difficult to separate.

Also of note is that the majority of research available and reviewed here talked about students rather than talked with students or used student voice as evidence. These studies and reviews predominantly include a 'birds eye' view of students, without asking students themselves how they learn best. This is, in my view, an important factor that is missing in transport safety education research.

### History and context of transport safety education programmes in Australia

Transport safety education programmes have been present in Australian schools in a formal and informal capacity for decades. In NSW, variations of the current road safety education programme have been running since 1986, in the form of resources for primary and secondary schools and the 'Kids and Traffic' programme for early childhood (Transport for NSW, n.d.; Marsh & Hyde, 1990).

Evidence of evaluation of more modern programmes goes back to 1990, when Marsh and Hyde (1990) delivered a 534 page report into road safety education in schools for the then Federal Office of Road Safety in Canberra. This study, which is the largest and most comprehensive study on Australian transport safety education to date that I know of, involved 101 interviews of road safety practitioners and policy makers across every state and territory in Australia; 148 questionnaires; a systematic analysis of the research literature and 85 education programme packages; as well as 59 case studies of programmes in action at individual schools (Marsh & Hyde, 1990).

Marsh and Hyde (1990) concluded their report with twenty nine recommendations on improving road safety education practices in Australia. Some of Marsh and Hyde's (1990) recommendations include advocacy for a mandated curriculum-based approach to learning (p. 237); more full-time consultants to facilitate road safety education in schools (p. 239); production of materials such as bicycle and pedestrian safety resources "with simple instructions and a built-in flexibility so that they can be used in a variety of

teaching situations” (p. 245); and new programmes developed with an integrated approach (p. 256).

Whilst there are elements of the report which are outdated due to advancements in technology and educational practices, most of the recommendations are still highly relevant. However, what struck me most about their recommendations is that now, thirty years since the study was published, many of them have not been, or are no longer, implemented in transport safety education programmes in most states or territories, despite the detailed and thorough investigation and evidence base this study provides. Is this because of the barriers Marsh and Hyde (1990) describe, such as a lack of funding, lack of support for staff in implementation, and lack of time in the curriculum—all challenges still faced in transport safety education today?

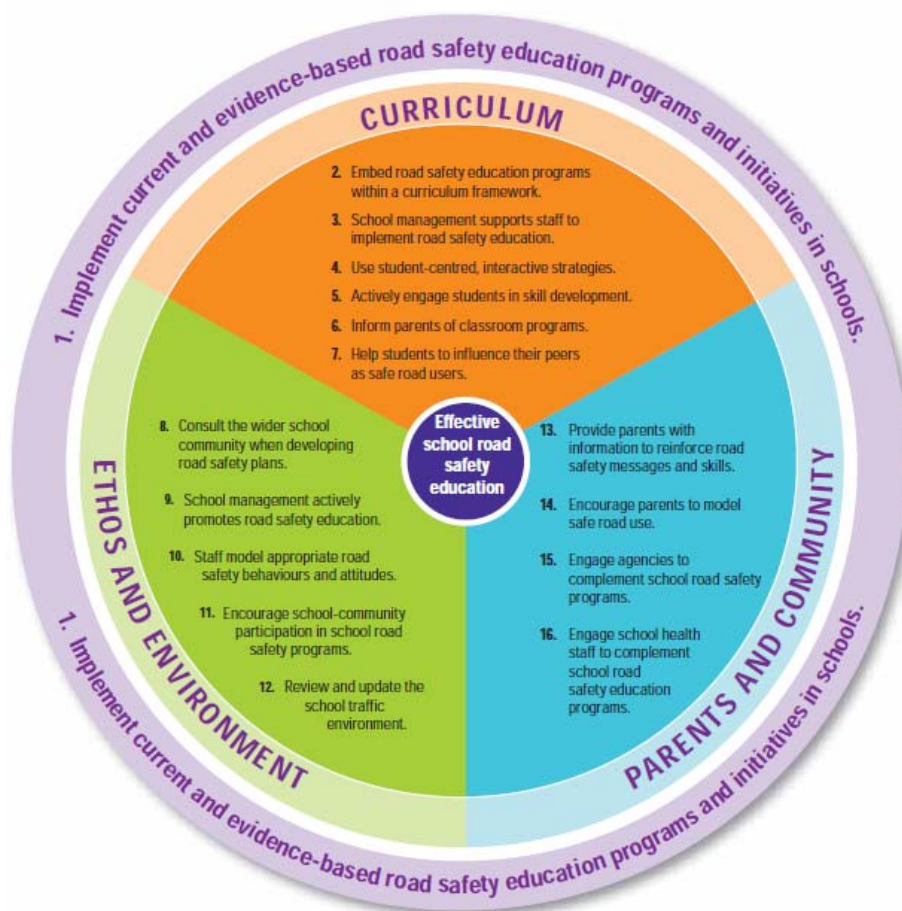
There have been some states which have implemented positive changes in line with these recommendations, such as NSW, which has been the only state or territory in Australia to incorporate road safety education as a compulsory part of the curriculum, within the Personal Development, Health and Physical Education (PDHPE) Years 7-10 Syllabus (NSW Education Standards Authority (NESA), 2003). A new NSW PDHPE syllabus has recently been released, and was rolled out across the state in stages during 2019, with full implementation from 2020 (NESA, 2018-a). Whilst, as recommended by Marsh and Hyde (1990) the PDHPE course itself is mandatory for all students in Year 7 to 10 in NSW (NESA, n.d.), the new PDHPE syllabus no longer includes ‘road safety’ as a compulsory element of the syllabus (NESA, 2018-a). Instead, the new NSW PDHPE syllabus includes both road safety and rail safety examples as suggested content in a variety of sections, which is consistent with its overarching national framework, the *Australian Curriculum: Health and Physical Education (HPE)* (Australian Curriculum, Assessment and Reporting Authority (ACARA), n.d.-a). Therefore there is no longer a mandate for NSW schools to teach road safety, despite a submission from the NSW Centre for Road Safety to NESA during the consultation period (NESA, 2018-b).

Current transport safety education programmes in Australia are developed using a wide range of approaches. Ferris (2017), noted that current transport safety education programmes in Australia include traditional or didactic approaches where the content and delivery are top-down and centred on ‘information giving’ by the teacher or person facilitating; through to student-centred approaches which focus on the learners and encourage them to produce their own knowledge.

Transport safety education programme policy makers and developers can access a range of guidelines and documents which outline or synthesise the evidence known to date about how students learn best about road safety education. It is not compulsory to follow them, however, as there is no overarching governing body to regulate the quality of programmes. The Road Safety Education Reference Group Australasia (RSEGA), which I am a member of, is a group comprised of staff from organisations across Australia and New Zealand who have an interest in road safety education, however it is a collegiate membership not a regulatory or governing body, and therefore has no jurisdiction to establish a model or set of recommendations for transport safety education to create consistency across states and territories. This means not all programmes are designed using available research or best-practice guidelines to inform their development, and therefore teachers and other practitioners are less likely to be able to make an informed choice as to the quality or effectiveness of the programme, or if the programme is suitable for their students.

For the past decade, the *Principles for School Road Safety Education* have provided guidance to educators on how to know whether or not a road safety education programme will be effective, appropriate, evidence-based, or suitable for the students they are designed for (Government of Western Australia (WA), 2009). The *Principles for School Road Safety Education* is a tool synthesising the road safety education literature, putting the literature in the context of the ‘Health Promoting Schools’ (HPS) framework, and giving educators a practical checklist of items to consider when implementing a road (or transport) safety education programme in a school. Researchers developed sixteen guiding

principles, visually represented through the “Effective Road Safety Education Model” (Figure 2) (Government of WA, 2009, p. 9).



*Figure 2 Effective Road Safety Education Model. Principles for Road Safety Education (2009, p. 9). School Drug Education and Road Aware (SDERA), Department of Education, Western Australia. Reprinted with permission.*

The model’s outer, surrounding ring is the overarching principle, to “implement evidence-based road safety education programmes and initiatives in schools and include local research and current legislation where available” (Government of WA, 2009, p. 7). The remaining fifteen principles are arranged into three sections in the model, which align with the HPS framework, giving the model an internationally recognised, best-practice, evidence-based foundation.

To give some context, HPS was first adopted by the World Health Organisation (WHO) in 1986 via the Ottawa Charter for Health Promotion (WHO, 1986), and in Australia in 1996 the National Health and Medical Research Council

recommended the adoption of a HPS approach (Parliament of Victoria Education and Training Committee, 2010). Subsequently, according to the Parliament of Victoria Education and Training Committee (2010), in 1997 the Commonwealth Department of Health and Family Services commissioned the Australian Health Promoting Schools Association (AHPSA) (which has since merged with the Australian Council for Health, Physical Education and Recreation (ACHPER) (ACHPER, n.d.)) to develop a national framework as an interface between the health and education sectors to promote health improvements for Australian children (Parliament of Victoria Education Committee, 2010).

AHPSA developed the national HPS framework with three overlapping sections: “curriculum, teaching and learning”; “school organisation, ethos and environment”; and “partnerships and services” (p. 18), which is sometimes referred to interchangeably with or alongside the term “whole-school approach” (see Government of WA, 2009; Parliament of Victoria Education Committee, 2010; Harris, n.d.; NSW Department of Education n.d.-a; NZTA, n.d.). The Effective Road Safety Education Model adapts the national HPS framework to suit the road safety education context, using the headings “Curriculum”; “Ethos and Environment” and “Parents and Community” (Government of WA, 2009, p. 9), and the corresponding principles (Figure 2). NSW Department of Education adopts a variation of this model (NSW DoE, n.d.-a).

### Recommended approaches for success

Drawing on the principles from the model, along with some research from a variety of educational perspectives, I will outline some of the key features for good practice in transport safety education in schools highlighted in the literature.

#### *Curriculum-based learning across the years of schooling and across the curriculum*

Transport safety education is shown to be more effective when it is embedded in the school curriculum (Government of WA, 2009; Harris, n.d.; NZTA, n.d.), and builds on skills as students develop (Harris, n.d.; NZTA, n.d.). Chamberlain and

Hook (2012) suggest that using a cross-curricula approach offers “diverse, innovative and engaging ways to achieve both road safety and subject outcomes” (p. 6). The lessons used in this study feature cross-curricula related content such as Drama (Forum Theatre), Civics and Citizenship and English (advocacy task). The wider suite of resources also include English and The Arts lesson plans. They include explicit curriculum links to assist the teacher in planning and fitting it into their teaching programme.

### *Trained educators provide the learning experience*

Elkington, Hunter and McKay (2000) recommended safety programmes aimed at injury prevention be taught by teachers who are trained by experienced health educators, and be based on appropriate pedagogical theories. Harris (n.d.) and NZTA (n.d.) agree that teachers are the most appropriate providers of health and safety programmes in schools.

### *Multiple sessions*

It has also been shown that multiple sessions over time has the most influence on knowledge, skills and attitudes for children (Dragutinovic & Twisk, 2006; Elkington, Hunter & McKay, 2000; Raftery & Wundersitz, 2011). Whilst not strictly related to the age group in question, in a systematic review of the evidence on preventing injuries in 15 to 24 year olds, Elkington, Hunter and McKay (2000) found no evidence that short, one-off programmes or isolated education approaches make any difference to injury prevention. They concluded that for education programmes to have any lasting impact on adolescents’ safety or health, programmes should be implemented over multiple lessons (which they defined as five or more).

Chamberlain and Hook (2012) stress the need to give students several chances to learn a new concept or skill, because most students need to engage with ideas a number of times before gaining an understanding. They give a concrete guideline for content development over a series of lessons, saying that any unit of work should be designed at an appropriate length to allow students to “take in ideas;

link these ideas; look at these ideas in a new way; and do something with them in real life” (Chamberlain and Hook, 2012, p. 4).

### *Age appropriate content*

Transport safety education programmes need to be designed with students’ ages and developmental stages in mind, with serious consideration of the evidence against using fear appeals, such as videos, stories or images intended to shock students (Harris, n.d.; NZTA, n.d.). A safety education programme 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).

### *Student centred, interactive learning activities which generate discussion*

Research on road safety education programmes (Elkington, Hunter & McKay, 2000; Masten & Peck, 2004; Raftery & Wundersitz, 2011) and drug education programmes (Botvin, 2000) have shown approaches which give information, (especially when used on their own or one-off capacity), are not effective in changing or influencing behaviour. Reyna and Farley (2006) showed 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. As Siegel (2014) confirmed earlier, this shows that providing this particular group with information about the risks will not prevent them from doing risky behaviours.

In a systematic review of evidence into preventing accidental injury to adolescents, Munro et al. (1995) affirmed that giving out information in itself is not sufficient to achieve any sort of behavioural change, but rather programmes which use a variety of interactive, student-centred approaches such as role play, encouraging alternative (safer) behaviour, and developing social norms against unsafe behaviours, may change knowledge, attitudes, and self-reported behaviour. Elkington, Hunter and McKay (2000) agree that education programmes centred on interactive sessions are more likely to be effective for injury prevention, for example, learning activities which are designed for students to interact with each other.

The NZTA (n.d.) suggests implementing programmes which engender student centred, interactive practices such as idea and experience sharing (including discussions) can provide opportunities to practice new skills, as well as gaining feedback on these skills.

*Focus on building resilience and skills in resisting social influences and pressure to act in unsafe ways*

To improve the interactivity of a programme, skill building can be a useful inclusion. Elkington, Hunter and McKay (2000) suggest education programmes focussed on building skills to recognise safer alternatives and make safer choices are more effective in preventing injuries. The NZTA (n.d.) recommend developing programmes which develop skills on coping, refusal and resilience: building students' capabilities of what to do when faced with a situation where they may be at risk, to be able to choose a safer behaviour.

Approaches where teachers can support learners to use their own unique strengths, and develop the knowledge and skills required to make safe choices, are encouraged as part of the latest thinking for effective for health education (ACARA, n.d.-a). Vera et al. (2019) say that in the context of bullying, the key to increasing upstanding behaviour in young adolescents is to build skills and self-efficacy on how to be an upstander in real settings, as well as an awareness that they need to be an upstander. They say direct and indirect learning experiences can improve self-efficacy, and that techniques such as role modelling, acting, and coaching in the preferred behaviours, can be used (Vera et al., 2019).

*Builds on school connectedness*

Feeling accepted and included in the school community, or 'school connectedness', decreases a student's likelihood of becoming involved in risky behaviours (Harris, n.d.; NZTA, n.d.). Bergin and Bergin (2009) argue all students want to learn, however they do not always want to learn the content they are expected to learn at school, and that attending to their emotional needs first allows them to feel safe, and in turn have better outcomes. They give an extensive insight into the benefits secure teacher-student attachments can have on student wellbeing and reducing risky behaviours in school students (Bergin &



Bergin, 2009). To build attachment relationships with their students, Bergin and Bergin (2009) recommend teachers use strategies such as having high expectations of their students; giving choices (particularly in individualist cultures); and using effective discipline (where the teacher avoids using power over the student and keeps their tone of voice respectful and positive), rather than coercive discipline (where the teacher uses threats imposes power and control over the student) to achieve compliance.

### Chapter summary

Recent developments in neuroscience and psychology have illuminated many insights into adolescence in relation to brain development. The literature tells us adolescents need empathy, not retribution, for the way their brain makes them function. They also need appropriate guidance from adults.

Adolescents are wired to take risks, because the novelty seeking part of their brain is still developing. No matter how much we tell them about the consequences of risky behaviour, they will keep on doing it. On the other hand, this particular function of the brain at this age means adolescents are also open to driving change.

Adolescents have increased social engagement with their peers: they do not want to hear what adults want them to know: they want to be with and listen to other teens, and these relationships are really important to them. Adolescents also do more creative exploration, and while this can help them challenge thinking, it can also leave them vulnerable to peer pressure and bullying.

All of these factors are helpful to know, because this knowledge can inform transport safety education programs and practises. We know that statistically children are not overrepresented in all modes of transport for fatalities and serious injuries, however one death or serious injury is one too many. This is why transport safety education for school students is important.

The Effective Road Safety Education Model is widely used in Australia and has a solid grounding in research. Because I am researching from the stance of a

transport safety education practitioner and programme developer from an external not-for-profit provider, rather than a school-based teacher or school executive, I have focussed on the 'curriculum' section of the Effective Road Safety Education Model in this study, which is the section an external provider has the most influence in.

In considering what we know about transport safety education worldwide and in Australia, both historically and currently, a number of recommended approaches for success emerged. These approaches are known to be effective in transport safety education, and form the basis of the learning experience for this study.

## Chapter Three: The critical pedagogy vision

### Chapter overview

In this chapter, I give an overview of critical pedagogy as a vision for learning. I look at critical pedagogy in a historical context and explain what is known about teaching and learning relating to certain aspects of critical pedagogy I identified in the learning experiences in this study. I will then show how these might be relevant in the context of transport safety education programs more generally.

### The emergence of critical pedagogy

Influenced by Foucault and his notions of power and discourse, Paulo Freire became one of the most influential critical educators of last century (Giroux, 2011) by challenging the thinking around pedagogy, the way schools are influenced by power, and the concept of knowledge (Freire, 1970/2018; Kincheloe, 2004). A founder of critical pedagogy (Giroux, 2011), Freire believed that education in its plainest sense is part of a mission of freedom (Freire, 1970/2018). Giroux, a scholar of Freire, said Freire saw education as highly political, as it gives students an environment for “self-reflection, a self-managed life, and particular notions of critical agency” (2011, p. 716). Giroux (2011) says critical pedagogy attempts to understand how power works through the production, distribution, and consumption of knowledge within particular institutional contexts and seeks to establish students as informed citizens and agents of social change. Critical pedagogy emphasises the value of critical analysis, making moral judgments, and having a social responsibility (Giroux, 2011).

Drawing on Freire and Giroux’s earlier works, Kincheloe (2004) explains that critical pedagogy is the shift needed in society’s thinking about education, in big picture terms such as the capabilities for human achievement; the social, political and cultural influences on human identity; how power functions not always in the interest of students; how students and teachers relate to knowledge; and how teachers and learners relate to each other in the context of the school. After

its beginnings with the attempt to free the oppressed in Latin America, critical pedagogy has become a mainstream discipline of education (Torres, 1998).

Critical pedagogy as a vision or movement is usually driven at a local level by teachers who identify as critical teachers, addressing global and societal level issues such as race, class and gender inequalities, and helping students form their own motivations for change to create a more equitable society (Freire 1970/2018; Giroux, 2011; Kincheloe, 2004). I will next argue the characteristics of critical pedagogy can apply in a transport safety education context to address the fundamental reasons for adolescent risk-taking behaviour, and to offer a meaningful learning experience for students undertaking transport safety education.

#### Key characteristics of critical pedagogy identified in the lessons

A number of key characteristics of critical pedagogy feature in the lessons used in this study (see Table 2, Appendix 2). The following descriptions are my interpretation of these key characteristics from the literature, with examples of how they feature in the Lesson Plans (see Appendix A) as enacted in this study, by underpinning the learning experiences and/or being present in learning activities. This is a small unit of work, so although it will not go to the depth that would usually be expected of critical pedagogy, the whole experience—including each lesson and the learning activities within them—was deliberately planned with critical pedagogical intentions.

#### *Civics and citizenship as the broader goal*

Critical pedagogy offers certain characteristics which have been proven to drive social change in communities (Kincheloe, 2004; Rowan & Bigum, 2010). Rather than promoting social regulation and “proper attitudes” (Kincheloe, 2004, p. 8) in students, critical pedagogy encourages students to become “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). In a school context, this idea ties in with ‘Civics and Citizenship’ as a learning area, where

students learn about civic institutions and processes of decision making for the good of the whole community, and develop skills to contribute to democratic society (ACARA, n.d.-b; NSWDoE, n.d.-b). Civics and citizenship is an important element of the school curriculum: in NSW it is incorporated and assessed across all syllabuses to Year 10 (NSWDoE, n.d.-b).

The concept of civics and citizenship fits well within transport safety education and underpins the transport safety education experiences in the study.

According to Baldwin and Erb (2015), “the Safe System approach presents young people with many entry points to unpack road safety in line with the moral, technical and social knowledge curation and creation that being a citizen sharing the roadway can entail” (p. 2). Being a safe transport user is, in the bigger picture, being a safe and considerate citizen: perhaps approaches that provide opportunities to practice skills in the positive aspects of what this can look like could drive social change in the long term? The collaborative nature and progression of the learning activities from Forum Theatre in Lesson Two to the trading cards and advocacy activities in Lesson Three is designed to encourage students to realise that transport safety is important; share their own ideas for how improvements can be made; and see that they are capable of driving change in their own context and community.

### *Context, community and relationships*

The context within which the school exists, the wider community and the relationships forged throughout the community are an important feature of critical pedagogy. Kincheloe (2004) says critical pedagogy is a vision which sees “schooling as part of a larger set of human services and community development...based on larger social and cognitive visions” (pp. 6-7). By understanding the complex political, social, cultural, cognitive, and economic frameworks and contexts schools are operating within, in a critical pedagogical context, teachers connect the students with their contexts and use resources within the community “to help facilitate quality education with an impassioned spirit” (Kincheloe, 2004, p. 7). This helps critical teachers to build relationships

with their students and recognise when unhelpful influences start to sabotage student success (Kincheloe, 2004, p. 7).

This pre-existing knowledge of and relationships with their students, and the understanding of the contexts and culture in which the school operates, allows the teacher to spot any unhelpful influences (such as family violence, poverty, relationship breakdowns, or bullying) as they emerge, and help prevent them from sabotaging the students' success in learning.

The learning experiences used in this study are designed for the usual classroom teacher to teach. It is important for the teacher to effectively guide students through the learning activities: Lesson Two and Lesson Three (see Appendix A) would be particularly challenging to teach without having existing relationships with the students, as well as a reasonable understanding of each students' contexts and the wider community. For the purposes of this study I became the teacher, and attempted to minimise the issue of not knowing the students well by spending three lessons with them to build relationships prior to becoming their teacher.

### *Power as a catalyst for reducing harm*

Power as a positive influence in reducing harm is one of the underlying features of critical pedagogy that features in the learning experience in this study. Power can give students from a privileged background the upper hand in inherently political school systems (Kincheloe, 2004). Kincheloe's assertion is that in a critical pedagogy, power must be recognised and used in a way that helps improve the ways specific students are harmed at school (2004, p.9). Examples of power in this sense can be socio-economic biases, gender or sexuality discrimination, racism, and cultural oppression (Kincheloe, 2004, p. 9). Whilst this notion goes beyond the capabilities of a transport safety education programme, it is worth mentioning as something that can underlie any activities being carried out in a school context. This is because biases, discrimination and oppression can manifest themselves into peer pressure and bullying (Smokowski & Evans, 2019), which is a prevalent form of harm among Australian school students (AIHW, 2009; 2019).

Power is an aspect of Lesson One when students discuss the reasons people act unsafely in the transport system. In Lesson Two power dynamics are allowed to play out both in an unsafe scenario (bullying leading to harm to a person using the transport system) and safer scenario (changing the behaviour of the characters for a different, safer, more positive outcome), entirely driven by the students. This demonstrates to students that shifting power away from other students displaying bullying behaviours is possible, and most crucially, introduces new skills on how it might be done. In Lesson Three, power dynamics and ways to manage these are identified in the context of peer pressure in the trading card activity (see Appendix A).

### *Respect for students and their expertise*

Respect for students and what they can offer is a key characteristic of critical pedagogy that appears in the learning experience. Kincheloe states “...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). Freire says we need to respect students and the processes they are undergoing to develop their identities, by taking into account the conditions they live in, their knowledge from lived experiences, their autonomy, and their dignity (1998). This feature is an inherent teacher skill implied in the lesson plan, evidenced in the way the lessons are written to champion the students and their knowledge and real-life transport experiences in a variety of ways.

Respect for students can also be demonstrated by listening to them: by being open to their words, gestures, and differences without prejudice, while still maintaining the right to disagree, contest, or take a certain position (Freire, 1998). Again this is something the teacher would need to bring to the learning experience, and would be fostered through the content.

Rowan and Bigum (2010) emphasise that when students know what they are doing matters to adults and focus is put on the skills and resources they *do* have, rather than seeing themselves as passive receivers of a curriculum designed by

‘experts’, they gain confidence as learners, and positive relationships can be forged with the local community.

The underlying foundation of the learning experiences used is that all students and forms of knowledge are valued (Rowan & Bigum, 2010). The content of all of the lessons positions students as experts in issues affecting them, and empowers them to: discuss and critically analyse issues within transport safety relevant to them in their local community (Lesson One); experiment with risk taking behaviours and demonstrate alternative safe choices in a controlled environment (Lesson Two); and choose between either creating a useful resource for themselves/their peers when faced with a situation requiring decision making in the transport environment, or using their ‘impassioned spirit’ to discuss how they can take action to make changes in their community (Lesson Three) (see Appendix A).

### *Recognition of prior knowledge*

When students are given the opportunity to become the ‘teacher’ and share their knowledge with others, they realise they have worthwhile knowledge, and in turn come to recognise they are capable of learning a great deal more (Kincheloe, 2004). This leads to the teacher working with the student to find other knowledge to learn, and identify the benefits of that knowledge for everyday life (Kincheloe, p. 15).

In Lesson One, students are asked to share their prior knowledge with the class through the brainstorming, hazard checklist, and hexagon activities. In Lesson Two, their knowledge of both the transport system and peer pressure are drawn on as students develop their plays and take the place of other characters. In Lesson Three, students are expected to build on their existing understanding of managing peer pressure or young peoples’ influences on safety in the local area (see Appendix A).

### *Problem posers and problem solvers through critical thinking*

Critical pedagogy is centred on the relationship between individuals in institutional settings, whereas critical thinking is a process that happens



internally within a person (Burbules & Berk, 1999). Having critical thinking skills means having the aptitude to search for reasons, truth, and evidence; as well as the disposition to search for them (Burbules & Berk, 1999). Critical thinking is an important skill to be able to take action, even in small ways at a local level, such as in these three lessons, to change the world through critical pedagogy (Burbules & Berk, 1999).

Students who learn within a critical pedagogical framework become problem posers, and learn to question knowledge and incorporate culture and history into their body of knowledge (Kincheloe, 2004). When students are given an opportunity to become researchers and engage in critical thinking and analysis, it encourages them to develop a “healthy and creative skepticism [*sic*]” (Kincheloe, 2004, p. 16). This helps them to pose problems, read between lines of text, and be sceptical of claims of neutrality or ethical behaviour in texts (Kincheloe, 2004). Critical thinking is a higher order thinking skill, which McGuinness suggests is necessary to go beyond recall of facts and jumping to conclusions, and instead gain a deeper understanding to make reasoned decisions (2005).

Critical thinking is an important skill that goes beyond the classroom and a students’ time at school. According to ACARA, “critical thinking is at the core of most intellectual activity that involves students learning to recognise or develop an argument, use evidence in support of that argument, draw reasoned conclusions, and use information to solve problems” (n.d.-c, para. 5). Critical thinking involves a complex process of inquiring, generating ideas, reflection and analysis (ACARA, n.d.-d) and needs to be simultaneously and explicitly developed alongside creative thinking in the classroom (ACARA, n.d.-c).

Examples of problem posing, problem solving and critical thinking can be seen in Lesson One in the hexagon activity; Lesson Two in the second iteration of the play where students act out alternative outcomes; and Lesson Three in the advocacy activity (see Appendix A).

### *Recognition of cognitive differences*

Critical pedagogy takes into consideration the cognitive differences of students. Kincheloe (2004) points out “there are thousands of different ways to learn” (p. 22) and teachers need to accommodate these in increasingly complex ways. Rather than positioning school students as “a homogenous group who will all benefit from the same set of educational practices” (Rowan & Bigum, 2010, p. 195), teachers need to meet the needs of a diverse range of learners by taking into account students’ current situation in terms of their strengths, interests, and motivations; and the type of resources they have access to within the school and community.

Critical pedagogy enables the teacher to cultivate the intellect of their students and drive social change (Kincheloe, 2004). Within a critical pedagogy, teachers use teaching methods specifically designed for the unique needs of the students they are teaching (Kincheloe, 2004). 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).

In this small unit, cognitive differences are recognised in Lessons One, Two and Three, as the teacher is provided with suggestions on options to adjust or differentiate the learning activities to accommodate cognitive differences. Lesson Three also provides two distinct options to give an opportunity for students to decide themselves as to which activity to do, based on their own interests and motivations (see Appendix A).

Appendix B provides a matrix to summarise where these key characteristics of critical pedagogy feature in the lessons and/or underpin the learning experience as a whole. An interesting point to note is that all lessons except Lesson One feature each of these key characteristics: the first lesson brings in ideas, the last part of Lesson One and the second lesson connects ideas, and the third lesson extends ideas. Through the bringing in of ideas, students give the teacher a clear understanding of their level of prior knowledge. Lesson One is designed to build knowledge, to enable them to work with more critical approaches for Lesson Two and Lesson Three.

### *High expectations*

Critical teachers have high expectations, which helps particular students flourish in schools in specific communities (Kincheloe, 2004, p. 7). My interpretation is that Kincheloe is referring to those students who are oppressed, for example by ethnicity, sexuality, or socio-economic status, and perhaps also perceived academic ability.

The content in the learning experiences used in this study does not 'talk down' to students or aim for teaching the 'lowest common denominator' of students. Instead, it acknowledges prior knowledge and life experience, and challenges students from a place of high expectations. In Lesson Two, students are expected to come up with the content themselves and participate fully, and in the activism activity in Lesson Three students are expected to use higher order thinking.

### *Teacher as facilitator of student enquiry and knowledge production*

In the vision of critical pedagogy, teachers have a very important role. Freire says "to teach is not to transfer knowledge but to create the possibilities for the production or construction of knowledge" (1998, p. 30), and describes teaching and learning as having a symbiotic relationship, where one can't exist without the other. He says that for true learning to occur, learners are "engaged in a continuous transformation through which they become authentic subjects of the construction and reconstruction of what is being taught, side by side with the teacher, who is equally subject to the same process" (1998, p. 33). The task of a teacher is to motivate their students to overcome their difficulties in comprehending the subject being studied, and the teacher must affirm their students' curiosity, in order to create a sense of fulfilment once they have achieved their goal (Freire, 1998). Freire (1998) says the process of discovery breeds knowledge:

To teach is not to transfer the comprehension of the object to a student but to instigate the student, who is a knowing subject, to become capable of comprehending and of communicating what has been comprehended....To teach and to learn have to do with the methodically

critical work of the teacher instigating the comprehension of something and with the equally critical apprehension on the part of the students. (pp. 106-107)

The authority of the teacher is dialectical: teachers are “facilitators of student inquiry” (Kincheloe, 2004, p. 17) instead of a provider of ‘truth’. They demonstrate their authority through their support of their students.

Relinquishing their authority means they assume the role of facilitators of student enquiry (Kincheloe, McLaren, Steinberg & Monzo, 2018), and this shift gives students the freedom “to become self-directed human beings capable of producing their own knowledge” (Kincheloe, 2004, p.17). In some ways, the teacher is giving them a ticket to be their own free thinking agent.

As a practical, real world example of critical pedagogy in action, Rowan and Bigum (2010) share examples of teachers using a Knowledge Producing Schools (KPS) framework, where, rather than getting students to acquire knowledge through text books, teachers support their students to do serious “knowledge work” (p. 198). They say learning activities focussed on knowledge production can facilitate authentic tasks which go beyond the “fridge door” (Rowan & Bigum, 2010, p. 193) where the audience is only parents and teachers, and instead contain real-world, student-driven tasks which enable students to produce their own knowledge to benefit themselves, their school and the wider community (Rowan & Bigum, 2010).

All three lessons offer teachers an opportunity to foster enquiry in students and give them the opportunity to produce knowledge. This knowledge production happens through Lesson One’s hexagon activity, Lesson Two’s Forum Theatre plays, and both activities in Lesson Three. The latter encourages students to take their knowledge beyond the ‘fridge door’ to their peers and the broader community.

### *Teacher experience matters: teachers become researchers and in turn produce knowledge*

A critical pedagogical approach requires teachers to become researchers and in turn produce knowledge. Kincheloe describes the immense undertaking teachers

have, examining their role as more than “managers of the predetermined knowledge of dominant cultural power” (2004, p. 5) who do more than simply learn the requirements of the curriculum and a few techniques to appease different learning styles (2004). He says teachers have 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, pp. 4-6). I argue that this big picture thinking is important for any teacher operating in the context of a school.

Teachers using a critical pedagogy, or critical teachers, are constantly constructing insights through their own classroom experience. This allows teachers to be viewed as learners in their own right, rather than minions following orders from the top. Rather than passive receivers of knowledge in a “dumbing-down of the curriculum” (Kincheloe, 2004, p. 19), teachers also become producers of knowledge through collaborative projects. In fact, this is a concept that is not confined to critical pedagogy: in a review of over eight hundred meta-analyses relating to student achievement, Hattie concluded, “the biggest effects on student learning occur when teachers become learners of their own teaching, and when students become their own teachers” (2009, p. 22).

In these transport safety learning experiences, the teacher is able to learn alongside the students. Even though the learning activities are largely led by the students, such as the hexagon activity in Lesson One, as well as Lessons Two and Three, the design allows the teacher and students to learn together in a collaborative way, in particular when transport safety subject matter knowledge is involved. The classroom teacher’s experience may give them insight into how their students learn and what motivates them. Teachers are given the opportunity to become researchers of the problems of transport safety existing in their local setting. They are not expected to be ‘experts’ in transport safety, so the lesson plans give guidance and links for the teacher to explore and prepare the lessons. In Lesson Three, the usual classroom teacher (or indeed, the

students) could choose to work alongside a transport industry SME, for example a train, tram or truck driver, road engineer, or road safety researcher, for their expert input into the lesson.

Teachers can also be researchers of their students by seeing them as “socially constructed beings” (Kincheloe, 2004, p. 20). On a daily basis, teachers study their students, listening to their ideas about their communities and the problems which confront them in order to understand their students—their motives, values, and emotions—and teach them more effectively (Kincheloe, 2004). In the context of the learning experiences in this study, understanding their students is made possible because they are designed for the usual classroom teacher to teach the lessons. A person from outside the school, particularly in a one off school visit, would be unlikely to reach the intended depth.

### Chapter summary

Whilst adolescents represent a relatively small number of serious injuries and fatalities in our transport network, in an effective safe system, there should be none. One key input to the safe system is education. Transport safety education experiences have a long history in modern Australia and use varied pedagogical approaches. There are academic papers, publications and guidelines available providing evidence about how students learn best for a variety of safety educational settings, however using evidence to inform transport safety education programmes is not mandated, and therefore not all providers incorporate the available evidence into their programme development and implementation. In addition, I have not located any studies in the literature about transport safety education programmes that feature students’ perspectives. Listening to the voices of students can offer a rich and meaningful perspective to help inform transport safety education programmes.

Certain characteristics of adolescent brain development can lead to increased risk taking behaviour, which can in turn result in fatality or serious injury in certain circumstances. Pedagogical features which acknowledge these factors and implement techniques known to encourage students to take less risks may

have the potential to drive social change amongst school students relating to transport safety.

Critical pedagogy is an approach to teaching and learning which offers certain characteristics that have been proven to drive social change in communities. While critical pedagogy is usually used at a local level as an approach for global and societal change in relation to issues such as race, gender and class, I argue that the characteristics of critical pedagogy could apply at a local level as an approach for societal change in the context of transport safety education, to help address the fundamental reasons for adolescent risk taking behaviour, such as peer pressure and bullying.

The key characteristics of critical pedagogy incorporated into the learning experiences used for this study provide an insight into how the evidence about why students take risks and how students learn best can inform the design principles used to develop transport safety education programmes.

The methodology used for this study and the related literature will be outlined in the next chapter.

## Chapter Four: Methodology

### Chapter overview

In this chapter I describe my research paradigm, ontology, epistemology and methodology for this study. I outline the importance of voice in the context of researching with children and then go on to explain my research methods and ethical considerations of the study. Finally, there are comments on the limitations of the study.

### The nature of research in educational settings

Research is a process used to gather information, analyse its meaning and present an answer to a question (Creswell, 2014). Research is important as it adds to society's knowledge base. O'Toole and Beckett (2013) elaborate that knowledge can be created "for its own sake" (p. 5); "in context"; (p. 6) "for a particular context" (p. 7); or "for reimagining and reforming society" (p. 8). Research is also valuable because it has the potential to improve practice and informs policy making (Creswell, 2014). My motivations for this study are to add new knowledge to the field of transport safety education. By adding students' voices to the body of transport safety education research, I aim to equip transport safety educators, including myself, with new knowledge to inform programme development and practices, as well as transport education policy.

I choose to take guidance from Clough and Nutbrown (2007) who assert, "All social research sets out with specific purposes from a particular position, and aims to persuade readers of the significance of its claims; these claims are always broadly political" (p. 4). My position as a supporter of and believer in students' views being heard has developed through a decade of practice. As previously noted, I work in the transport industry where student voice is not used as a means of gathering information to plan an effective transport safety education programme for students. My political purpose takes an advocacy role: to inform policy makers and programme designers so they may consider students'



perspectives as a legitimate and fundamental source of information—an authority in what and how they themselves learn about safety in and around transport.

This study falls into the category of educational research, which is a type of social science research (Basil, 2010). O’Toole and Beckett (2013) describe educational research as research in the formal discipline, or a faculty of, education, in-school based (e.g., pedagogy and the curriculum) and non-school based (e.g., community projects and workplace learning) contexts. This study was conducted in-school and my focus is transport safety education in a school-based context.

O’Toole and Beckett describe the way educational research has shifted away from “researching the content and how to transmit it, towards considering the learners’ contexts, the use of experimental or radical pedagogies, and the values being exchanged and engaged (rather than transmitted) with the knowledge.” (O’Toole and Beckett, 2013, p. IX). In other words, the significance of the learner both in the process and the context of teaching and learning is now valued in educational research. According to O’Toole and Beckett, “scholastically responsible” (2013, p. X) educational research must “make a difference” (2013, p. X). I have strived to assume my scholarly responsibility “to make a difference”. The difference I want to make is to add students’ voices to the literature on transport safety education.

### Research paradigm

Every researcher brings their own personal history, views about the world, and philosophical assumptions to their project, creating a set of beliefs which shape the research (Creswell & Poth, 2018). Bracken (2010) outlines multiple practical reasons for researchers to be aware of their grounding: by having an awareness of our research tradition, worldview or ‘paradigm’, researchers can reflect on the project, identifying the best way to connect with their research. This means that when researchers have a clear understanding of their standpoint, they are able to return to this belief system, to ground themselves whenever they need to throughout the research process.

In research, a paradigm is “a basic set of beliefs that guides action” (Guba, 1990, p. 17). Thus, a paradigm has a significant influence on the types of questions researchers pose, the approaches they choose in order to address these questions, and the ways their research findings are presented (Bracken, 2010). There are numerous paradigms, and in fact Lincoln and Guba (2000) and subsequently with Lynham (Lincoln, Lynham & Guba, 2018) acknowledge that between 1994 and 2018, each time they revised their chapter, more and more paradigms were emerging, creating a merging and interweaving of disciplines and perspectives. Some authors (such as Cohen, Manion & Morrison, 2007; Mertens, 1998) identify three broad types of paradigms: ‘normative’ (or ‘positivist’); ‘interpretive’ (also known as ‘interpretivist’ or ‘constructivist’); and ‘critical’ (or ‘emancipatory’). Guba & Lincoln (1994) include ‘postpositivist’; and Lincoln and Guba (2000) and Lincoln, Lynham and Guba (2018) add ‘participatory’. Upon weighing up the various interpretations of paradigms, I assert that my approach for this study is an interpretivist paradigm with a critical stance.

### *The interpretivist paradigm*

Creswell and Poth (2018) explain that in an interpretivist paradigm, the research does not start with a theory; rather a theory or pattern of meaning develops inductively or is generated from the research itself. This suggests that meanings emerge throughout the research process: they are not static, unchanging entities. Borko, Liston, and Whitcomb (2007) explain an interpretive study is a “search for local meanings” (p. 4), and its intent can be to improve practice or programme design; inform policy or illustrate policy pros or cons; and shape theory development. My intent in this study is to show how local perspectives can inform programme design, by making sense of the students’ actions, reactions and responses. I deliberately put myself in the classroom to experience the context first-hand, and attempt to interpret and understand the knowledge the students provide from their point of view. I recognise the value in the students’ prior knowledge, and interpret the language used by the students as an indication of their thoughts.

### *The critical stance*

Critical theory plays an integral role in my viewpoint, however it does not completely fit this study. When considering the broader, overarching features of critical theory, such as political and ideological critiques and concepts of power (Cohen et al., 2007), my intent to empower students does not go far enough for it to fall wholly within critical theory as a paradigm. As such I made the decision to take an interpretivist view with a critical stance.

While conducting research relating to a programme designed using critical pedagogy, it is difficult not to take a critical stance. My critical stance is consistent with Cohen, et al.'s definition that critical theory studies students as a group; is sparked by interest in giving power to a group (in this case, by way of giving them a voice); and it interrogates and critiques "the taken for granted" (2007, p. 33). The ideological position of a researcher can cause bias in all research paradigms, and there is a clear need for researchers to "clarify any potential for research bias and to highlight how the adoption of ideological perspectives may impact on research findings" (Bracken, 2010, para. 17).

Now I have explained my paradigm, I will detail my ontology, epistemology, and methodology for this study.

### *Ontology and Epistemology*

A paradigm has three key issues or components: ontology, epistemology, and methodology (Lincoln & Guba, 2000, p. 168; Lincoln, Lynham & Guba, 2018, p. 111). Basit (2010) explains a researcher's paradigm is underpinned by ontological and epistemological beliefs or views, which affect their stance, which in turn influences the methodology and methods used.

Cohen et al. describe ontology as a set of "assumptions which concern the very nature or essence of the social phenomena being investigated" (2007, p. 7). Without an awareness of their ontological perspective, researchers may not be aware of the underlying philosophical basis arguments are based on, to in turn be able to justify their research methods and findings (Bracken, 2010). My

ontological assumptions for this study are that social reality and knowledge is co-constructed through lived experience and interactions with other people (see also Byrd, 2008, in Lincoln, Lynham and Guba, 2018).

Epistemology is concerned with “Knowing” (Basit, 2010): the nature and form of knowledge, and how it can be acquired and communicated to others (Cohen et al. 2007; Basit, 2010). How a researcher aligns themselves with epistemological assumptions strongly impacts the way in which a researcher will tackle the job of discovering knowledge of the social phenomenon (Cohen et al., 2007). Lincoln, Lynham and Guba (2018) describe the epistemology underpinning the interpretivist paradigm as “transactional/subjectivist” (p. 111) with “co-created findings” (p. 111). Guba elaborates, saying that research findings are created through the process of interaction between the inquirer and inquired about (Guba, 1990). In this study, I attempt to co-create the findings by subjectively interacting with and analysing the students’ actions and views.

### *Methodology*

Methodology is the way the researcher goes about finding knowledge (Guba, 1990). Clough and Nutbrown (2007) describe research in terms of a “research recipe” (p. 23), with methodology providing the reasons for using a certain recipe. They argue:

Methodology is about making research decisions and understanding (and justifying) why we have made those decisions. Our research methodologies are....rooted in our own personal values which, in some form, inform our ethical and moral responses to problems and challenges (Clough & Nutbrown, 2007, p. 80).

For this reason, methodology within an interpretivist paradigm aims to continuously improve both the communication informing the constructions and the sophistication of the constructions (Guba, 1990). In other words, methodology seeks to open our minds to how we construct meaning.

### What about the students themselves?

In reading the literature I became curious as to why involving students to find out more about their needs, interests, capabilities and strengths did not feature in the discussions on effective safety education. The Effective Road Safety Education Model and other studies discussed do not offer students' perspectives on what effective transport safety education looks like. Academics and educators offer great deal of insight into how students learn best, however I have yet to locate any studies on transport safety education which include students' perspectives or voices to inform the results of the study. School students are the people who are the 'target audience' or 'end-users' of the resources—the people who are going to benefit the most from the existence of the resources and the associated effort, time, funding, and knowledge invested into developing them.

It appears this issue is not isolated to transport safety education research: Nutbrown and Hannon say that generally studies on how children learn have not put much focus on "*listening* to children and soliciting their views on matters of daily life and learning" (2003, p. 116). They question whether educational research is one of the last places children continue to be "seen but not heard" (Nutbrown & Hannon, 2003, p. 116), and suggest that "including children as research informants brings them 'into the centre' of discourses about 'education and its purposes'" (p. 116). According to Golledge (2018), asking students about their thoughts on teaching "can be a source of rich and meaningful data about students' understanding and experiences of classroom learning in particular contexts" (para. 18), and we should embrace including them more often in conversations about teaching and learning.

Students at secondary school may have learning experiences with up to six teachers in a day, so they are "informed agents" (para. 19) with genuine knowledge and understanding of modern teaching practices (Golledge, 2018). Golledge's study revealed students value being taught by specialists in a subject, especially when a teacher shows how passionate they are about the subject, and learns with them (Golledge, 2018). For this reason, and other considerations

discussed in this chapter, I decided to teach the transport safety unit within this study myself.

### Research site, access and ethics

The research site was “Grevillea High School” in “Grevillea”, a town in rural New South Wales (NSW), Australia.

First, I met with the school principal to request her general agreement to conduct a research project. I then completed The University of Waikato Ethics Research Application (FEDU040/18) which was approved (see Appendix C). I then completed the NSW Department of Education’s State Education Research Applications Process (SERAP) (SERAP 2018084) which was also approved (see Appendix C). I was unable to access the site until all of these procedures were complete.

Once approved, I contacted the school to arrange to meet Julia, the regular PDHPE teacher of the class. I provided her with an information sheet and consent form, and gave her a verbal overview of what her and the students’ level of commitment would entail should she agree to participate, which she did.

### Cultural considerations

I did not anticipate any social or cultural issues to emerge in the context of this research, as the content focused on transport safety, which is not traditionally a culturally or socially sensitive topic. All components of the research were designed to be culturally inclusive, and I ensured cultural sensitivity in my language at all times.

Being a remote area, however, there was a chance some indigenous students may have been present in the class. As the specific social and cultural backgrounds of each participant was unknown prior to my meeting with the principal, I sought advice from some local aboriginal elders as to who the correct person in the Grevillea area of the Wiradjuri nation, who all informed me there was no particular elder who was in charge in Grevillea. I was introduced to a number of elders as well as the NSW Department of Education Aboriginal

Education and Engagement Officer by a family member who identifies as Aboriginal and is an employee of the NSW Department of Education. They all confirmed there is no one elder in the area who is in charge, and the officer invited me to attend a meeting of the NSW Aboriginal Education Consultative Group in the next town, to seek permission for any indigenous students in the cohort to participate in the research.

When I attended the meeting, I verbally briefed the group on the nature and content of my research, asked them if they would give me permission to conduct my research on Wiradjuri land, and asked if I could get permission on behalf of the students. The Group discussed the fact that technically their jurisdiction does not geographically cover the town, however because there is no one elder in charge in Grevillea they gave their blessing and thanked me for asking them. They also suggested I directly ask the school principal which specific students in the class identify as Aboriginal or Torres Strait Islander. When I met the principal, she advised me that one student did, and suggested I contact his parents directly. As his mother was already my acquaintance, I telephoned her and explained I would like to be culturally inclusive and ask permission to engage with her son for the research, and she gave her permission. I also consulted the Guidelines for Ethical Research in Australian Indigenous Studies (Australian Institute of Aboriginal and Torres Strait Islander Studies, 2012) and made every effort to adhere to these guidelines.

### Participants

The student participants were in Year Eight (aged thirteen and fourteen). In spite of absences, all eleven students in the grade participated in the learning experiences and/or focus groups. The students were from a range of socio-economic and cultural backgrounds, and one student identified as Aboriginal. The regular PDHPE teacher of this class, Julia, also participated in the research as both an assistant teacher while I was teaching the lessons, and an interview participant.

## Research involving children

### *Informed consent*

When working with children, informed consent is a crucial part of the ethics process (Mutch, 2013). Cohen et al. stress that gaining informed consent is one way a researcher can show acknowledgement of and respect for an individual's right to freedom and self-determination (Cohen et al., 2007). Following the information session, the students each took an information sheet and consent form home (see Appendix D), and returned them to the school prior to the study commencing.

Students should also have an ongoing opportunity to consent or dissent from any specific aspect of the evidence gathering stage (Bissenden & Gunn, 2017). An example of how this aspect of 'informed' consent played out in this study was student Leonardo's participation. Leonardo was not there for all learning lessons and yet still elected to participate in a focus group. His decision might have roots in an unwillingness to miss out, however, the tension between further missing out and the focus group conversation reinforcing what he had missed out on seemed to have an influence on his interaction and contribution in the focus group (see Chapter 6).

### *Voice*

School students are not generally afforded opportunities to have input into how they learn about transport safety (see Chapter 2). Little to no regard is given to their individual backgrounds; views of risk taking; motivation to act safely; actual propensity to take risks; cognitive differences; role in the community; ability to think critically, creatively, and for themselves; ability to make change within their own communities; or the historical or social contexts within which each individual student learns. With this in mind, I investigated the potential for critical pedagogy to be explored further as a suitable pedagogical approach to underpin transport safety education programmes (Ferris, 2017).

Fundamentally, this study intends to highlight the importance of student voice, both in the research methods and as the subject of the research. Clough and



Nutbrown (2007) view social research as inherently “*positional and political*” (p. 25) and as such emphasise the importance of paying close attention to every voice relating to the topic through a process they call “radical listening”: “the interpretive and critical means through which ‘voice’ is noticed” (p. 25/p. 79). Research participants, for example through focus groups, and the voices from other studies contribute to what is noticed in this study. An important outcome of radical listening is that the data (what is heard) is interpreted with integrity in a way that is faithful to the participants’ genuine points (Clough & Nutbrown, 2007). To maintain this integrity student voice was transcribed as accurately as possible (see 'Working with evidence' later in this chapter).

### Research methods

If, as Clough and Nutbrown argue, “methods mediate between research questions and the answers which data partially provide to them; methodology justifies and guarantees that process of mediation” (2007, p. 42), the methods used in this study are deliberately chosen to enable this process to occur. The methods I used in this study included observations, teaching, focus groups, and an interview (see Table 3, Appendix G).

#### *Observation of lessons prior to teaching*

I attended four lessons of fifty minutes each over a two week period as an ‘observer’ prior to teaching the class: three taught by Julia and one taught by a casual teacher. The aims of observing the lessons were to assist the class in becoming familiar and comfortable with me, and assist me with gaining an understanding of their levels of comprehension, literacy, strengths and interest areas, which is an important characteristic of critical pedagogy.

#### *The transport safety education experiences used in the study*

In the interests of full disclosure of potential biases, the learning experience I chose to use for this study is adapted from the TrackSAFE Education Year 7 and 8 HPE resource (TrackSAFE Foundation, n.d.-a), which was developed in 2014 as part of a suite of resources for Year 7 to 10 by a contract curriculum developer

from New Zealand, which I subsequently edited, formatted and uploaded to the website. The programme has not been evaluated, and as such I am not suggesting this learning experience is an example of ‘best practice’—rather I am mentioning it because both the developer and I made decisions for the programme as a whole, as well as the content of each individual resource, informed by the literature available at that time regarding transport safety education worldwide (TrackSAFE Foundation, n.d.-b).

Hattie (2009) says the curriculum should provide opportunities for a balance between surface and deep understanding. 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. To this end, the lesson sequence was an important consideration, and is the reason why the lessons are designed to first bring in ideas, then connect ideas, and then extend ideas further.

### *Conducting the lessons*

I taught the class the three lessons over a period of a week and a half. Julia and I both made it clear to the students that I was their teacher, and Julia fully supported me as my ‘assistant’ throughout the lessons. I audio recorded the lessons to ensure I could capture the students’ voices accurately.

### *Focus groups with the students*

I chose focus groups (see Appendix E) as a research method for their versatility. According to Denscombe (2010), focus groups are useful for appraising the degree of shared views amongst participants about a particular topic. In a study unit example written by Nutbrown (1999, as cited in Clough & Nutbrown, 2007), she states that “‘Focus Group Interviews’...stop at the generation of data” (p. 92), but that ‘Focused Conversation’ work goes beyond this, achieved when participants agree that what is written is an accurate version of events to their minds.

In order to find out how the students perceive the effectiveness of a variety of learning activities that use different pedagogical techniques, I decided an active ranking activity would be most suitable. I gave the students a set of twenty cards with a different learning activity written on each, in random order, and asked each group to rank them by placing them on the floor in order from 'most' to 'least'. I also included a few pieces of blank paper and a marker to allow them to write their own ideas for activities if they wished, however no students in either group did this. I asked them to rank the activities for three different criteria: activities they like; activities they learn from, and activities that might be useful in everyday life. The students all had input into the ranking, vocalising their opinions in the group to have their opinions considered, and justifying their decisions to each other as they went, in a democratic process. I photographed the placement of the cards from both focus groups.

It was not practical for the students to verify all of the audio data I captured for several reasons. Firstly, the length of time between researching in the classroom and completing the study meant some of the students no longer attended the school, and were uncontactable. Secondly, due to the huge amount of data the focus groups yielded, the conversations from the lessons and focus groups were partially transcribed: this meant the data was unable to be verified fully. Knowing my interpretation of their data would be subjective, I paid careful attention to their statements in the classroom in both the lessons and the focus groups, and at the time, wherever possible, I asked clarifying questions whenever I thought there was a chance I may misinterpret their comments when I listened to the audio recording.

I also asked students to clarify their written work where necessary, so I could interpret the meaning of what they had written as accurately as possible. I also reiterated to the participants before they handed me their student work samples, that any of their written work they were handing in could be withdrawn at any time before the results of the study were being finalised, as was the requirement of the ethics application. I am aware that my background influenced the way I interpreted the voices of the student and teacher participants in this

study, however the rigour I applied attempts to give it authenticity as a faithful and honest account of the participants' voices.

### *Interview with the teacher*

My interview with Julia was a secondary part of the research, which I used as a verification tool to measure my own observations against (see Appendix F). I transcribed the interview in full, and Julia verified the final full transcription of her interview.

### *Audio recordings*

Audio recording were a good way of capturing the data, however I underrated the difficulty of hearing all of the voices from the lessons and focus groups clearly enough for the conversations to be fully audible. The students spoke over the top of each other during whole class and group discussions.

The group activities created a situation where the recording captured voices from the other group, making it difficult to identify individual students from their voices, and to hear their conversations clearly. This resulted in me rewinding multiple times to catch all parts of the conversation. I also used several devices to record the audio, and this became useful when students did group work, to hear the conversations in both groups. It did however mean listening to more than one version of the same session, which was even more time consuming.

### *Transcription*

I transcribed the students' comments as accurately as possible to be authentic in their voice, out of integrity (Clough & Nutbrown, 2007), and also to remind the reader of the nature and age of the participants.

My original intention was to transcribe all of the audio recordings, including the lessons, focus groups and interview. I did not however consider firstly that my typing rate is well below touch-typing standards, or that placing two recording devices plus a back-up device in the room would require me to listen to and analyse up to three times the length of each lesson or focus group I recorded. Given the significant number of hours of recordings, I partially transcribed the lesson and focus group audio recordings, focussing only on the information

relevant to this study. On the other hand, I fully transcribed the interview using transcription software and a foot pedal to assist with the process. In my information sheet and consent form I stated I would present the teacher with a transcription for verification, so it would not have been ethical to renege on this promise. Despite using transcription software to assist with this process, the number of hours it took me to type the transcript significantly delayed me in progressing on the analysis and writing stages.

### Working with evidence

#### *Analysis*

Qualitative data analysis needs to be “detailed and rigorous” (Denscombe, 2010, p. 295). It can be quite challenging to explain the “fairly complicated and messy” (Denscombe, 2010, p. 295) process used for analysis, and present the data. Clough and Nutbrown describe analysis as “the act of stripping away whatever clothes or disguises an object, so that we can see it in its simplest form” (2007, p. 175): removing elements that may form part of the object’s character (in this case, the topic of the study), to focus on only the essential components relevant to the particular purpose of the task (the study). In social science, they argue this needs to occur in the context of the researcher’s position and personal and political ideologies (Clough & Nutbrown, 2007).

My analysis was all done manually in a variety of ways. I looked at photographs to visualise dynamics between students and recall the focus group data that was recorded in this way. I read my field notes. I reviewed the student work that emerged from the lessons and focus groups. I listened to 9 hours and 42 mins of recorded audio data, in most cases multiple times. I also mapped the details of the range of evidence collected and how it was analysed (see Table 4, Appendix G).

An example of how I analysed some of the focus group data can be seen in the method I used for the PMI activity. I typed out a list of their answers (see Table 5, Appendix H), then removed the pronouns and other superfluous words, and edited the grammatical and spelling errors, to create a combined list of the key

words both groups wrote on the butcher's paper in the PMI activity (see Chapter Six; see also Figures 3-8, Appendix H). I then copied these words into 'Pro Word Cloud' in Microsoft Word to generate a word cloud as a visual representation of the top ten frequently used words mentioned (see Chapter Six). According to McNaught and Lam (2010), word clouds give readers an overview of the central topics and themes within a text, and can illuminate the key standpoints of the author (or in this case, authors). Due to a number of limitations the use of word clouds is not recommended as a standalone analysis tool in qualitative research, but can be a useful preliminary analysis tool and means of validating findings (McNaught & Lam, 2010), which are the two ways I have implemented it in this study.

For the focus group, ranking activity I allocated each answer with a ranking number, using 1 for most and 20 for least. I then transferred these rankings to a spreadsheet (see Table 6, Appendix H) where I entered Group 1 and Group 2's rankings. I then used a formula to create a combined score (Group 1 plus Group 2's rankings). Using the combined score, I sorted the data from 1 to 20 to create an overall ranking. Where activities received the same overall score, an equal ranking was allocated. I then highlighted the top three activities (most) in yellow, and bottom three activities (least) in orange. The outcomes of analysis of focus group evidence is presented in Chapter Six.

### Other ethical considerations

#### *Anonymity and confidentiality*

Anonymity and confidentiality are extremely important ethical considerations, especially when researching with children. Kervin et al. (2016) explain that when anonymity is not possible (such as in this study where I knew the participants and it was such a small group), confidentiality is crucial, and includes actions such as vigilantly protecting the data, de-identifying the students and using pseudonyms.

In order to protect the identity of participants I have referred to the school, town and all participants (as well as anyone mentioned by the students in their lessons or focus groups) using pseudonyms. As it is a small town and school, the

students' participation in this research project was known to the school and potentially the wider community, however no adverse impact is expected as the focus was on the way of teaching and content of the lessons, not on student or teacher achievement.

I safeguarded participant's identities by removing all identifiable features from their answers. Anonymity was not guaranteed, however I have made every effort to ensure all participants are protected. I have blanked out faces and any other identifying features such as the school logo in the included photographs.

I edited the photographs I would likely include to remove any facial or other identifying features, printed them and took them to the school for the students to view and approve.

Identifying data including original audio, photographs, student work with participants' names and consent forms, were kept private through a variety of means. Electronic files have been kept on password protected devices including my personal computer, iPhone and iPad. I transferred the images and audio recordings from my iPhone and iPad to my personal computer as soon as reasonably practicable after the completion of the sessions. All physical files such as student work samples were kept in a locked drawer in my home office. Student work samples were scanned or photographed and saved on my personal computer, which is password protected.

Transcription and analysis was done manually. All non-identifying data (e.g. data sets and transcripts) used for publication are securely stored either electronically protected by a password, or physically in a locked cabinet. All files will be stored for at least five years after the conclusion of the project, as per the ethics guidelines.

### Limitations

The most obvious limitation to the methodology is the size and scope of the study. A single study of a small group in a remote area of NSW is not going to give results that are transferable to other contexts, such as large cities, different

age groups, or different cultural or socio-economic contexts. This makes the scope of the research quite narrow but also appropriate for a Master's thesis this size.

There were also quite a few aspects of this study that did not go to plan. The SERAP ethics approval process took much longer than expected, which pushed the timeline out. Also, due to a number of other delays, the analysis and writing process took longer than anticipated.

Another limitation was that I chose to teach the lessons myself, rather than recruit the usual classroom teacher. I did this deliberately for a number of reasons. By taking the role of teacher for the transport safety lessons, I could reduce the workload and preparation time on the teacher; model the teaching process I am researching as a transport safety educator; gain an insight into the way critical pedagogical lessons work when implemented in a classroom; to take field notes and reflections on my experiences with the students. Another advantage was to gain valuable feedback from the class teacher about the students' responses, which Julia may not be able to observe if she taught it herself. It also gave me the opportunity to check myself and my understanding of critical pedagogy from the perspective of each of my three roles as a researcher, teacher and programme manager/government official. However, teaching the lessons myself meant I was engrossed in the content of lessons and managing the classroom to keep students on task. I therefore needed to rely heavily on the audio recordings, photographs and samples of student work to ensure what I heard and saw was as accurate as possible. This was much more time consuming than I anticipated.

### Chapter summary

As the aim of this study is to find out students' perspectives about a lived experience of transport safety education, I took an interpretivist approach with a critical stance. Student voice features in this study as a way of bringing a new perspective to transport safety education. Ethical considerations, including



gaining participants' informed consent, anonymity and confidentiality were a high priority.

This study combines a range of qualitative research methods in order to find out how students responded to and viewed a series of three transport safety lessons. The following chapter outlines the various ways the students responded to the lessons.

## **Chapter Five: Students' responses to a lived experience of transport safety education**

### Chapter overview

In this chapter, I provide a description of the lessons and an analysis of the data gathered during the three transport safety lessons I ran with the Year 8 class at Grevillea High School. I draw on my field notes and the audio recordings of the lessons to give a chronological description of the students' responses to the learning activities during each lesson, and outline my observations of their responses. My analysis of the students' responses is presented, and I draw on classroom teacher Julia's interview evidence (see Appendix F for interview plan) to verify or challenge my observations about the way the students responded to the lessons. I close the chapter with a summary of my interpretation of the ways students responded to their lived transport safety education experience that was provided within this study.

### The transport safety education experience

The transport safety education experience employed in this study involved me (as the researcher-teacher) teaching three lessons. These lessons were adapted from the TrackSAFE Education Year Seven and Eight *Health and Physical Education* mini unit of work (TrackSAFE, n.d.-a). When adapting the lesson plans (see Appendix A), I broadened the topic area from a 'rail safety' focus to a 'transport safety' focus for several reasons: firstly, I felt this may be more relatable for students in a rural school, with no passenger trains or trams in their town. Secondly, I wanted the students to be able to think freely about transport in whatever form that looked like to them. Thirdly, any reports of this study may be more useful for a wider range of audiences by being inclusive of all modes of transport.

## Lesson One

Lesson One involved four parts: a concept discussion, a brainstorming activity, a hazard checklist, and a concept mapping group activity using hexagons to link ideas and identify themes (see Appendix A).

Hattie (2009) says the curriculum should provide opportunities for a balance between surface and deep understanding. For this reason, I started Lesson One with a concept discussion to ensure students understood the vocabulary and concepts about the transport system. The students offered a range of answers when I asked them, “What do you think makes up the transport system?”

Charlize said the transport system is made up of “things that move from point A to point B”. I prompted them to think of “physical things” that are part of the transport system in Grevillea, and their answers included “bus”, “trains”, “motorbikes”, “feet”, “bikes”, “scooters”, and “planes”. When I asked them to give examples of “things you don’t ride that make up the transport system”, their answers included “run”, “trucks”, “planes”, “horse”, “road signs”, “40 ‘K’ (kilometres per hour) zones”, “train tracks”, and “kangaroos” (followed by a discussion about how it would be funny to tell some overseas students they know that they ride kangaroos to school). Their sense of humour may have been a sign that they were relaxed and prepared to use the concept of a transport system (and their humour) to apply more varied examples. Alternatively, they may have been testing me to see how I was going to be as the teacher. It is also possible that the use of ‘shopping trolleys’ in this answer may be an alert to an unsafe practice. Some students also demonstrated creative thinking, such as “trees” (which Charlize pointed out are part of the transport system, “because you can climb them...you’re getting from point A which is down the bottom...to point B which is up the top”), and “shopping trolley”.

I mentioned to the class that I thought “feet” was a really good point, because in Year Eight they are usually a pedestrian, passenger or riding a bike: I was attempting to narrow their thinking to their own use of the transport system, ahead of introducing the next activity. Although this part of the lesson felt like

'chalk and talk' to me, this activity allowed me to ensure the students had demonstrated their prior knowledge before moving onto the next activity.

At the end of the concept discussion, I asked the class to think about how the transport system is used by people who are physically active, and write or draw their answers on paper provided (Figures 9 and 10). The aim of this brainstorming activity was to establish connections to the PDHPE Syllabus outcomes expected of them in this class, and to lay the foundations for further learning.

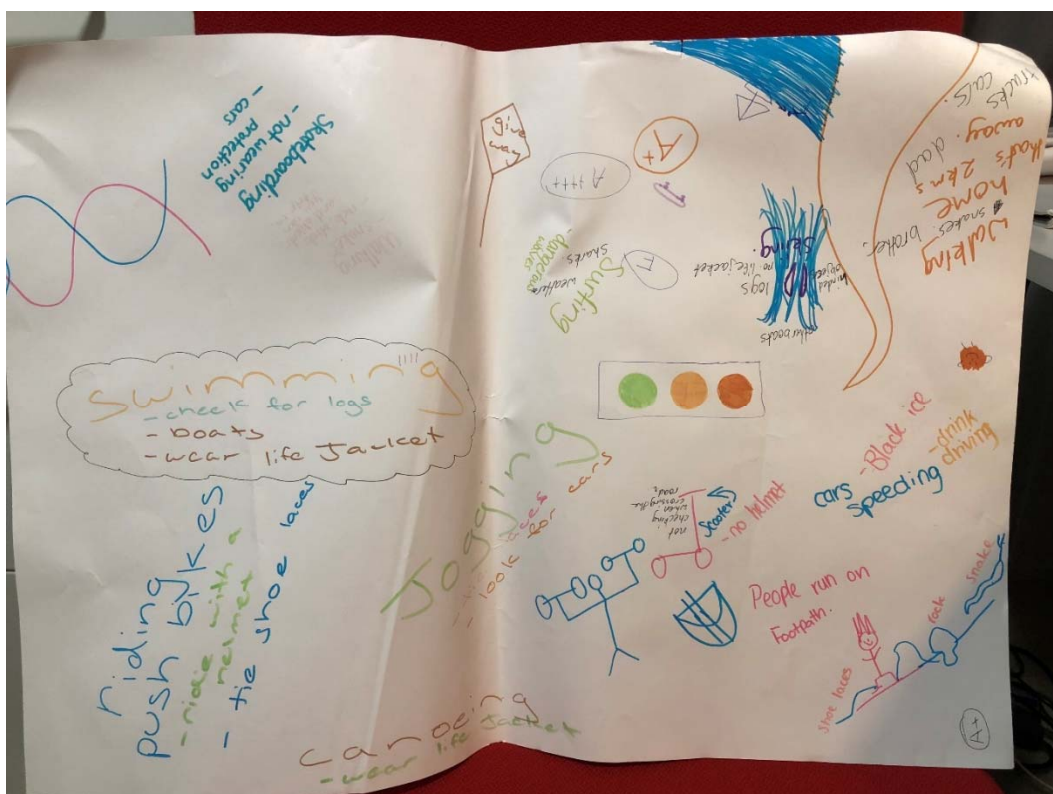


Figure 9 Group One's student work sample of group brainstorming activity: Lesson One

I observed that the students responded positively to this activity, having on-task discussions with each other, along with their usual level of off-task discussions (using a comparison with observations of four previous lessons). During this brainstorming activity I asked, "What is a hazard?". The students also discussed issues important to them, and they wrote or drew their answers, relating both hazards and risks to the transport system features allowing people to be

physically active (Figures 9 and 10). Group One's ideas included: "Skateboarding (not wearing protection, cars)"; "cars (speeding, drink driving, black ice)"; "riding push bikes (ride with a helmet, tie shoe laces)"; "Scooter (no helmet, not checking when crossing the road)"; and a drawing of traffic lights. Group Two's brainstorm comprised of answers such as: "Train station (walking along the train tracks, get leg stuck on tracks)"; "Run (snakes, holes, rocks, run into someone and fall over); and drawings of stop and give way signs. Evidence from the brainstorming activity shows these students had existing knowledge and understanding of the transport system, including modes of transport; physical hazards; risks; and behavioural strategies to reduce the risks.

Figure 10 Group Two's student work sample of group brainstorming activity:  
Lesson One

Researcher-Teacher Janine: What is a hazard do you think?

Charlize: Skipping backwards across a road.

Mila: [inaudible]...dangerous—

Janine: Something that's dangerous?—

Mila: Yeah—

Janine: —Something that can cause injury?—

Mila: —texting while driving

Janine: Texting while driving is definitely a hazard.

Charlize: My Dad [laughs].

Sandra: People are always doin' it. People are on the road and they're just like...I saw a taxi driver doin' it, and I saw a police officer doin' it. I was like, waaah...

Mila: Yeah, cops are always doin' it, but they never get in trouble.

Janine: They have an exemption under the law, did you know that?

Sandra: That is not fair!

Janine: I agree, I think that everyone should—

Sandra: If they are enforcing the law they should abide by the law.

This conversation revealed that Sandra had a very strong opinion about the fact that texting while driving was dangerous, and that she often saw adults taking illegal risks and displaying dangerous behaviour in this way. During this interaction, Sandra's tone of voice became increasingly high pitched and loud, which I interpreted as a demonstration of her indignation at the injustice of the situation—the thought of the law applying to some people but not others.

After the brainstorming activity, I asked the students to choose their favourite pedestrian activity from the examples they had explored, to become the topic for their group's hazard checklist. Group One chose motorbikes, and justified this by the fact that motorbikes can be a hazard for pedestrians:

Charlize: Let's do motorbikes.

Cate: You don't ride motorbikes on the street.

Charlize: Yeah you do. Mila, you do motorbikes on the streets, don't you?

Sandra: Yes.

Charlize: See?

Mila: No... [looks cautiously at Janine]

Charlize: Haha, shoosh [laughs]...shoosh [laughs].

I understood from Mila and Charlize's attempts at denying involvement and silencing the discussion, that they are aware it is against the law to ride on public roads, and were concerned about how I may react to this information. It was apparent these students had experience of motorbikes beyond what is legal for their age, so I decided to see what they might discuss if allowed to pursue this option.

Janine: OK, well you can do motorbikes, go for it. What are the potential hazards for pedestrians?

Mila: Getting hit by some—getting hit by one of them.

Charlize: It's their fault for walking.

Charlize: Mila, Mila, if they get hit then it's their problem not mine [laughs].

Mila: Yeah, but then I'm left with the guilt. Seriously I feel guilty already, 'cos Jamie's just broken his leg falling off the motorbike from something I did. I was doin' a, I did a wheelie...[inaudible]...his Dad videoed the whole thing as he's broken his leg, and Jamie's just been and broken his leg, and he's tried to do the same thing I was doin', and I was just like, aww, crap...

I did not want to discourage the students from speaking openly, so prompted that they should continue the discussion. I also understood from Mila's description that she felt a sense of responsibility for the consequences of modelling unsafe behaviours to Jamie.

As shown in Group One's hazard checklist (Figure 11), the group demonstrated a level of familiarity of the potential hazards of riding a motorbike, including on public "main roads" and in off-road environments ("sandpit", "tip track"), and listed various consequences of those potential hazards not only for pedestrians ("hurting someone", "you can die"), but also for the motorbike rider ("you can get hurt", "you can get embarrassed", "severe injury" "almost dieing [sic]"), and the motorbike itself ("hurting bike").

Hazard checklist <i>motor bike</i>		
Potential hazard for pedestrians	Where is the hazard?	Why does it present a safety hazard for pedestrians using the place?
<i>getting hit by a bike</i>	<i>Street</i>	<i>you can die</i>
<i>falling off a bike</i>	<i>Sandpit</i>	<i>you can get hurt</i>
<i>failing a jump</i>	<i>Sandpit</i>	<i>you can get embarrassed</i>
<i>crashing</i>	<i>tip track</i>	<i>severe injury</i>
<i>hitting a tree</i>	<i>tip track</i>	<i>hurting bike</i>
<i>flipping bike</i>	<i>sandpit</i>	<i>almost dieing</i>
<i>getting find</i>	<i>main roads</i>	<i>hurting someone</i>

Figure 11 Group One's completed hazard checklist

Group Two chose bikes, and in their hazard checklist (Figure 12) focussed on pedestrians, and although they did not always use the appropriate column headings to record their ideas, they included a range of relevant answers including physical hazards ("road", "footpath", "around lake", "driveway"),



behavioural hazards (“speeding”, “riding on the footpath”), and alternative locations to ride to avoid hazards (“bike lane”).

Hazard checklist		
Potential hazard for pedestrians	Where is the hazard?	Why does it present a safety hazard for pedestrians using the place?
<b>knocked over</b> , injury	footpath, road, driveway	because of injury and danger and more-intense,
speeding	road, footpath, around lake	Death
riding on footpath	bike lane	Angry.
not using bell	driveway	
Frightened	all of above	

Figure 12 Group Two's completed hazard checklist

The final part of Lesson One was the concept mapping exercise, or ‘hexagon activity’. In the hexagon activity, students were asked to write down their ideas of possible reasons why people might act in unsafe ways around transport. During the first part of the hexagon activity, the students wrote their own ideas onto hexagon shaped pieces of paper. They worked individually (see Figure 13, Appendix J), or in pairs (see Figure 14, Appendix J), and then cut them out (see Figure 15, Appendix J), for later group work to identify any connections, big ideas, or themes (see Figure 16, Appendix J). The students wrote down a variety of reasons why people act in unsafe ways around transport, including “peer pressure”; “running away from someone”; “to test them self [sic]”; “mentaly [sic] unstable”; “under the influence e.g. achol [sic]”; “drugs”; “in a rush to get somewhere”; “to show off in front of friends”; “they don’t know it’s unsafe”; and “don’t think of the risk when doing it”.

In the final part of the lesson, I asked the students to work as a group to make connections between individual hexagons and group them (see Figure 16, Appendix J). The students worked together by calling out to each other, asking each other if they had the same reasons as them, or working quietly with each other to connect their hexagons on the table (see Figure 17, Appendix J). The class created nine groups and left one hexagon on its own (see Figures 18-27, Appendix I).

While the students appeared to be able to group the hexagons easily, they could not articulate why they were grouped. When I asked them to look for common themes as to why people act in unsafe ways around transport, additional prompting was needed by their classroom teacher Julia and I to ensure students understood the task. Some justifications for their connections included:

Brad: They're all about anger and stuff.

Hugh: Cos they're in front of their friends.

Sandra: For a dare. Boys may show off to girls.

Charlize: For a date.

Scarlett: Cos they can.

At this stage, I could see I had reached the limits of their prior knowledge. I wrapped up the lesson by asking the students if they knew why we did this activity. This led to a discussion about risk taking and a class consensus that they were "stupid":

Janine: What are the reasons why we're not supposed to act in these ways?

Mila: 'Cos we're underage.

Janine: Yeah?

Mila: And we're stupid. We're kinda like silly. We don't think before we do things.

Janine: Do you really think you're stupid?

Class: Yeah. Yep! Yep. Yeah! Yep. [laughter]

What was interesting for me here was that Mila expressed an awareness of her and her peers' developing impulse control, and there was resounding agreement from the whole class. The conversation went on:

Janine: I actually think you're not...I think that you all have a full understanding of what's going on and why people do things. But I think sometimes we make poor choices, don't we, because of these things [pointing to hexagons on tables]. We wanna be cool in front of our mates. We wanna...go out with someone or show off. So I really genuinely don't think anyone is stupid. I think that maybe we just need to concentrate more on changing those things and wondering, if we're doing these unsafe things, and the reasons are all these things, then we might need to figure out ways we might be able to change that...so in our next lesson we're going to come up with some really awesome ideas as a group about how we can address some of those issues. Is that cool with everybody?

Class. Yep. Yeah.

I attempted to reposition them as people who are not stupid but sometimes make poor choices because of the reasons they had written on the hexagons, and can make better choices if they are aware of some strategies of how to do this. This would have been an excellent time to reinforce the learning—the big ideas on why people of all ages might take "unnecessary" risks—however the students had to move to their next class, so I was unable to take advantage of this teachable moment.

### *Students' responses to Lesson One*

The students' responses to this lesson show they had existing knowledge about hazards and risks, as well as the consequences of taking these risks around transport. Their knowledge included an awareness that people taking risks, as

well as other people, may be harmed when someone takes risks. They noticed adults frequently role-modelling unsafe behaviours, and felt a sense of injustice when adults broke the law with seemingly no consequence. They deemed reasons people take risks can involve internal and external factors both within and beyond their control, including mental illness; negative influences; peer pressure; drugs; alcohol; anger; fear; avoidance; rushing; or to challenge themselves (see Figures 18-24, Appendix I). They were cognizant of factors to gain a desirable status, such as to look cool in front of others; because they think they look cool; for social media fame; to gain attention; and to show off (see Figures 25-27, Appendix I). They also demonstrated a mindfulness that some people take risks because of ignorance of the risk, or because they are aware but do not think about it at the time they need to make the decision. At the conclusion of the lesson when the students positioned themselves as “stupid”, it made me wonder if they think this because they have been told they are by others, or because they know they could make safer choices but struggle to, or perhaps a combination of the two. Alternatively, they may have been seeking a sign that risky behaviour is not as inevitable as it seems.

In terms of their responsiveness to the lesson content and me as the teacher, the students were not particularly interested in the first part of the lesson. It was not until they got to think more for themselves in the more social and active activities of the group brainstorm and the hexagon task, that they started to engage freely in discussion with me and each other, to think more deeply, and show a genuine interest in what they were learning.

## Lesson Two

Lesson two had four parts: planning a play, rehearsing a play, performing a play, and intervening to change the outcome of others’ plays. This lesson was based on Augusto Boal’s Forum Theatre, a technique of Theatre of the Oppressed (Boal, 1993; Rosa, 2009; Hartwell, 2012). In Forum Theatre, participants are asked to create, rehearse and perform a story which involves “a political or social problem of difficult solution” (Boal, 2007, p. 139). Next, the performance is

repeated, but this time others stop the performance to intervene in the story to potentially change the outcome (Boal, 1993). This is a particularly interesting learning experience, as students may have ideas on what to do, but may not realise how difficult it is in reality (Boal, 1993).

I began the lesson with a quick recap of the previous lesson (see Figures 28 & 29, Appendix J), using student's examples to reinforce the reasons, including big ideas and groupings of big ideas, learnt the day before, and focusing on peer pressure. I then gave an overview, task instructions and timeframe for the current lesson. Their task, working in two groups, was to create, rehearse and perform a thirty second play depicting an unsafe situation near transport, including one of two main causes (peer pressure or bullying), and an explanation about why behaviour is unsafe.

Group One planned their play (see Figure 30, Appendix J), prepared props and stage makeup (see Figure 31, Appendix J), rehearsed (see Figure 32, Appendix J), and performed a play involving a person in the back seat of a car peer pressuring the driver to speed through a school zone in order to win a race with another driver (see Figure 33, Appendix J). The passengers were snapchatting from the back seat. The end of their play showed the car hitting a child and their parent on the pedestrian crossing, and both of them died. The driver looked shocked and remorseful, realising what they had done, but kept driving when told to by the person in the back seat (see Figure 34, Appendix J).

Group Two also planned (Figure 7; see also Figure 35, Appendix J), rehearsed and performed their play, which featured a group of year ten students bullying a short year nine student, by calling him names, verbally abusing him, and pushing him onto the tracks. Members of the group of older students were snapchatting the whole interaction. A bystander, his friend, watched the whole scenario play out from afar, then when bullies started to leave he went over to the victim and told the bullies to get out of there before he called the police (see Figures 36-38, Appendix J).

All students thought through their roles and participated fully, and there was a lot of laughter and enthusiasm in the room during the rehearsals and

performances. Both groups supported each other by watching quietly and clapping at the conclusion of each performance.

George, Charlize, Cate, Mila, Brad

**Task**  
Develop a 30 second play that describes an unsafe behaviour in the transport system, caused by peer pressure or bullying.

**The play must include:**

- A negative peer pressure (e.g. rejection, putdowns, reasoning, everyone else is doing it) used to persuade others to act unsafely in the transport system.
- An explanation as to why the behaviour is potentially unsafe in the transport system.

**Roles** bully, bye, victim, train, yr 9,10

Person 1 George, vic

Person 2 Brad, bye

Person 3 Charlize

Person 4 Cate

Person 5 Mila

Person 6

**Script notes**

we try to make George  
go on train tracks as  
train comes then trough  
has down on track  
he goes but we don't  
let him up Brad comes  
to help George and  
can cope

Figure 39 Group Two's plan for their play

At this point the Forum Theatre technique came to life: I asked the students to perform their plays again, only this time their classmates would be able to shout "Stop!" or "Freeze" and change any character's actions to alter the outcome of the play.

Group Two replayed their scene first. Salma was the first student to freeze the play and took the place of the bystander. Instead of waiting until the end, she intervened (see Figure 40-41, Appendix J) by saying, “No no no no, get away, go, get out of here. Just stop, just leave them alone guys, just don’t do that”.

Angelina then called stop from that point, acting out the role of one the year ten students (see Figure 42, Appendix J). She stood up to her friends, by saying, “She’s right. I mean, we’re pushing him onto the tracks. Can’t you hear that train coming? It’s not OK. We shouldn’t do this anymore. Let’s go”. During another run through, Charlize stopped the play at the very beginning, took the place of one of the year ten students and said, “This isn’t really necessary. We don’t need to be doing this, like, why are we even doing this?” and after an argument about snapchat said, “Pick on someone your own age” (see Figure 43, Appendix J).

Mila stopped Group One’s rerun of their play near the beginning, taking the role of the driver and simply braking (saying, “Brake, brake, brake, brake”) and ignoring the person pressuring her. In another run through, Angelina took the role of a passenger and said, “Why are we doing this?” After arguments from the others, she retorted, “Who cares about snapchat? Would you kill someone for that?” (See Figure 44, Appendix J).

We continued replaying the plays until all people who wanted to change the outcome by replacing a character had a turn. After the plays, we sat down together and had a discussion (see Figure 45, Appendix J).

Janine:      What did you guys take away from those plays?

Charlize:    That you don’t have to do everything with your mates and like follow them around. You can, like, think for yourself and everything.

Salma:      Don’t let anyone pressure you to do anything.

Sandra:      Rethink the consequences of your actions.

Mila:        Stand up for what you believe.

Charlize: Think of something that you're doing to somebody else. Like, 'cos it could, like, change their life and make them feel like they're not wanted, and everything.

These responses give some indication that the exercise gave them pause to think of alternatives. It also suggests that perhaps the plays had had an impact on their thinking in terms of the important role their own and others' behaviour can play on safety, as well as empathy towards others.

### *Students' responses to Lesson Two*

All students were immediately interested and completely engrossed in this lesson, and there were very few periods of off-task discussion until the discussion at very end of the lesson, when some students displayed signs of fatigue. Both groups understood the task and embraced the idea of acting in front of the class, even students who were usually more reserved, as they opted to take on more minor roles. The groups held animated discussions with each other while planning their plays, and were decisive in developing their ideas within the given timeframe. They had no trouble coming up with a realistic scenario on their own, and utilised the characteristics and skills of each person in their group to their advantage, for example using George, who was shorter than his classmates, who volunteered to play the character of the victim being pushed onto the tracks.

When it came time to stop the plays and change the outcome, it surprised me that the students chose to take the place of the victim and stand up for themselves as a first strategy: this demonstrated to me that the students already had a comprehension of the dynamics of bullying and possible strategies for overcoming it. I was also pleased to see several instances of 'upstanding' as a response to the bullying scenario.

The most striking moment for me was during the discussion afterwards, when multiple students gave insightful answers as to the take-home message from the lesson, having been reinforced in the lesson. There was an awareness of external influences on their own behaviour and felt staying true to themselves was



important. There was an appreciation for thinking twice about the consequences of their actions. There was also a mindfulness about their responsibility not to bully others, due to the negative impact it may have on another person's life.

### Lesson Three

Lesson Three involved students choosing between two tasks: creating trading cards to put in their wallet or share with their friends (see Appendices A and K); or developing an activism strategy for transport safety in their area.

When I gave the initial instructions, I advised the students they had a choice as to which task they would like to do and therefore which group they would be working in. My verbal explanation of both tasks was not clear and did not include much detail, as I expected them to read the detailed instructions on the sheet provided. After outlining the tasks and advising them they could choose which task they wished to do, I articulated my high expectations of them very clearly:

Janine:       What I expect from you today, is that I expect you guys to manage your time yourself.

[Class discusses the current time, the lesson end time, and agrees they have forty minutes to complete their chosen task].

Janine:       I expect you to manage your time, and I expect you to make a plan of how you're going to do your activity. And I expect each and every one of you, every person in this class...to work to your absolute best. That's going to mean something to everyone. But if you can say at the end of this lesson I've done a hundred percent, then you've done something great for your teammates, OK? 'Cos you're going to be working in a team. OK? And the other thing is, I expect you guys, as team mates, to keep each other accountable. I expect you to keep yourself, your self-control, and yourself accountable, and I expect you to keep

your team accountable for their actions. So if they're mucking around, they're gonna affect your forty minute timeframe, aren't they? So let's keep each other on task, and let's see if you can rise to that. OK?

Once the groups started their tasks (see Figure 46, Appendix J), there was a lot of off-task discussion, particularly in Group Two. Group One needed a large amount of assistance from both Julia and I, with Julia leading the discussion for most of the lesson (see Figure 47, Appendix J). Group Two finished off their trading cards at the last minute (see Figure 48, Appendix K), and Group One were able to complete two parts of the task, but unable to complete the whole task.

The depth Group One went to in their discussion was excellent. They elected Salma as their leader, and she recorded the group's responses on her sheets (see Figures 49 & 50, Appendix K). Their ideas stemmed from an issue Charlize had that morning on the school bus:

Charlize: They started picking on my neighbour and Johnny was sitting with him, and the next thing I know Johnny moved down the front where they all were, and he's left up the back of the bus, and he's up there crying and everything, and it just sorta grew.

Janine: So what happened?

Charlize: I just let it go for a bit, and then he started yelling out mumma jokes and all that, and I went, come on, that's not right. Why retaliate back, I'm gonna help ya. They bully us, if you retaliate back it's not gonna help you later.

Charlize described looking out for her neighbour on the bus that morning and providing him with peer-to-peer support and advice. The group decided each of their respective current bus drivers were unable to keep control of the students on the bus, which impacted on their wellbeing. The group came up with multiple suggestions on how this situation could be improved, including improving the systems for reporting inappropriate behaviour on the bus; involving parents in

disciplining children who are misbehaving; allowing drivers to kick students off the bus if they are displaying rude, disrespectful, or bullying behaviours; and training drivers with people management skills, and recorded these on their sheet (see Figure 49, Appendix K). They then came up with a range of ideas of how they can respond and take action at a variety of levels, including leading by example at the class level; educating younger students at the school level; and more enforcement of the rules at a local community level (see Figure 50, Appendix K).

In Group Two, several students attempted to lead the group at various times to complete the task on time. After attempting for most of the lesson to engage with other students to share ideas, Angelina and Brad eventually chose to complete their trading cards individually, opting out of conversations with the rest of the group. Group Two needed major behavioural prompts from me to get back on task and complete it, indicating that the members of this particular group may not have the group skills needed to complete the task autonomously. Alternatively, perhaps they did not understand the instructions; felt uncomfortable as it was a big step up from the lesson the day before; or struggled with the level of thinking required for problem-solving without much warm up.

The quality of the finished trading cards varied. Angelina and Brad provided detailed descriptions and showed a very high level of understanding of potential peer pressure situations near transport, well thought-out strategies to counter peer pressure, and a good understanding of rating the level of risk for the victim (see Figures 51 & 52, Appendix K,). George, Hugh and Sandra's trading cards (see Figures 53-55, Appendix K) were simpler but gave an indication they understood the task and point of the task, for example Sandra, who shows an awareness of what 'you should' do (see Figure 55, Appendix K).

### *Students' responses to Lesson Three*

There was a huge amount of off-task discussion during this lesson from both groups, causing an impact on learning, particularly for Group Two. By allowing the students to choose their groups, they were not protected from other

students who may be distracting for them, as they usually would be if the teacher chose the groups. This meant that neither group managed their time appropriately, which affected their ability to learn. The advocacy task and trading cards task were not comparable in duration or difficulty, making it difficult to run the two tasks concurrently given the additional support Group One required. Julia suggested Group One's task would have been more suitable being run over two or three lessons, rather than a single lesson, and as such it was unrealistic of me to expect the group to be able to complete this task in one lesson. Despite this, once the students started to understand the task, they were clearly interested in the social justice and advocacy aspects, coming up with some creative ideas as to how they may be able to implement changes and impact their community.

One thing that stood out for me was that Charlize had experienced a real-life bullying scenario that very morning, only a few days after they had acted out pretend scenarios Lesson Two. Instead of being a bystander, she chose in the heat of the moment on the bus to support her friend. While it is difficult to know if or to what extent participating in the lesson impacted her decision that day, what was clear was that she felt a level of confidence about her actions, and felt comfortable sharing her experience in order to debate possible big picture solutions to this ongoing issue of bullying on the school bus. In some ways, she became an upstander in the class that day, by having a serious discussion about what could be done to prevent bullying on the bus in future. The positive affirmation from her classmates that something needed to be done about this serious issue may show the lesson achieved its objective.

The overall objective of both of these tasks however was to give students an opportunity to take what they had learnt further into the community, ideally not only in theory but in practice, which may have been possible over a series of lessons with planned additional support and groups chosen by the teacher based on strengths. However, I failed to articulate this to the students, creating a situation in which the students did not understand what they were supposed to do or why they were doing it. I realised this during the course of the lesson, and

Julia verified the same after the class and in her interview. This was an error on my behalf: my aim was to demonstrate high expectations of them given the critical pedagogy focus of my study, as well as to ask them to demonstrate self-awareness and self-management which they would need in situations like this. However instead of this, when I introduced the topic, I told them I had high expectations for their behaviour during the class, not the quality of learning or ideas produced. Therefore my instructions needed to be simpler and clearer, my expectations needed to be related to their learning and not to their behaviour, and the advocacy task needed to be simpler and potentially run over several lessons.

Finally, I noticed, being my seventh lesson with them, I had a better understanding of most of the students themselves, and vice versa. It is an important part of critical pedagogy for the teacher to be able to know their students well enough to be able to support them. For example, I noticed at one point during this lesson Scarlett withdrew from the lesson and walked outside. When I spoke with her, she was having an adverse anxiety response, triggered by some inappropriate off-task discussion in her group about an unrelated topic. Because I had gained her trust, she allowed me to alert Julia because of the seriousness of the issue and swap her to the other group to avoid her anxiety being triggered again, so that she could continue in the lesson. Our familiarity with each other allowed that situation to be resolved relatively quickly and not disrupt the lesson significantly.

### Summary

Based on my observations throughout the three lessons, the students had a level of pre-existing knowledge about and understanding of transport safety, including hazards, risks and consequences, that I would consider appropriate for their age and circumstances. Several male and female students discussed taking risks on or near transport, and the whole class acted in plays demonstrating risk taking: they either acknowledged they knew it was against the law and unsafe but had no plans to stop doing it, or were proud of doing it, talking themselves up in front of

their peers. In addition to this, social media, in the form of Snapchat, featured in both plays: perhaps this is an indication of the importance of having an audience.

Turning their experiences into a better understanding of the types of reasons for unsafe behaviour was the most important lesson. Being able to name bullying, peer pressure, and perceived status as prompts for such actions could provide further recognition and self-awareness in the moment. An awareness of the prompt or driver could open up possible alternatives for action. Alternatives for action for a number of parties involved was a key aspect of the Forum Theatre activity. These students recognised and enacted alternative possibilities for the protagonist, the subject and bystanders.

On the other hand, a few students articulated changes ‘people should’ make, in a general sense. One student even described standing beside her friend on the school bus that day, as practised in Lesson Two.

When the students were interested in the learning task, were able to think for themselves, and actively be involved in and have control over the ideas they produced, I noticed students engaging willingly with the task, conversing with each other about the task, and demonstrating interest in making a contribution to the task. Examples of this include the hexagon activity and plays. When the students did not understand the learning task, did not understand the reason for the task, were not interested in the task, and were distracted by others, I noticed students withdrawing, displaying off-task talk and behaviour, distracting others, and ignoring requests to participate. Some students displayed these behaviours during Lesson Three.

Developing trust and rapport with the students over time was an integral part of the whole pedagogical experience—I was able to have high quality, personal and meaningful interactions with all students in the class by the second half of the first lesson, continuing on into the second and third lessons. I wonder if part of this was due to me listening without judgement, being open to talk about things that adults may try to shut down or disapprove of. It is a good example of how building positive relationships can be mutually beneficial for students and teachers: they got to speak openly, and I got to see their point of view.

The trust and rapport the students and I built also continued into the focus groups, which I will discuss in the next chapter.

## **Chapter Six: Students' views of the lived transport safety education experience**

### Chapter overview

In this chapter, I present the students' thoughts, feelings and ideas about their transport safety education based on evidence from the focus groups. In two groups, the students participated in a range of activities designed for me to gain an understanding of: what they thought about the learning experience overall and how they feel about learning in various ways; how they feel about various teaching strategies and pedagogical techniques; and the ideas and possibilities they imagine for transport safety education. My research question was: How does a class of thirteen to fourteen year old students in a rural school in NSW, Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning? To answer the 'student views' aspect of my research question I sought student opinions on their views about the learning, teaching and their ideas, but first I wanted these students' ideas on what they had learnt.

### Views about their own learning

#### *Self-reported changes in thinking, feelings, and behaviours*

I was keen to ask the students about any changes they had noticed in their own thinking, feelings and behaviours regarding transport safety, compared to before the learning experience. I asked them to complete the blank section of three statements in a Visible Thinking activity (Harvard Graduate School of Education, 2015): *I used to think \_\_\_\_ now I think \_\_\_\_; I used to feel \_\_\_\_ now I feel \_\_\_\_; and I used to \_\_\_\_ now I \_\_\_\_* (see Table 7 & Figures 56-61, Appendix H). Some students said their thinking had changed (remembering that I was also the teacher, so this may have affected the students' answers).



Students' answers revealed a realisation that they need to pay more attention, there is a need to teach younger students, and an insight into their perceptions of the amount they had learnt:

“I used to feel like I didn’t care. Now I feel like I should pay more attetion [sic] about transport safety”.

“I used to feel that we didn't need ~~to learn~~ task [sic] about it. Now I feel that we should tell little kids about the risks of transport”.

“I used to feel that I wouldn’t lern [sic] anything in this class. Now I think that I have leard [sic] heaps!! about transport safety”.

These three examples show a sense of apathy to begin with, and then a realisation that they are no longer so apathetic.

Other students said their thinking had changed in terms of a realisation that transport safety is relevant to them, and that they have a role to play in helping others learn how to be safe near transport:

“I used to think that we didn't need a lot to learn, but now I think we need to help more and tell people about transport safety”.

“I used to think that we didn't play a big part in transport safety. Now I think that we are the future generation, who are a bit more educated about transport safety and can make changes when it comes to informing others about transport safety”.

I thought the last comment in particular was insightful for someone who had actively participated in only three lessons: this student seems to be thinking now at a more macro level.

There were several students who reported that their behaviours near transport had changed for the better since being part of the transport safety education experience:

“I used to be silly. No [sic] I am respectful about transport safety”.

“I used to be loud and stupid. Now I am a good boy—I believe about transport safety”.

Whilst these answers did not include examples of how they are now respectful or a “good boy”, the general sentiment seems to be that there is now an awareness of the need to take their safety around transport seriously.

This sentiment emerged again with some students reporting better passenger behaviours and becoming more cautious:

“I used to fight with my brother. But we hardly fight now”.

“I used to yell at my brother in the car. Now I don’t yell and be causes [sic/cautious] about transport safety”.

This demonstrated to me an awareness of the impact their behaviour can have on the safety of themselves and others.

One student talked about having moved from complacency to being more aware about her own behaviours near transport and the impact her behaviour can have, specifically regarding trains and trams:

“I used to not pay attention to transport that much (trains/trams) because I thought it didn't need to worry about it living in the country. Now I understand you should always rethink the risks of beings [sic] silly/distracting when around different types of transport”.

The fact that this student articulated that being in a remote area may have impacted on their level of attention, and that they now understood it was important to consider their actions more carefully, was a possible indication they were intending to avoid being silly or distract others in the future.

These self-reported changes in thoughts, feelings and behaviours give an insight into student awareness and aspects of learning they considered important.

*Student views on characteristics of the learning process*

I was interested to find out what these students would say about learning activities using different pedagogical techniques, in this case a planned critical pedagogical approach, and as such did a label generation activity with them (Colucci, 2007) (see Appendix E), to help them label their feelings. This activity was very interesting because I asked all of the students to contribute an answer, so there were no dominant voices overpowering the less dominant, which was sometimes the case where I asked a question to the whole group. The students gave a range of informative and insightful answers, which I summarised in a table (see Table 8, Appendix H). One student's narrative was about their own role in the learning process:

“When my voice is heard, I feel like I’m involved in the conversation and I’m contributing to learning”.

Another student valued choice:

“When I don’t get a say in my learning, I feel upset because I like to understand my learning and ask questions”.

Positive reassurance was important for one student:

“When my opinion is valued, I feel smart”.

And for another, the process of expressing themselves was positive:

“When I get to express myself in a way that suits me, I feel good, because you’re telling them what you’re trying to explain to them in your own way not their way, it might be more complicated”.

One student expressed the idea that feeling ‘smart’ was a result of an internal process:

“When I can ask and solve problems by working on them myself or with my class, I feel a little bit smarter, cos you’re getting through it”.

On the other hand, another student felt smart when she was able to externalise the knowledge and share it with others:

“When I share my knowledge with others I feel smart, because I like know it, and can tell them, and you feel like really smart. When I tell things to Mila I’m like, I’m smart!”

Finally, there was a sense of being emotionally affected by didactic disciplinary approaches for one student:

“When the teacher yells at people, I think they’re yelling at me too because I’m part of the class, and I feel sad. I’m a real person everyone”.

Their answers highlighted the complexity of the learning process, and the vast range of cognitive and emotional effects pedagogy can have on students.

### Views about teaching

#### *Effectiveness of learning activities using different pedagogical techniques*

In order to find out how the students perceive the effectiveness of a variety of learning activities that use different pedagogical techniques, I used an active ranking activity (Colucci, 2007) (see Appendix E). Collectively, the students ranked ‘excursions’, ‘role plays’, ‘have a class debate’, and ‘brainstorm using hexagons’ as activities they liked the most (see Table 6, Appendix H; see also Figures 62-80, Appendix H). They ranked ‘presentation by a classmate’, ‘my own research on the internet’, and ‘my own research at the library’ as activities they liked the least. When I asked them to justify their answers, Group One said the ones they ranked at the bottom were “boring”, and there was an agreement that “getting up and doing stuff” was their preference:

Mila: We can go places. We can go do stuff, we can walk around, be silly, have like a good time.

There was also an agreement from the class that the teacher impacts on their learning experience:

Sandra: You try being in a class with Mrs Kidman, or someone else, it’s just...no...”

This shows me that students see the teacher as an integral piece of the pedagogical jigsaw puzzle. Students also made comments comparing their experience of learning with different teachers. They strongly associated pedagogy with individual teachers.

The students ranked 'create my own presentation and present it', 'teach primary kids about it', 'read a textbook', and 'tell my family or friends about it' as activities they learn from the most. They ranked 'brainstorm on board or paper', role play' and 'do a treasure hunt' as activities they learn from the least. Group One gave examples of tuning out when they are being talked at:

Sandra: If you're getting involved sometimes you do learn a bit more. Do you learn more when you're sitting there listening to a teacher and you're just like, I don't want to listen to this?

Mila: Nah I put my headphones in.

Sandra: Exactly [laughs].

Charlize: Yeah, a lot of us do.

This tells me they are not only disinterested in being lectured, but that they want to cut themselves off from participating. Putting their headphones in seems to be a non-verbal strategy to clearly tell the teacher that they are not interested.

A majority of students in Group One also had negative perceptions of being at school in general, in particular having to abide by rules:

Hugh: I hate school.

Janine: You hate school? Why do you hate school?

Class: [All talking at once, in agreement]

Janine: Ok, let's let Hugh speak.

Hugh: Because teachers...and there's rules, too many rules, and you're not allowed to do anything, and...

Class: Yeah.

Janine: And do you feel like when you had the first ones, that they were kind of the rule-based stuff?

Class: Yeah.

The students ranked 'brainstorm on board or paper', 'do an investigation', and 'excursions' as activities that might be most useful in everyday life. Finally, they ranked 'presentation by an expert', 'read a text book', 'do a treasure hunt' as activities that might be the least useful in everyday life.

What I found most interesting about the students' responses is that there was very little overlap in activities they like most, learn from the most, and think might be most useful in everyday life. 'Excursion' was top three for both activities they like and activities they thought might be useful in everyday life, but was ranked 12th for activities I learn from, because one group ranked it as 1 (the most) and one as 20 (the least). The students also liked role plays (ranked 2) but did not think they learnt from them (ranked 19), although I noted that some students used 'role play' interchangeably with the term 'Forum Theatre', so this may have impacted the results. 'Brainstorm using hexagons' ranked highly for all three categories (3, 6 and 4 respectively). 'Presentation by a classmate' was ranked reasonably low across the three categories (18, 9 and 17 respectively) (see Table 6, Appendix H; see also Figures 62-80, Appendix H).

### *Students' evaluations of what was Plus (positive), Minus (negative), and Interesting*

In order to gather student views on their evaluation of activities I also asked each group to undertake a Plus, Minus, Interesting (PMI) analysis (deBono, n.d.) about the learning experience we did together (see Appendix E). The students added a range of ideas to a piece of butcher's paper I provided them with the words 'Plus, Minus, and Interesting' in the centre (Whyte, Fraser, Aitken & Price, 2013). When Group One discussed the reasons for their choices in the 'Plus' and 'interesting' categories, they were very positive about the way they I had treated them during the lessons:

- Janine: So, tell me what was fun about it. What were the pluses, or interesting.
- George: Well, you're a mad teacher, and you weren't yelling at us.
- Charlize: Yeah, you let us do our own thing, instead of what most of the other teachers do.
- Mila: Most teachers make us do something *they* want. But we want to do what *we* want.
- Sandra: Yeah miss, if we had to do role plays, before you started doing something with us, and we had this little sheet, we *had* to do what was on the sheet. We didn't have to do that.
- Janine: OK.
- Mila: We got to get our ideas into the thing you wanted us to do. Where the teachers, we have to do their ideas, the way they want to do it. No offence to teachers, but it just doesn't work.

These answers showed me that the students appreciated being listened to; having their opinions valued; having a choice, instead of having choices made for them; and being able to follow their own ideas and inclinations rather than being forced to do something they do not want to do.

The hexagon activity was very popular amongst the students. One student added it to both categories, and commented that it was the first time she had done it:

- Janine: So Mila, did you put 'hexagons' in plus and interesting deliberately? [Nods] Can you tell me about that?
- Mila: Cos, I'd never done it before, and thought it was really weird, and really cool and stuff.
- Janine: OK cool, what did you like about it?
- Mila: I don't know, I just found it really interesting.

Even though she was unable to articulate the reason behind the activity's interest factor, it was very clear that she enjoyed the activity. Novelty is likely to be a factor in gaining student engagement in transport safety education.

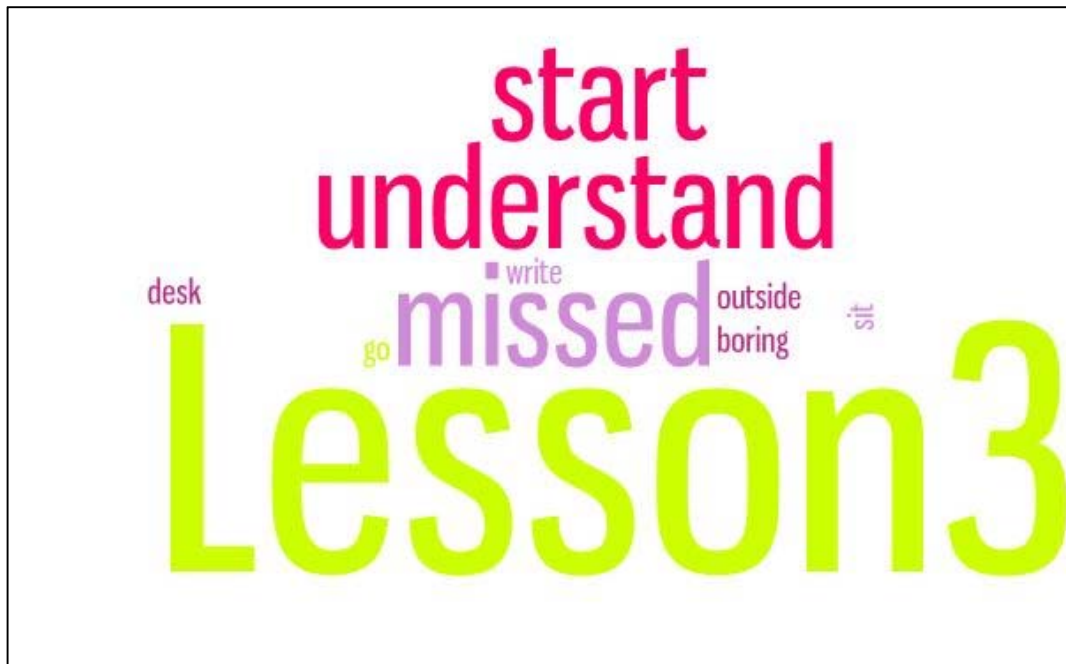
After collating both groups' answers, I generated a word cloud (McNaught and Lam, 2010) to identify the frequency of the words used in the plus category (Figure 81). 'Roleplaying' appeared the largest, which indicates it is the most frequently used word, followed by 'hexagons'.



*Figure 81* Word cloud representing the top ten words used by the students to describe their thoughts on the 'plus' or positive aspects of the learning experience

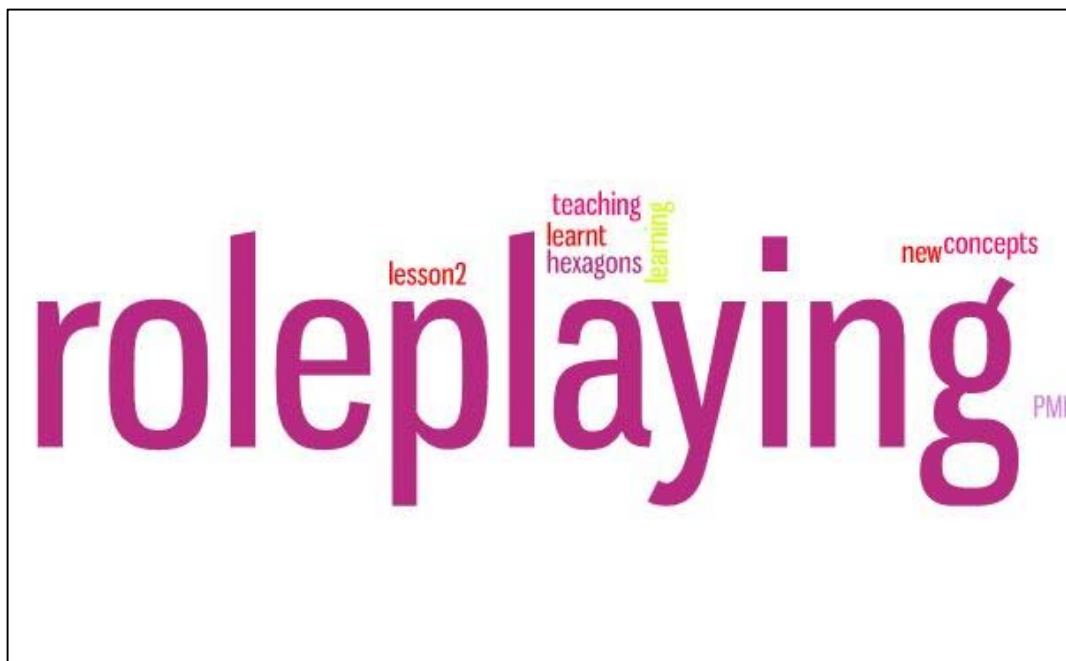
I repeated this process for the minus category (Figure 82). For this category, students identified 'Lesson 3' as their most significant minus, followed by 'start' and 'understand', which related to not understanding what to do at the beginning of Lesson Three.





*Figure 82* Word cloud representing the top ten words used by the students to describe their thoughts on the 'minus' or negative aspects of the learning experience

I then did the process for a third time for the interesting category (Figure 83). Roleplaying again came out on top, with the other answers including 'hexagons', 'learning'/'learnt', and 'new concepts' evenly rated.



*Figure 83* Word cloud representing the top nine words used by the students to describe their thoughts on the 'interesting' aspects of the learning experience.

(There are nine words instead of ten in this case because there were only nine words to include).

On the basis of these student responses, teachers of transport safety might give attention to learning activities that involve students active participation (such as role play or Forum Theatre) and time to explore their own ideas (such as in the hexagon activity).

### Ideas and possibilities

#### *Creative ideas for pedagogy*

I used a magic tool activity (Colucci, 2007) to ask the groups to use their imaginations and tell me what their ideal transport safety education experience would be (see Appendix E). They came up with some very creative ideas linked to their particular interests:

Charlize: I wanna do more roleplays. Fun role plays pushing people on the train tracks [laughs].

Charlize's use of humour here makes me wonder if she got a kick out of acting 'the bully' because does not normally fulfil that role—she is often someone who is picked on and feels not listened to herself—which is a fact that came to light during this focus group. Hugh was more focussed on his life's passion:

Hugh: There's every bike in the world. Teach you to ride bikes, safety on the bike.

Hugh's excitement for motorbikes was very evident throughout the three lessons and during the focus group. His answer seems to be focussed on the type of transport safety he sees as most relevant to him. Sandra agreed:

Sandra: Motorbikes. They can see the dangers of it and everything that's fun about it.

Learning about the risks, and also about the positive aspects of the transport activity was something Sandra valued. George also suggested a practical learning experience:

George: I would do some fun stuff, like Ag, and stuff instead of sitting in the classroom.

His answer suggests to me his preference would be to do a transport safety lesson outside the confines of the classroom environment; or combine his favourite subject with it.

Leonardo also used motorbikes as the main attraction of his ideal transport safety learning experience:

Leonardo: We're gonna turn that oval out there into a motorbike track. Yeah, see that's tricky just quietly.

Janine: OK, so how are you going to incorporate safety into that?

Leonardo: Don't let retards onto it.

I ignored Leonardo's use of inappropriate language which may cause offence to people with disabilities in order to keep the focus group flowing.

Scarlett: Stop signs?

Janine: OK, so we've got a driving learning centre with motorbikes, the oval's turned into a motorbike track...

Scarlett: I reckon there should be a height, like, if you're not as high as this you can't ride, 'cos you'll have a higher chance of dying.

Angelina: What if we just have a smaller motorbike?

Scarlett: Oh yeah, George won't be able to ride!

This discussion showed some students were thinking through the possibilities for learning, rules that might need to be enforced, possible safety infrastructure and ways to keep people safe while riding.

Mila was also focussed on motorbikes, had strong views that farm and bush survival skills were important to her, and that transport safety to her fits into that category:

Mila: Instead of sitting in the classroom...I would actually get the kids, teach them to ride motorbikes, teach them to do agriculture. Out here there's nothing much except thereselves [*síc*], so we need to learn what snakes there are...know the dangers of the bush. Because not all of us are going to leave our families and our home, we're all going to stay here pretty much.

Janine: So do you think transport safety's relevant to you?

Mila: Yes. Because you've got headers and tractors. You've gotta know how to fix them if they break, know how to get out of the way when they're coming, know how to help 'em while they're doin' whatever they do.

Janine: What about in town?

Mila: Yep. Make sure you secure everything down so you don't lose half a bale of hay down the main street.

Mila thought about transport safety in the context she was most familiar with: transport on the farm and in relation to people who work on farms. This comment highlights the overlap between farm safety and transport safety.

Angelina had an idea which involved using technology to enhance the learning experience:

Angelina: We could have lessons where you use those visual things to see holograms so you're actually in a situation.

Scarlett: Like virtual reality?

Angelina: Yeah. Like you're in someone else's shoes, and before they do something you get to rethink what could happen, "Oh no, this isn't right". So then you know when you're in that situation you know not to do it.

These students discussion in lessons (e.g. use of Snapchat within their Forum Theatre plays) had already established their everyday use of technology. Angela's

comments highlights the advantages of visual resources in learning and also the use of technology as a way to allow students to learn in a realistic environment but without physical risk. The suggestion is that, if they did make a risky choice, there were no actual consequences, but rather virtual ones. Such an experience could also then give students the opportunity make a different, safer choice.

Aligned with the class' preferred learning activity, Scarlett had the idea to go on an excursion:

Scarlett: We could go to like the city and see what their transport thingy's like.

Angelina: How the different systems work?

Scarlett: See the difference like from here to the cities.

Janine: That's a good idea. Yep.

Scarlett: We should do that, like actually.

[Class laughs]

Scarlett: Like we go there, and spend like a couple of days there just studying the surroundings, then come back here, and then we compare them. That is a great idea. I'm gonna talk to Ms Thurman about that. Yep, it's going to happen.

Scarlett's idea involved a study tour for a comparative study to learn more about the transport system in a city environment versus the environment she is used to in the country. She was so determined to tell the principal Ms Thurman her idea and make it happen that she mentioned it again later.

Another interesting idea Scarlett came up with was related to safety near trains:

Scarlett: Board up the side of the railway track. And just be like, don't go in, if you enter you'll get prosecuted. They'll think that their heads get chopped off so they won't go in.

Salma: But then some people will be stupid and be like, “I wanna see if it actually happens and then they’ll do it. Or if they’re suicidal.

Scarlett’s idea was quite graphic and focussed on enforcement, however, Salma realised it would not be an effective way of stopping some people from entering the rail corridor.

Angelina thought a communications campaign using billboard advertising might be a good option to reinforce safe behaviours around trains:

Angelina: We should have, like, giant signs up. Have you driven through South Australia and seen those signs of like crashes everywhere? I used to see those signs with a guy with toothpicks in his eyes, ‘cos he has to stay awake. We used to always have those signs. And we should have them here, but have pictures of like a really horrific accident with trains. Or someone standing in front of a train trying to get a good photo, and be like, ‘rethink this, do you know what’s going to happen?’

Scarlett: That’s a smart idea.

Knowing what the evidence says about fear appeals, I decided to ask their thoughts on the effectiveness of a fear-based campaign like this:

Janine: Do you think that would change people’s behaviour?

Angelina: Yeah—

Scarlett: Yeah, that would sink in, because of what the train could do.

Angelina: Maybe they’d see an actual event or true story what has happened, and they’d go, well that could happen to me.

Janine: Do you think that would help you guys think that, if you saw that?

Scarlett: Yeah. If you seen like a proper, proper one, and like, you know—

Angelina: Their story about what's happened, somewhere.

Angelina and Scarlett emphasised the importance of the story to be used in the campaign being 'real' and a 'true story' to increase its effectiveness. I was curious to ask the opinion of other students who may display a higher level of tendency for risk-taking than Angelina or Scarlett, to garner a different viewpoint on whether or not that strategy would change behaviour:

Janine: What about you Leonardo? Would that change your behaviour? Like would you ride your motorbike differently if you saw a big horrific crash?

Leonardo: No.

Salma: My brother wouldn't either, he'd just be like, yeah... [laughs].

Leonardo: Speed up a bit more. More speed, more power, less chances of dying.

Janine: Why wouldn't it impact you?

Leonardo: 'Cos I'd be like—

Salma: It didn't happen to me or something?

Leonardo: It happened to them, they're stupid enough to do it, I'll go out and do the same thing and if I fall off and hurt myself I fall off and hurt myself.

Janine: So it's kinda my own fault, is that what you're saying?

Janine: Like I'm taking my own responsibility for my own actions.

Leonardo: Yeah.

In other words, Leonardo said that he would not be dissuaded to take risks on his motorbike, if exposed to a negative, fear-based image or story. Instead, if he

chose to do that, it would be his own doing, and it wouldn't be a big deal to him. This shows he has a sense of individual responsibility about the risks he takes.

Leonardo then came up with another idea to combine his love of motorbikes with safety near train tracks:

Leonardo: Can we go steal George's 110, we'll get the coolest grinder out, we'll cut the tyre off it so it's on the rim, and then we'll get on the train tracks, and we'll go ride it on the train tracks.

Janine: Is that a good lesson about safety, Leonardo? [Janine and class laugh] I'm not sure...

Leonardo: It's a 110, it don't go that fast!

Salma: But that means if the train's going past you'll die!

Angelina: But if that actually happens, you could show it to other people and say, say do you want this to happen to you, these were bad influences.

Leonardo: I'll do it!

Janine: Do you think other people might want to do that, because they've done it?

Salma: Yeah, some people might think that's pretty cool...

Leonardo: Let's do it!

Janine: So is that safe? Is that encouraging safety?

Scarlett: That's like, egging them on to do it. That's not good.

Janine: That's not good at all is it?

Despite Salma pointing out the flaw in Leonardo's plan (that is, dying), he still said he wanted to try it. Angelina thought the end result might actually be a useful tool to make into a teachable moment. Salma had the insight that copycat behaviour may be a result of showing unsafe behaviours to some people. Scarlett also articulated that using a strategy like that might have the opposite effect,



that is, to encourage the unsafe behaviour. There is a possibility that the dynamics of the focus groups caused Leonardo put himself forward with bravado.

Finally, Angelina thought about a strategy to start transport safety education earlier in life:

Angelina: I think just if children are educated from a younger age, they just grow up to know that it's not right. Kindy kids, planting seeds in their knowledge and then they will just know when they are like, our age and older that it's not good.

I thought Angelina showed a great deal of intuition and awareness of how people learn, and a level of understanding of the importance of lifelong learning by expressing this idea. The rest of the group were also supportive of her idea.

Overall it was noticeable how often these 14 year old students spoke of teaching and guiding younger ones. This may be a context specific situation where students take responsibility for younger children or siblings, due to the nature of the community. This might also be applicable in other contexts and have implications for the importance of transport safety education with this age group, and encourage their sense of responsibility as teachers themselves.

### Chapter summary

The focus groups revealed a rich impression of the students' views about learning and teaching, as well as some highly creative and innovative ideas on how transport safety education can be improved. The students demonstrated a significant level of understanding about how they prefer to learn. They demonstrated an awareness of how they are treated, and how that impacts on them emotionally and cognitively. They expressed a range of opinions about learning and teaching and some ideas about what they would like to do, such as teaching younger students.

There is a lot teachers, transport safety educators, policy makers and curriculum developers can learn from listening to the voices of these students, in order to

inform both policy and practice. These learnings will be outlined in the discussion.

## Chapter Seven: Discussion

### Chapter overview

The aim of this research was to seek students' perceptions about transport safety education through asking the research question: How does a class of thirteen to fourteen-year-old students in a rural school in NSW, Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning? This involved me, as the researcher, getting to know, teach, and observe the students in one class studying a short unit on transport safety. Evidence was gathered on their opinions and ideas about the learning experience and about learning in general. Students' opinions were sought specifically because their voices may be able to make a first step in bridging the current gap we have in transport safety education policy, practice, and literature: that is, a lack of student input.

The literature on transport safety education in Chapter Two reveals numerous studies on transport safety education (Assailly, 2017; Dragutinovic & Twisk, 2006; Government of Western Australia, 2009 and others), however none include students' voices in the research.

In this chapter I will discuss the intentional design of the lessons using aspects of critical pedagogy such as acknowledging student expertise, changing the power dynamics, and learning alongside students, and link it to the literature about good practice transport safety education and critical pedagogy. I will also discuss three findings arising from how the lessons impacted student learning. These are: students have prior knowledge about safety and the transport system, whether exhibited in their behaviour or not; an opportunity for crossing agency boundaries; and a suggestion for alternative curriculum development. Finally, I will identify a continuum of learning that emerged in this study, and discuss this in the context of future practice.

### Considerations of pedagogy

Although it was a small unit, the learning experience also had a range of aspects aligned with critical pedagogy embedded within it. What stood out to me as I observed the students during the lessons, and in the reactions and opinions students had during the focus groups, was that the teacher's role is intrinsic in ensuring the pedagogy works the way it is intended, and works for the students in that context and circumstance. As I taught the lesson, I realised there was a requirement for the teacher to deliberately ignore (in the sense of not reacting to) students' discussions about illegal or unsafe behaviour. If I had have shut down the conversation, the richness of the information the students provided would have been lost. This richness helped me to guide the lesson because it gave me an unfiltered understanding of the students' experiences through their eyes.

#### *Being a critical teacher*

While I was their teacher, I also realised that critical pedagogy, as a vision, is something that cannot simply exist in a set of resources. There is a strong element of this that needs to either come from within the teacher (or be developed), an intrinsic desire to build quality relationships with students; teach with students' interests in mind; ask for their input; help shape the students' ideas and drive to contribute to society through civics and citizenship; break away from traditional classroom power dynamics; teach critical thinking skills; have high expectations of students; and encourage students to produce knowledge by being a facilitator not a provider. Perhaps given the way the content is written, teachers who naturally teach this way might be likely to pick up and use the resources as they can see the vision in the content.

#### *Practical pedagogical methods these students responded to*

Students in this study had clear opinions on what kinds of learning activities they enjoyed and worked for them. The transport safety unit taught in this research was deliberately planned to include aspects to engage students identified in the literature from prior research and critical pedagogy. Using student ideas and

prior knowledge to build more knowledge was a key aspect of the lessons planned. Students responded when they had time to think and talk, were given choices, and were allowed to bring in aspects of their passions to the lessons, for example talking passionately about motorcycles (see Focus Groups, Chapter 6). Students viewed lessons where they were able to interact with each other and be out of their usual classroom routine as valuable: one suggestion from several students to improve the pedagogy was to run the lessons outdoors.

Novel ways of learning seemed to be most effective. This was manifested in how the students in this study responded to activities they had not done before, and how they viewed these activities, as evidenced by their preferences and discussed in the focus groups. Examples include the hexagon and Forum Theatre activities. This is consistent with the literature on transport safety education, which shows interactive approaches are more effective (Raftery & Wundersitz, 2011). It is also important to not rely on novel pedagogical techniques, as they can quickly become mainstream and lose their novelty factor, and therefore their edge to engage student interest.

There was also a suggestion for the incorporation of technology (such as virtual reality) which is novel as it is not already used in the classroom, but also the fact that 'safe' risk taking is possible in this context may be useful. Caution needs to be taken here to ensure technology is not used in a tokenistic way: that is, replacing an aspect of learning that could be done without technology.

### Learning for curriculum and programme development

#### *Lesson sequence*

The lesson sequence was a very important aspect of the pedagogy. By tapping into their prior knowledge from the outset, students realised that transport safety was in fact relevant to them, after all, they already knew rules and what constituted safe and unsafe behaviour, even for modes of transport they did not have in their local town (such as passenger trains). This relevance may have contributed to developing a sense of purpose for the lessons, and in turn the motivation to learn.

### Context specific safety connections

Context is an important consideration for transport safety education programmes. Many of the ideas and topics students talked about, and ideas they came up with in the focus groups, stemmed from their specific, remote rural context. Beyond the fact that the lessons are adaptable for the teacher to make them relevant to their students, I realised the importance of the design in encouraging free thought and input of students' own ideas. This allowed the students to bring their own local context and unique sense of relevance to the lessons.

The overlap with farm safety was apparent once I heard the students' views expressed during the focus group, with many of them discussing safety in the context of riding motorbikes, expressing a desire to get out of the classroom and learn outdoors. One student suggested focussing on transport safety practices in the context of her farm would be more relevant to her and her classmates: this content would ordinarily be featured in a farm safety education experience. Addressing the 'real-life' overlaps between transport safety in context is in contrast to the traditional view of 'transport', where road and rail operate separately to each other in policy, statistics, research and education programs. Cross agency collaboration is an opportunity worth further investigation.

### Continuum of learning

A pattern emerged from the focus groups when the students discussed how they viewed a range of issues before and after the lessons (see Visible Thinking activity in Focus Groups, Chapter 6). Their views can be illustrated by a continuum of learning in transport safety education, as follows:

1. **Irrelevant and apathetic:** transport safety is not relevant or important, I don't care about transport safety.
2. **Recognise relevance:** transport safety is relevant to me.
3. **Give it more attention:** I pay attention to being safe around transport.

4. **Pause and think:** I can see this might be unsafe, I won't act until I think first.
5. **Empathy:** I care about others, I want them to be safe too (e.g. peers, younger children).
6. **More agentic:** I have more agency about how I act around transport.
7. **Intention to change own behaviour:** I intend to act safely around transport.

This indicated to me that students do not learn at the same pace, and they may have an 'aha' moment which brings them further along this continuum, compared to their peers.

### Key findings

The three key findings that emerged from this study follow.

#### *Building of self-regulation and self-management skills*

The students in this study demonstrated their amount of prior knowledge about safety and the transport system, whether exhibited in their behaviour or not. This in some ways contradicts the evidence in the literature, which perhaps underestimates student's awareness of hazards, risks and consequences. The students also already have some ideas as to how to manage these issues, as evidenced by their Forum Theatre plays (see Chapter 5). However, they thrived from structured practice in a safe environment to practice ways to make safer choices, self-regulate and self-manage, which is consistent with the literature on adolescents' brain development (Blakemore, 2019, Siegel, 2014).

Snapchat featured in both groups' Forum Theatre plays with one group snapchatting an instance of bullying, and the other snapchatting while peer pressuring a driver into street racing. Snapchatting in both instances appeared to have been to gain a wider audience to 'perform' to than was physically present at the scene. This may also suggest that having no physical audience available would not be a barrier to 'performing': they know they can just bring one in via

social media. Learning activities to further develop students' skills in self-regulation and self-management assisted these students.

Siegel (2014) raises concerns about rites of passage being missing or underrated in modern cultures. He points out that in traditional cultures where culturally approved rites of passage exist, boys often complete a dangerous, risky activity and are welcomed to adulthood with a sense of responsibility; and girls are formally acknowledged and welcomed through recognition of their fertility (Siegel, 2014). In rural areas, children are expected to work on the farm from an early age, and perhaps the early introduction of risk, such as motorbike riding, is one kind of rite of passage, although it is not formalised. Without formalised rites of passage in our modern society, adolescents are not getting the support they need from adults other than their parents, where they can participate in harm minimised risk taking activities while still being 'teenagers' (Siegel, 2014). He suggests that by creating these sorts of rites of passage and relationships in our modern cultures, and working together intergenerationally at a community level, we can support teens to develop the secret power and purpose of their minds, whilst still honouring the "essence of adolescence" (Siegel, 2014, p. 29).

### *Cross agency collaboration*

The students in this study made me aware that transport safety does not have the boundaries for students that traditionally bind our policies and practices. When using the transport system, safety is not divided into separate entities, e.g. rail, road, and farm. The students in this study and the responses from their experiences in the lessons and focus groups indicates a crossing of boundaries in student lived experience of transport. A good example of this is level crossings, which is a road/rail interface, but is, for the most part, forgotten about in road safety education.

As outlined in Chapter Two, the statistics are divided into road and rail, as are most of the transport safety education programs in Australia, although this is starting to change.



### *Opportunities for dynamic learning*

As the literature about learning has established, students appreciate being active in their learning, to have opportunities to talk and share their own ideas.

Students suggested a range of alternative ways they would prefer to learn about transport safety education, in particular they would appreciate opportunities outside the classroom, for example excursions. This means there are still things to be learnt about how transport safety educators prepare resources, and potential opportunities for transport safety-based excursions.

### Chapter summary

This study has shown how pedagogy could be successfully constructed *with* students, not *for* them, both in the sense of the lesson content and the broader framework in which it exists.

## Chapter Eight: Conclusion

### Chapter overview

This study asked the question: How does a class of thirteen to fourteen-year-old students in a rural school in New South Wales (NSW), Australia view and respond to a transport safety education experience that uses a critical pedagogical approach to learning? I will outline the key learnings from this study, and make some recommendations.

### Key learnings

#### *Learnings for pedagogy*

The students in this study had good knowledge of the transport system, their role in the transport system, as well as an awareness of hazards, risks, and consequences of risky behaviour near transport. However, this is not recognised widely in the existing literature or in programme design, particularly in programs that do not go beyond transmitting information. On the other hand, they needed support to develop skills in self-regulation and self-management, especially around their peers, which is consistent with the literature on adolescent brain development.

#### *Learnings for programme developers and practitioners*

The students shared a lot of ideas that can be useful for programme developers and practitioners of transport safety education in this study. For example, they made it clear that they do not separate different modes of transport when using the system—they are simply getting from A to B.

#### *Learnings for further research*

Listening to students' perspectives yielded authentic and real narrative data that gave insights into pedagogical practices for transport safety education. Students are a missing voice in the literature, however this study shows they have a lot to offer.

## Recommendations

On the basis on this single case small study, I make the following recommendations:

1. When designing transport safety education programs, raising awareness of risks, hazards and consequences should not be the focus. Instead, building skills in self-regulation and self-management in a controlled environment may be more effective.
2. Transport agencies should work together more collaboratively to ensure their administrative silos are not a barrier. They should also work in cross-agency collaborations outside of transport, for issues involving transport safety in other contexts, such as on farms.
3. Listening to students' voices is important, and should form a component of transport safety education programme design in future.

Further research in larger regional centres and cities, or other jurisdictions would help us understand if the findings are useful in other contexts.

LeCompte (1993) points out that “creating a name for a condition is not the same as changing it” (p. 14), and that if research is intended to be empowering, the researcher must expect conflict with those who make the rules, and cannot expect to appease all stakeholders, because true empowerment means taking privilege away from those who have previously benefitted from their position. She says that for empowerment to occur, there needs to be a change to the power dynamics, and a researcher needs to identify the desired future state or vision beyond simply publishing a text (LeCompte, 1993). My vision for this study goes beyond this thesis.

My vision, encompassing the voices of the students and teacher involved in this study, is to lobby for inclusion of student voice as a key component of programme policy and design. I intend to start by identifying any policies or resources in my current professional practice that can be transformed by the insights I gained from this study. I then intend to share these learnings with other practitioners, so they too can learn from the students and teacher who so

generously participated in the lessons and shared their opinions and perspectives.

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## **Appendices**



## **Appendix A: Lesson Plans**

## Lesson Plan Overview

The following lessons are adapted from an authentic program available to teachers online. The material used to create this is licensed under CC BY 4.0 by the TrackSAFE Foundation (TrackSAFE). It was downloaded from [www.tracksafeeducation.com.au](http://www.tracksafeeducation.com.au) in 2018 and was modified.

**Note: This is a guide for context only. The content and timings of the lessons will be adapted for the students once I have an understanding of their strengths, interests, and literacy levels.**

Lesson	Overview	Learning intentions	Success Criteria
<b>Lesson 1</b> Bringing in ideas about physical activity near transport (moving to connecting ideas at the end of the lesson)	Students explore the physical activity of people around transport. They investigate risks to the health and wellbeing of people moving around their local area using different transport modes. They explore the reasons why people behave in unsafe ways near transport.	<ol style="list-style-type: none"> <li>1. <b>Describe</b> health and safety hazards around transport.</li> <li>2. <b>Explain</b> the causes of health and safety hazards around transport.</li> </ol>	There is no assessment as part of this study, therefore success criteria is not included.
<b>Lesson 2</b> Connecting ideas about physical activity near transport	Students explore the reasons why people behave in unsafe ways near transport in more depth. They investigate strategies to manage this risk.	1. <b>Explain</b> how to manage a safety hazard around transport.	
<b>Lesson 3</b> Creating ways to positively influence hazardous	Students explore how they can make a transport related place around the local area safer for young people. They investigate strategies to manage risk, and plan a project to make young people safer around places where transport exists in their local area.	1. <b>Create</b> a proposal or a resource to positively influence hazardous behaviour around transport.	

physical activity near transport			
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### Equipment needed to record lessons for dissertation:

- iPhone
- iPad
- Laptop – back up recording device
- Camera – ask Robin to take photos

## Lesson 1

### Bringing in ideas about physical activity near transport

Learning intentions:

1. **Describe** health and safety hazards around transport.
2. **Explain** the causes of health and safety hazards around transport.

#### **Preparation**

*To prepare for this lesson, students have been asked to take photos of the transport system around the local area, and observe the behaviour of people using the transport system. They have also been asked if they would like to invite along any experts to participate in the lessons, e.g. local police officer, railway worker.*

Time	Activity	Resources
12:05	<b>1. Define terms</b> <ul style="list-style-type: none"> <li>• <b>What makes up a transport system?</b> (<i>Physical assets: roads, pedestrian crossings, traffic lights, round-a-bouts, rail yards, railway stations, tracks, overhead</i>)</li> </ul>	Board

Time	Activity	Resources										
12:15	<p>wires, rail substations, level crossings, pedestrian level crossings, overpasses, pedestrian walkways, tunnels, bridges, signals, communication systems; Administrative processes and regulations; personnel and management required to repair tracks, sell tickets, timetable trains; transport users e.g. cyclists, pedestrians, drivers, rail commuters; Transport modes e.g. cars, trucks, bicycles, trains, trams, ferries/boats, planes.)</p> <ul style="list-style-type: none"><li>• <b>What is physical activity?</b> (Walking, running, cycling...)</li><li>• Ask students to <b>brainstorm</b> everything they know about <b>physical activity in and around the transport system</b>. Ask them to <b>think about all the different ways the transport system is used by people who are physically active</b>. They should use text, quotes, drawings and/or images to express these ideas. If prompts are required, provide examples describing physical activity at various places in the transport system (YouTube, still images, popular media, online and TV news stories etc.).</li><li>• <b>What is a hazard?</b></li></ul> <p>Ask students to:</p> <ul style="list-style-type: none"><li>• <b>Take out</b> the photos they took of the transport system in the local community and group them in categories e.g.</li></ul> <table><tr><td>sealed roads</td><td>pedestrian crossings</td><td>level crossings</td><td>carparks</td><td>footpaths</td></tr><tr><td>train tracks</td><td>rail yards</td><td>bus stops</td><td>dirt/gravel roads</td><td>bike racks</td></tr></table> <ul style="list-style-type: none"><li>• <b>List</b> the different groups of pedestrians who use this space each day – for example,</li></ul>	sealed roads	pedestrian crossings	level crossings	carparks	footpaths	train tracks	rail yards	bus stops	dirt/gravel roads	bike racks	<p>Sheets of blank paper/butchers paper</p> <p>Photos taken by students</p>
sealed roads	pedestrian crossings	level crossings	carparks	footpaths								
train tracks	rail yards	bus stops	dirt/gravel roads	bike racks								

Time	Activity	Resources
	<p>young people, family groups, pre-teens, adults with pre-schoolers, adolescents, older people, people with mobile suitcases, people in wheelchairs, people using walking frames or sticks, people with prams and strollers, people running late, people pushing bicycles or riding scooters.</p> <ul style="list-style-type: none"> <li>• <b>Do</b> an 'imagined' walk through using markers/stickers to identify hazards for pedestrians in places in and around the transport system</li> <li>• <b>Identify</b> a group of pedestrians who may be at risk of a trip/fall or another transport related injury when using this space.</li> <li>• Use the attached <b>Hazard checklist</b> to help you look for pedestrian hazards and possible management suggestions.</li> <li>• As a group, ask students to <b>annotate</b> the images in a style that will appeal to an identified group of young people. For example, create a meme or add a caption, speech bubbles or hashtags.</li> </ul>	<p>Board/butchers paper</p> <p>Post-it notes</p> <p>Hazard checklist</p> <p>Textas/pens</p>
12:30	<p><b>Connecting ideas about physical activity near transport</b></p> <p><b>Explain the causes of hazardous physical activity in the transport system</b></p> <p>Ask students to work in pairs or small groups to come up with different reasons why people might act in any number of unsafe ways around the transport system.</p> <p><b>For example</b>, it may be that they have behaved in this unsafe way before and escaped injury, or that the unsafe behaviour brings them some kind of advantage. Some people may model their behaviour on the unsafe behaviours and attitudes of others using the transport system (peer pressure and bullying). Others may simply be stressed, distracted or under the influence of drugs or alcohol.</p> <p>Ask students to:</p>	<p>Scissors</p> <p>Hexagon template</p> <p>Pens/textas</p>

Time	Activity	Resources
	<ul style="list-style-type: none"> <li>• <b>write</b> these ideas on a separate blank hexagon. They can do this electronically using the HookED SOLO Hexagon Generator: <a href="http://pamhook.com/solo-apps/hexagon-generator/">http://pamhook.com/solo-apps/hexagon-generator/</a> or manually using the <b>HookED Hexagon Template</b>.</li> <li>• <b>combine</b> their hexagons with those of other pairs of students.</li> <li>• as a group, <b>make connections</b> between individual hexagons by looking for reasons to make straight edge connections (tessellating the hexagons). Students should explain orally or by annotation why these ideas are related.</li> <li>• <b>explore</b> the node where three hexagons share a corner (or simply look at a cluster of hexagons) and make a generalisation about the nature of the connected ideas.</li> <li>• <b>step</b> back from the resulting tessellation (clusters of hexagons) and make a group/class claim – “Overall we think an important reason why people act in unsafe ways in and around the transport system is (make a claim) ... because (give a reason) ... because (give evidence).”</li> <li>• <b>share</b> the important reasons why people behave in unsafe ways in and around the transport system.</li> </ul>	
12:48	<b>Recap and talk about next lesson (period ends 12:50)</b>	

**Hazard checklist**

Potential hazard for pedestrians	Where is the hazard?	Why does it present a safety hazard for pedestrians using the place?

Potential hazard for pedestrians	Where is the hazard?	Why does it present a safety hazard for pedestrians using the place?



## Lesson 2

### Explain how peer pressure can influence young people to act in safe and unsafe ways in the transport system

Learning Intention:

**Explain** how to manage a safety hazard around transport.

Time	Activity	Resources
11:00	<p>Peer pressure within adolescence is commonly cited as the reason why some young people behave in unsafe ways in and around the transport system.</p> <p>The research shows risk taking in and around the transport system commonly occurs when adolescents are in the company of their peers rather than when they are acting as individuals in the transport system.</p> <p>Ask students to work in the same small groups to develop a one minute play that describes an unsafe behaviour in the transport system caused by peer pressure or bullying. Students develop their own script. They can ask for help with ideas.</p> <p>The group should:</p> <ul style="list-style-type: none"><li>• Identify individual roles within the group.</li><li>• Ensure that all members contribute ideas when planning the role play.</li></ul> <p>The play should:</p> <ul style="list-style-type: none"><li>• Identify the negative peer pressure (e.g. rejection, putdowns, reasoning, everyone else is doing it) used to persuade others to act unsafely in the transport system.</li><li>• Explain why the behaviour is potentially unsafe in the transport system.</li></ul> <p>To develop their plays, ask the groups to:</p>	<p>Blank paper</p> <p>Pens</p> <p>Any props they wish to use</p>

	<ul style="list-style-type: none"> <li>• <b>Practise</b> the role play and seek feedback from another group on how you could make the story line more compelling.</li> <li>• <b>Rework</b> the role play.</li> </ul> <p>Groups deliver the role play, without interruptions, to an audience.</p> <p>Next, use the 'Augusto Boal Forum Theatre' technique (refer to: <a href="http://en.wikipedia.org/wiki/Forum_theatre">http://en.wikipedia.org/wiki/Forum_theatre</a>) to replay the scene, but this time any member of the audience can shout "Stop!" and take the place of an actor, changing the situation to manage the peer pressure or bullying in a way that keeps the student safe.</p> <p>Replay the scene several times to allow students to share different strategies, responses and outcomes. The facilitator explains what is happening to the audience.</p> <p>As a class, discuss which approach is likely to be the most effective when managing the peer pressure or bullying that is causing unsafe behaviours in the transport system.</p>	
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## Lesson 3

### Creating ways to positively influence hazardous physical activity near transport

Students will be given a choice of two group activities for this lesson. They can choose this based on their level of interest, skills, strengths, and motivation to do the task.

Students explore how they can make a place on or around the local transport network safer for young people. They investigate strategies to manage risk, and plan and carry out a project to make young people safer around places in the transport system in their local area.

Learning intention:

**Create** a proposal or a resource to positively influence hazardous behaviour in the transport system

9:00	<p><b>Option 1: Make a set of trading cards to help others manage peer pressure on them to act unsafely in and around the transport system</b></p> <p>Using their new learning from the previous activities, students work in groups to create a set of trading cards that suggest five different ways to manage negative peer pressure in and around the transport system. These cards are to be designed for students to carry in their wallet or photograph and add to their mobile phone image library.</p> <p>Each card will:</p> <ul style="list-style-type: none"><li>• Identify a peer pressure approach used to persuade others to act in illegal or dangerous ways in the transport system (e.g. rejection, putdowns, reasoning, everyone else is doing it).</li><li>• Explain how and why the peer pressure is a hazard to personal safety or the safety of others.</li><li>• Assess the riskiness of the peer pressure approach (0 to 5) to create a Risk Assessment Score. This can be done through a class vote. Add the reasons why this score was given (e.g. consequence score + likelihood score = score).</li></ul>	Trading card template
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	<ul style="list-style-type: none"> <li>• Identify three ways to manage (deal with) the hazardous peer pressure.</li> <li>• Use a pull-out quote to send a message about managing hazardous peer pressure.</li> </ul> <p>Set out the information in the way shown on the attached <b>Trading Card Template</b>. Alternatively student can make their own cards using genuine sizing of 64 mm x 89 mm (2.5" x 3.5").</p> <p>Students share their draft trading cards with other students.</p> <p>Prompt them to ask for and give feedback on how they could improve the trading cards. Use the success criteria and feedback prompts to give explicit feedback.</p> <p>Some feedback prompts for students:</p> <ul style="list-style-type: none"> <li>• I liked...</li> <li>• I learnt...from this.</li> <li>• One thing you could work on improving is...</li> <li>• Next time you could try...</li> </ul>	
9:00	<p>Option 2: Make decisions about actions to help young people move safely in or around the local transport system</p> <p><b>Discuss</b> these questions:</p> <ul style="list-style-type: none"> <li>• Why do young people move in unsafe ways in or around the local transport system?</li> <li>• What can be done to help manage the risk young people face when moving in and around the transport system in your local area?</li> <li>• How can we work with young people to make them safer in or around the transport system in your</li> </ul>	<p>iPads for research – arrange with Robin ahead of time</p> <p>Decision making matrix Prepped info sheets for the groups</p>

	<p>local area?</p> <p>In making young people safer, think about what can be done by students at each of these levels:</p> <ul style="list-style-type: none"> <li>• <b>individual</b> – for example, learn more about the reasons why young people move in unsafe ways on or around a place on the transport system in your local area, and about what is needed to help young people better manage their safety on or around a place on the transport system in your local area,</li> <li>• <b>class</b> – for example, survey other young people to find out what would help them manage hazards at a place on or around the transport system in your local area,</li> <li>• <b>school</b> – for example, encourage schools to adopt policies for safer movement of young people in and around the transport system in your local area,</li> <li>• <b>clubs and youth organisations</b> – for example, take part in discussions, write to news media and online forums to raise the awareness of working together to create safe outcomes for students moving on or around the transport system in your local area,</li> <li>• <b>local community</b> – for example, participate in local body politics and lobbying to include a youth perspective on safer outcomes for young people moving in and around the transport system in your local area,</li> <li>• <b>government</b> – for example, contact government representatives to build an awareness of a youth perspective on keeping safe around the transport system in your local area, and</li> <li>• <b>places of worship</b>– for example, encourage discussion among church/mosque/temple/synagogue etc. members around meeting the rights of young people to experience safe outcomes when moving in and around the transport system in your local area.</li> </ul> <p>Ask students to come up with an example for what they might do to take action or influence others to take action at each level listed above.</p> <p>Ask students to imagine how they might work with other young people to create safer outcomes for young people who are moving in and around the transport system in your local area. Their suggestions might</p>	
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	<p>involve re-imagining a place on the local transport network as a place to foster wellbeing for the youth community. It might require renovations, landscaping, improving the accessibility, incorporating youth art or opportunities for youth to act in public service projects. Their suggestions might involve providing public places for enhancing the physical wellbeing of young people outside of the transport system or drop-in street theatre hubs designed to build resilience and help young people deal with bullying and negative peer pressure to act in unsafe ways around the transport system.</p> <p>Use a decision making matrix below to select the best ideas from the class.</p> <p>Develop explicit criteria to select the best solution from several choices. For example, which solution is most likely to appeal to young people? Which solution can be achieved using existing resources? Which solution is most likely to attract local community support? Which solution best confronts the cause of the unsafe situation? Which solution will work the best in the long term? Which solution will be easiest to implement?</p> <p>Which solution best meets the criteria listed below? Rank from 1 to 5.</p> <p>Ask students to elaborate the best solution using the following structure:</p> <ul style="list-style-type: none"> <li>• Who will do what? (describe)</li> <li>• What is the idea for a solution? (describe)</li> <li>• How will it work? (describe)</li> <li>• Why will it create safer outcomes for young people in and around a place on the transport system in your local area? (explain).</li> </ul> <p>Ask students to:</p> <ul style="list-style-type: none"> <li>• Use the solution to create a draft formal proposal and/or action plan to help young people moving in and around your local transport network be safer. The Youth Activist's Toolkit will be helpful when you are creating a draft</li> </ul>	
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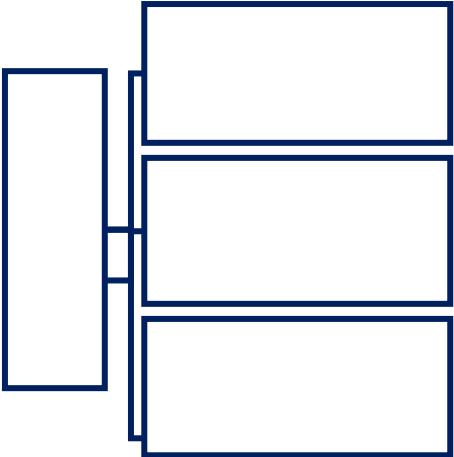
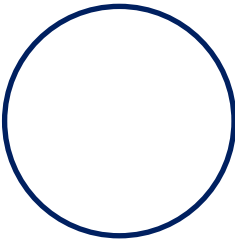

	<p>proposal: <a href="http://www.advocatesforyouth.org/storage/advfy/documents/Activist_Toolkit/activisttoolkit.pdf">http://www.advocatesforyouth.org/storage/advfy/documents/Activist_Toolkit/activisttoolkit.pdf</a></p> <ul style="list-style-type: none"> <li>• Write up your proposal.</li> <li>• Take your next steps to making a difference. The following youth advocacy links may help you. Contact the agencies about your proposal by letter, email or phone. <ul style="list-style-type: none"> <li>○ Australian Youth Affairs Coalition: <a href="http://www.ayac.org.au">http://www.ayac.org.au</a></li> <li>○ Youth Action and Policy Association NSW (YAPA): <a href="http://www.yapa.org.au">http://www.yapa.org.au</a></li> <li>○ UN Youth Australia: <a href="http://www.unyouth.org.au">http://www.unyouth.org.au</a></li> <li>○ Multicultural Youth Advocacy Network Australia (MYAN): <a href="http://www.myan.org.au">http://www.myan.org.au</a></li> <li>○ Fixers: Young people fixing the future: <a href="http://www.fixers.org.uk">http://www.fixers.org.uk</a></li> </ul> </li> </ul>	
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## Trading Card Template Guide

Front	Back	
<p>Draw or insert an image representing the peer pressure to act in a hazardous way on the transport system here.</p> <p>Insert a name for the peer pressure here.</p> <p>Explain why peer pressure to act in this way is dangerous on the transport system.</p>	<div data-bbox="778 331 1369 667"> </div> <p>Insert three ways to manage the peer pressure.</p>	
<div data-bbox="395 1008 635 1249"> </div> <p>Insert a score out of 5 for the riskiness of the peer pressure in the circle.</p> <p>Explain your reasoning here.</p>	<p>Explain why the actions above help manage the peer pressure.</p>	<div data-bbox="1077 1012 1391 1236"> </div> <p>Insert your pull-out quote about managing peer pressure here.</p> <p>Draw or insert a photo of your face here.</p>



Trading Card Template

Front	Back
	
	

	Possible solution 1	Possible solution 2	Possible solution 3	Possible solution 4	Possible solution 5
Criterion 1					
Criterion 2					
Criterion 3					
Criterion 4					
Criterion 5					
Total					

## **Appendix B: Critical Pedagogy Matrix**

Table 2 Matrix of key characteristics of critical pedagogy as they feature in the learning experiences

Key characteristic	Underpinning the experiences	Lesson 1	Lesson 2	Lesson 3
Civics and citizenship as the broader goal	✓		✓	✓
Context, community and relationships	✓		✓	✓
Power as a catalyst for reducing harm	✓	✓	✓	✓
Respect for students and their expertise	✓	✓	✓	✓
Recognition of prior knowledge	✓	✓	✓	✓
Problem posers and problem solvers through critical thinking	✓	✓	✓	✓
High expectations	✓		✓	✓
Teacher as facilitator of student enquiry and knowledge production	✓	✓	✓	✓
Teacher experience matters: teachers become researchers and in turn produce knowledge	✓	✓	✓	✓
Recognition of cognitive differences	✓	✓	✓	✓

## **Appendix C: Ethics approvals**

Te Oranga School of Human Development  
and Movement Studies  
Faculty of Education  
The University of Waikato  
Private Bag 3108  
Hamilton, New Zealand, 3240

0800 WAIKATO (924 528)  
jef32@students.waikato.ac.nz  
www.waikato.ac.nz



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

### Applicant Agreement

This application has been developed under my supervisors' supervision, and has their support.

They agree to support me to follow the procedures mentioned in my application concerning the ethical conduct of this project.

Janine Ferris

2/5/18

Janine Ferris  
Student  
Faculty of Education  
University of Waikato

Date

Dr Carol Hamilton

30-04-2018

Dr Carol Hamilton  
Senior Lecturer  
Te Oranga School of Human  
Development and Movement Studies  
Faculty of Education  
University of Waikato

Date

Dr Kerry Earl Rinehart

30 April 2018

Dr Kerry Earl Rinehart  
Senior Lecturer  
Te Hononga School of Curriculum  
and Pedagogy  
Faculty of Education  
University of Waikato

Date

## SERAP (No. 2018084)

### Application to Conduct Research

**Principal Researcher:** Janine Ferris

**Name of Organisation/Institution:** The University of Waikato, New Zealand

**Title of Proposal:** "My ideas are important too!": Student perceptions of a transport safety education experience based on a critical pedagogical approach to learning.

#### Agreement to provide reports of completed research

As Principal Researcher I **agree** to:

Agree	Provide a report to the Department of Education and Communities and participating schools. The report will be completed by: 31/03/19
Agree	Indemnify the Department for any and all claims arising from their research.
Agree	Publication of the report on the Department's intranet (available to Departmental employees).
Agree	Publication of the Report on the Department's internet (publicly available).

#### Indemnification by researcher

The Organisation and principal researcher indemnify the State of New South Wales by its Department of Education and Training (including its officers, employees, agents and contractors) against all losses, liabilities, damages, costs and expenses of any kind arising from any claim it incurs that relates to:

- **personal injury, death, or property loss or damage:** the personal injury or death or property loss or damage caused or contributed to by the principal researcher and or researchers;
- **the Project:** the principal researcher's conduct of the Project including its materials and publications;
- **Project Materials:** Project Materials created by the principal researcher and or researchers infringing anyone's intellectual property rights; and
- **negligent, unlawful or wilful act or omission:** the principal researchers and or researchers negligent, unlawful or wilful acts or omissions.

To be signed by an authorised signatory of researcher's employing

organisation and the Principal Researcher:

Authorised Signatory Name Carol Hamilton
Position Senior Lecturer, Te Oranga School of Human Development & Movement Studies, Faculty of Education, University of Waikato
Signature
Date

I declare that the above information is correct. I declare that as Principal Researcher I have read the Criteria for Approving Applications in the Department's *Research Guidelines* and agree to abide by them in the conduct of this study. I undertake to ensure that I, and any assistants working with me and/or on my behalf, will maintain the confidentiality of all information collected from participants under confidentiality agreements.

Principal Researcher Name Janine Ferris
Signature
Date



## **Appendix D: Letters and consent forms**



### Information sheet for students

**Researcher:** Janine Ferris  
0409 456 969  
[jaf32@students.waikato.ac.nz](mailto:jaf32@students.waikato.ac.nz)

**Title of project:** "My ideas are important too!": Student perceptions of a transport safety education experience based on a critical pedagogical approach to learning.

*This information sheet explains what this research will involve. Please take the time to read the information carefully. Please contact me if there is anything that is not clear or if you would like further information.*

### About the project

I am a distance student at the University of Waikato. I am doing a research project as part of a Postgraduate Diploma of Education, which is a university degree. The aim of the study is to find out how school students view their experiences of a transport safety education programs. The program will involve learning about transport safety and then telling me your thoughts about your experience when doing the program. The results of this study may help improve transport safety education programs in Australia and New Zealand.

### What I am asking from you

If you agree, I would like to attend up to three (3) of your usual lessons, then teach you three (3) lessons in your PDHPE class. Once we are finished the program I'll invite you to participate in a focus group. This will involve some questions and some activities, which will take around 70 minutes. I will then interview your teacher. All of this will be done during school hours, sometime between June and September 2018.

### Important things you need to understand

There are strict rules I have to follow, called the Ethical Conduct in Human Research and Related Activities Regulations (2008), which you can look at on <https://calendar.waikato.ac.nz/assessment/ethicalConduct.html>. I also have to follow the NSW Department of Education's State Education Research Applications Process. Having to follow these rules means I can't do anything that might put you at risk, which is a very good thing!

I will audio record the lessons and focus groups so I can remember the conversations, and then I will type out everything from the focus groups. I will ask the teacher to take photographs during the lessons, and I will take photographs during the focus group activities. I am mainly interested in showing how you interact with each other and me. I will blur out your faces and any other features which may identify you or the school. I will also take digital copies (scan or photograph) of your work and may include it in my research paper but I'll make sure no one can tell it is yours. I will show you the photos and work samples I might use, and you will get a chance to tell me if you don't want them included. You will have a chance to view any photos and work samples from the lessons that may be published, and choose not to have them included. The things you say and do in the focus

group won't be available for you to review, because it contains things others have said and done. All data will be securely stored for a minimum of five (5) years.

The names of the school and all participants will be changed, and only a general location will be mentioned, to protect the identity of everyone involved. You will be asked to sign a consent form agreeing to your participation. You do not have to take part and can withdraw at any point, without consequence. **Important:** If you join the research project and withdraw later, you or your parent/carer can take your work back, and I will delete the scan/image of your work, however some of the information you have given will still be used. This is because I will be looking at your work as a class group, and it will not be possible to remove one student's information.

#### How the study will be used

The findings will be written in a really long assignment called a 'dissertation', and submitted for marking to the Faculty of Education at the University of Waikato. The findings may also be submitted to academic journals and conferences, and used for future research and transport safety education program design in Australia and New Zealand. If you are interested in seeing the dissertation or any of the presentations or publications, you have a right to see them: please contact me.

#### What I need you to do

Please fill in the attached consent form and return it (see instructions on form).

#### What to do if you have questions

If you have any questions, concerns or complaints about this research, please contact me first, and if your concern is still not addressed, please contact my supervisors:

**Dr Carol Hamilton**  
Senior Lecturer  
Te Oranga School of Human Development  
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Thank you very much for considering participating in my study.

Janine Ferris



## Information sheet for parents and carers

**Researcher:** Janine Ferris  
0409 456 969  
[jaf32@students.waikato.ac.nz](mailto:jaf32@students.waikato.ac.nz)

**Title of project:** "My ideas are important too!": Student perceptions of a transport safety education experience based on a critical pedagogical approach to learning.

*This information sheet explains what this research will involve. Please take the time to read the information carefully. Please contact me if there is anything that is not clear or if you would like further information.*

### About the project

I am a distance student at the University of Waikato, currently undertaking the above research project as part of a Postgraduate Diploma of Education. The aim of the study is to find out how school students view their experiences of a transport safety education program. The research will involve learning about transport safety, the connections between safe behaviours and other influences such as peer pressure, and how students might improve transport safety in their community. The results of this study may contribute to improvements in transport safety education programs in Australia and New Zealand.

### What I am asking from you

If you agree, I would like to observe up to three (3) usual lessons, then teach your child in their usual PDHPE class during three (3) lessons. Once the program is complete, each student will be invited to participate in a focus group involving some questions and some activities, which will take around 70 minutes. I will then interview the teacher. I will conduct the research during school hours between June and September 2018.

### Important things you need to understand

This research must abide by the Ethical Conduct in Human Research and Related Activities Regulations (2008), available at <https://calendar.waikato.ac.nz/assessment/ethicalConduct.html>. I will audio record the lessons, focus groups and interview for the purposes of remembering the conversations and transcribing the dialogue. I will ask the teacher to take photographs during the lessons, and I will take photographs during the focus group activities. I am mainly interested in showing how the students interact with each other and me. I will blur out faces and any other features which may identify the school or students. I will also take digital copies (scan or photograph) of your child's work and may include it in the publication, with any identifying features removed. Your child will have a chance to view any photos and work samples from the lessons that may be published, and choose not to have them included. Focus group data will not be available for review or be returned to you or your child, because it contains things others have said. All data will be securely stored for a minimum of five (5) years.

Anonymity cannot be guaranteed, however the names of the school and all participants will be changed, and the location will be referred to by general geographical area to protect the



identity of everyone involved. You will be asked to sign a consent form agreeing to your child's participation. Your child does not have to take part and can withdraw at any point, without consequence. **Important:** If your child joins the research project and withdraws later, you or they can take their work back, and I will delete the scan/image of their work, however some of the information they have given will still be used. This is because I will be looking at their work as a group, and it will not be possible to remove one student's information.

#### **How the study will be used**

The findings will be written in a dissertation and submitted for marking to the Faculty of Education at the University of Waikato. The findings may also be submitted to academic journals and conferences, and used to inform further research and transport safety education program design in Australia and New Zealand. If you are interested in seeing the dissertation or any of the subsequent presentations or publications, you have a right to see them: please contact me.

#### **What I need you to do**

Please fill in the attached consent form and return it (see instructions on form).

#### **What to do if you have questions**

If you have any questions, concerns or complaints about this research, please contact me first. If your concern is still not addressed, please contact my supervisors:

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Thank you very much for considering your child's participation in my study.

Janine Ferris  
BAAsian Studies (ANU), GrdDipEd (Macq.)  
NSW Working with Children Check WWC0853706E





### Information sheet for teachers

**Researcher:** Janine Ferris  
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### What I am asking from you

If you agree, I would like observe up to three (3) usual lessons, then teach three (3) transport safety lessons in your usual Year 8 PDHPE class. I would need you to be present during the classes so you can observe the students interactions. Once the program is complete, each student will be invited to participate in a focus group involving some questions and some activities, which will take around 70 minutes. This would need to be a small group (around 5 students), so two separate focus group sessions may be needed. I would ask to do this without a teacher being present, to reduce any bias in the results. I would then like to interview you and find out your thoughts on the students' participation in the lessons. I will conduct the research during school hours between June and September 2018.

### Important information you need to understand

This research must abide by the Ethical Conduct in Human Research and Related Activities Regulations (2008), available at <https://calendar.waikato.ac.nz/assessment/ethicalConduct.html>. I will audio record the lessons, focus groups and interview for the purposes of remembering the conversations and transcribing the dialogue. A copy of the interview transcript will be provided to you for verification prior to analysis. I will ask you to take photographs during the lessons, and I will take photographs during the focus group activities. I am mainly interested in showing how the students interact with each other and me. I will blur out faces and any other features which may identify the school, you or students. I will also take digital copies (scan or photograph) of the students' work and may include it in the publication, with any identifying

features removed. The students will have a chance to view any photos and work samples that may be published, and choose not to have them included. You have the right to access any data that has been collected from or about you. All data will be securely stored for a minimum of five (5) years.

Anonymity cannot be guaranteed, however the names of the school and all participants will be changed, and the location will be referred to by general geographical area to protect the identity of everyone involved. You will be asked to sign a consent form agreeing to your participation. You do not have to take part and can withdraw at any point, without consequence.

#### **How the study will be used**

The findings will be written in a dissertation and submitted for marking to the Faculty of Education at the University of Waikato. The findings may also be submitted to academic journals and conferences, and used to inform further research and transport safety education program design in Australia and New Zealand. If you are interested in seeing the dissertation or any of the subsequent presentations or publications, you have a right to see them: please contact me.

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### Information sheet for the School Executive

**Researcher:** Janine Ferris  
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I am a distance student at the University of Waikato, currently undertaking the above research project as part of a research-based Postgraduate Diploma of Education. The aim of the study is to find out how school students view their experiences of a transport safety education program. The program will involve students learning about transport safety, the connections between safe behaviours and other influences such as peer pressure, and how students themselves might improve transport safety in their own community. The results of this study may contribute to improvements in transport safety education programs in Australia and New Zealand.

### What I am asking from your school

If you agree, I would like to observe up to three (3) usual lessons, then teach three (3) transport safety lessons in the Year 8 PDHPE class. I would need the usual teacher to be present during the classes so they can observe the students interactions. The executive team are more than welcome to pop in and view the lessons at any time. Once the program is complete, each student will be invited to participate in a focus group involving some questions and some activities, which will take around 70 minutes. This would need to be a small group (around 5 students), so two separate focus group sessions may be needed. I would ask to do this without a teacher being present, to reduce any opportunities for bias in the results. I would then like to interview the teacher to find out their thoughts on the students' participation in the lessons. I will conduct the research during school hours between June and September 2018.

### Important information you need to understand

This research must abide by and be approved by the Ethical Conduct in Human Research and Related Activities Regulations (2008), available at <https://calendar.waikato.ac.nz/assessment/ethicalConduct.html>. It must also be approved by the NSW Department of Education's State Education Research Applications Process (SERAP). Once approval has been obtained, both formal approvals will be forwarded to you for your records.





I will audio record the lessons, focus groups and interview for the purposes of remembering the conversations and transcribing the dialogue (focus groups and interviews only). Copies of the interview transcript will be provided to the teacher for verification. The themes picked up from the focus groups will be provided to the students for verification. I will ask the teacher to take photographs during the lessons, and I will take photographs during the focus group activities. I am mainly interested in showing how the students interact with each other and me. I will blur out faces and any other features which may identify the school, the teacher or students. I will also take digital copies (scan or photograph) of the students' work and may include it in the publication, with any identifying features removed. All data will be securely stored for a minimum of five (5) years.

The names of the school and all participants will be changed, and the location will be referred to by general geographical area to protect the identity of everyone involved. The school principal will be asked to sign a consent form agreeing to your school's participation. Your school does not have to take part and can withdraw up until the time the first activity is completed, without consequence. Students, parents and staff will also receive an information sheet, and be asked to sign a consent form.

#### **How the study will be used**

The findings will be written in a dissertation and submitted for marking to the Faculty of Education at the University of Waikato. The findings may also be submitted to academic journals and conferences, and used to inform further research and transport safety education program design in Australia and New Zealand. If you are interested in seeing the dissertation or any of the subsequent presentations or publications, you have a right to see them: please contact me.

#### **What I need you to do**

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28 May 2018

#### Information sheet for the AECG

**Researcher:** Janine Ferris  
0409 456 969  
[ja32@students.waikato.ac.nz](mailto:ja32@students.waikato.ac.nz)

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#### About the project

I am a distance student at the University of Waikato, currently undertaking the above research project as part of a research-based Postgraduate Diploma of Education. The aim of the study is to find out how school students view their experiences of a transport safety education program. The program will involve students learning about transport safety, the connections between safe behaviours and other influences such as peer pressure, and how students themselves might improve transport safety in their own community. The results of this study may contribute to improvements in transport safety education programs in Australia and New Zealand.

#### What I am asking from the school and community

If you agree, I would like to observe up to three (3) usual lessons, then teach three (3) transport safety lessons at XXXXXXXXXX School in the Year 8 PDHPE class. I would have the usual teacher to be present during the classes so they can observe the students' interactions. Once the program is complete, each student will be invited to participate in a focus group involving some questions and some activities, which will take around 70 minutes. This would need to be a small group (around 5 students), so two separate focus group sessions may be needed. I would ask to do this without a teacher being present, to reduce any opportunities for bias in the results. I would then like to interview the teacher to find out their thoughts on the students' participation in the lessons. I will conduct the research during school hours between June and September 2018.

#### Important information you need to understand

This research must abide by and has been approved by the Ethical Conduct in Human Research and Related Activities Regulations (2008), available at <https://calendar.waikato.ac.nz/assessment/ethicalConduct.html>. It must also be approved by the NSW Department of Education's State Education Research Applications Process (SERAP). Both formal approvals can be forwarded to you for your records.

I will audio record the lessons, focus groups and interview for the purposes of remembering the conversations and transcribing the dialogue (focus groups and interviews only). Copies of the interview transcript will be provided to the teacher for verification. The themes picked up from the focus groups will be provided to the students for verification. I will ask the teacher to take photographs during the lessons, and I will take photographs during the focus group activities. I am mainly interested in showing how the students interact with each other and me. I will blur out faces and any other features which may identify the school, the teacher or students. I will also take digital copies (scan or photograph) of the students' work and may include it in the

publication, with any identifying features removed. All data will be securely stored for a minimum of five (5) years.

The names of the school and all participants will be changed, and the location will be referred to by general geographical area to protect the identity of everyone involved. The school principal will be asked to sign a consent form agreeing to the school's participation. The school does not have to take part and can withdraw up until the time the first activity is completed, without consequence. Students, parents and staff will also receive an information sheet, and be asked to sign a consent form.

#### **How the study will be used**

The findings will be written in a dissertation and submitted for marking to the Faculty of Education at the University of Waikato. The findings may also be submitted to academic journals and conferences, and used to inform further research and transport safety education program design in Australia and New Zealand. If you are interested in seeing the dissertation or any of the subsequent presentations or publications, please contact me.

#### **Cultural considerations**

Potential social and cultural issues are unlikely to emerge in the context of this research, as the content focuses on transport safety, which is not traditionally a culturally or socially sensitive topic. All components of the research including the lesson, focus group and interview questions will be culturally inclusive, and I will ensure cultural sensitivity at all times.

Despite this, I would like to request permission through the AECG to ensure I can remain as culturally sensitive as possible for any indigenous students who may be present. I would also like to formally acknowledge the traditional owners of the land on which I will conduct the research, and their elders past and present. I have also consulted the Guidelines for Ethical Research in Australian Indigenous Studies (2012) available at <https://aiatsis.gov.au/sites/default/files/docs/research-and-guides/ethics/gerais.pdf> and will make every effort to ensure I adhere to these guidelines.

#### **What to do if you have questions**

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Thank you very much for considering my application to your group for my study.



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## **Appendix E: Focus Group Plan**

# Focus Group Plan

Total time required: 70 minutes

## Introduction

*Format for introduction adapted from Krueger (2002). Time required: 5 min.*

Hi everyone and welcome to our focus group.

I'd like to acknowledge the traditional custodians of this land. I would like to pay my respects to Elders past and present of the Wiradjuri nation, and I extend that respect to other indigenous people who are present.

Thanks for taking the time to help me learn more about your thoughts on transport safety education. I'll be asking the other group the exact same questions and doing the same activities with them.

We'll be here together for a bit over an hour today. We'll be doing some fun activities and I'll also be asking you some questions. You can stop at any time and you don't need to give a reason – you just need to report to your teacher at \_\_\_\_\_. If you feel tired, feel free to hop up and have a stretch or a drink at any time. If you need to use the toilet, please do whatever you do during your normal classes. We'll have some breaks too!

I want you to know there are no right or wrong answers to anything we do here today. Expressing your own feelings is really important. Please be completely honest and open. Nothing you say here will be used against you in any way: that means you can't get in trouble for anything you say. We'll use our real first names in class today, but none of your names will be used in the reports.

You might have noticed we have the same microphones here as we did in the lessons. I can't write fast enough, so I need to record the session because I don't want to miss any of your comments and ideas. I need everyone to speak one at a time, so I can hear you clearly.

Does anyone have any questions before we begin?

*(Pause for questions)*

Shall we begin?

Firstly, for the purposes of the recording, could you please go around the circle and say your first names?

## Focus group activities

*Time required: 65 min.*

Rather than a question and answer format, this focus group format uses tasks designed to encourage critical and creative thinking and responses, in line with the framework of critical pedagogy.

**Note: The following is a guide only. Questions may vary depending on what occurs during the lessons. Probing questions may vary depending on the answers given.**

No. and timing	What I want to find out	Question/activity to find it out	Sub or probing questions	Strategy
1) 15 min	How do the students perceive the effectiveness of a variety of different learning activities/pedagogical techniques?	<p>[Group activity]</p> <p>Think about the different types of activities you do during lessons at school, including the lessons we did together. How well do they help you learn about the topic?</p> <p>I'd like you to have a look at these cards – they have words or phrases describing different learning activities. There are also some blank cards so you can add your own ideas.</p> <p>As a group, I'd like you to rank them from the most to the least, along this scale on the floor (<i>point to most and least cards on floor with large enough gap between for all cards to fit</i>).</p> <ul style="list-style-type: none"> <li>The activities you like</li> </ul>	<ul style="list-style-type: none"> <li>Presentation by teacher</li> <li>Brainstorm</li> <li>Hexagons</li> <li>Forum theatre</li> <li>Copy off board</li> <li>Read a text book</li> <li>Write a story</li> <li>Do a treasure hunt</li> <li>Contact an expert to ask a question</li> <li>Do an investigation</li> <li>Create a video</li> <li>Presentation by classmate</li> <li>Have a class debate</li> <li>Own research on the internet</li> <li>Own research at the library</li> <li>Excursion</li> <li>Create my own presentation and present it</li> <li>Presentation by expert</li> </ul>	Ranking (Colucci, 2007)

		<ul style="list-style-type: none"> <li>• The activities you learn from</li> <li>• The activities that might be useful in everyday life</li> </ul> <p>While you are sorting them, I'd like you to talk to each other about your decisions and reasons why you think it should go in a certain spot.</p> <p>You have 4 minutes to sort each list.</p> <p>At the end of each list, I'll ask you some questions about your decisions.</p>	<ul style="list-style-type: none"> <li>• Teach primary kids about it</li> <li>• Write a story</li> <li>• Role play</li> <li>• Tell my family or friends about it</li> </ul> <p><i>What is it about ____ that you like/you learn from/might be useful?</i></p> <p><i>What is it about ____ that puts it in the [middle/towards the bottom/towards the top] of the list?</i></p>	
----- 2 min break -----				
2) 15 min	What do the students think are the positive, negative and interesting points about the transport safety lessons we did together?	<p>Let's do a PMI (plus minus interesting) on the transport safety lessons we did together.</p> <p>Here are 3 big pieces of butcher's paper: one for PLUS, one for MINUS, and one for INTERESTING points.</p> <p>Grab a marker and write down what you think were the positive, negative, and interesting points about those lessons.</p> <p>Feel free to talk to each other and bounce ideas off each other.</p> <p>[Group activity]</p>	<p><i>Can you tell me why you said ____ was a plus/minus/interesting point?</i></p> <p><i>What about if you think of the hexagon/forum theatre/trading card/activist activities?</i></p> <p><i>How about your existing knowledge, was it recognised? Is that a P, M or I?</i></p> <p><i>Were you given choices about how you learned? Was that a P, M or I?</i></p> <p><i>What is similar/different about your ideas?</i></p>	<p>PMI (de Bono, n.d.)</p> <p>Variation on IGA (Whyte, Fraser, Aitken and Price, 2013).</p>

			<i>What do you think overall about the lessons?</i>	
3) 10 min	How do the students feel about the key CP characteristics and some non-CP characteristics?	<p>[Group activity]</p> <p>I'd like to find out a bit about how you feel when you are in different learning situations.</p> <p>I'm going to tell you some statements. One at a time, I'd like you to shout out whatever comes to your mind in response to that statement. It can be one word, or a sentence.</p> <p>I don't want you to overthink it – just call out the first feeling or thought that pops into your head.</p> <p>I'll give you an example of a one word answer:</p> <p>"When my dog eats my homework, I feel <u>annoyed</u>".</p> <p>I'll give you an example of a sentence answer:</p> <p>"When my dog eats my homework, I feel <u>worried that my teacher might get angry</u>".</p>	<ol style="list-style-type: none"> <li>1) When my voice is heard, I feel _____.</li> <li>2) When I don't get a say in my learning, I feel _____.</li> <li>3) When my opinion is valued, I feel _____.</li> <li>4) When sit and listen to someone doing a presentation, I feel _____.</li> <li>5) When my teacher allows me to contribute to my learning, I feel _____.</li> <li>6) When I get feedback about my work, I feel _____.</li> <li>7) When my teacher has high expectations of me, I feel _____.</li> <li>8) When my teacher listens to me, I feel _____.</li> <li>9) When I get to express myself in a way that suits me, I feel _____.</li> <li>10) When my teacher respects me, I feel _____.</li> <li>11) When my teacher views me as an expert in the things that interest me, I feel _____.</li> <li>12) When I'm actively learning about something, I feel _____.</li> </ol>	Label generation (Colucci, 2007)



			<p>13) When I can ask and solve problems by working on them myself or with my class, I feel _____.</p> <p>14) When I share my knowledge with others I feel _____.</p>	
----- 2 min break -----				
4) 10 min	What do students think about transport safety education programs after having done this one, compared to before?	<p>[Group activity]</p> <p>I'm going to give you 3 pieces of butcher's paper. I'd like you to think about your thoughts, feelings and how you act. You can draw pictures or write words to express your feelings.</p> <p>The topic is "transport safety". (<i>write on board</i>)</p> <p><i>On the butchers paper:</i></p> <p>I used to think____ now I think ____</p> <p>I used feel _____ now I _____</p> <p>I used to ____ now I _____</p> <p>You get to write or draw as many answers as you like on each piece of paper. You have 10 minutes.</p>	<p>(e.g. I used to think <u>cars were boring</u>, now I think <u>they are awesome</u>.)</p> <p>(e.g. I used to feel <u>embarrassed to speak up</u>, now I feel <u>like I know what to say</u>.)</p> <p>(e.g. I used to <u>distract the driver by fighting with my little brother</u>, now I <u>keep quiet in the back seat</u>.)*</p> <p>(*note the examples will not feature the lesson content, so as not to lead their answers)</p> <p><i>Probing questions will vary depending on the answers given. May include questions such as:</i></p> <p><i>What's changed?</i></p>	Visible thinking routine (Harvard Graduate School of Education Project Zero, 2015)

5) 10 min	What creative ideas do students have about transport safety education pedagogy?	<p>This is a key to a never-before opened door of possibilities. With this key, you get to implement your wildest ideas about what an education program about transport safety should be like. There are no limits to budget, materials, resources, time frames - you are only limited by your imagination!</p> <p>You have 10 mins to think and write down or draw your ideas on the butcher's paper. Feel free to bounce ideas off each other.</p>	<i>Probing questions will vary depending on the answers given.</i>	Magic tool (Colucci, 2007)
6) 5 min	Anything more to add?	Does anyone want to make any more comments about anything we have done, either in the lessons or about any of the activities and questions we have addressed today?	<i>Probing questions will vary depending on the answers given.</i>	

## References

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## **Appendix F: Interview Plan**

# Interview Plan



*Overall time required: 50 min.*

## **Introduction**

Format for introduction adapted from Krueger (2002).

Time required: 5 min. Hi\_\_\_\_\_, and welcome.

Thanks for taking the time to help me today to learn more about what you think about your student's perceptions about transport

safety education. I'd like to hear your thoughts and observations on how your students responded to the lessons I did with them.

We'll be here together for just under an hour today. You can stop at any time and you don't need to give a reason. If you feel tired, feel free to hop up and have a stretch or a drink at any time.

There are no right or wrong answers - expressing your own feelings is really important. Please be completely honest and open. Nothing you say here will be used against you in any way. I'll use your real first name during the interview, but your name and the names of the students will not be used in the reports.

You might have noticed we have the same microphones here as we did in the lessons. I can't write fast enough, so I need to record the session because I don't want to miss any of your comments and ideas. I'll be transcribing what you say today. You will have the opportunity to review the transcript and to make any amendments as you see fit.

Do you have any questions before we begin?

*(Pause for questions)*

Shall we begin?

Firstly, could you please tell me your first name and your teaching areas of expertise?

## Interview

Time required: 50 min.

**Note:** The following is a guide only. Questions will vary depending on what occurs during the lessons and the answers given during the focus groups. Probing questions may vary depending on the answers given.

Qu.	What I want to find out	Question/activity to find it out	Sub or probing questions
1)	Relevance of transport safety programs to the teacher and students	How often do students get taught about transport safety at school?	<i>What programs have been used? How did students respond? How important do you think they are?</i>
2)	Students perceptions of experiences of other programs	Have you ever had any visiting experts at the school regarding safety of any type?	<i>How did the students respond? Was what they learned measurable? What did they learn? How did it meet or not meet your expectations?</i>
3)	Students' perceptions of experiences of other programs	What comments have you heard students comment about transport safety education programs in the past?	<i>What was your feeling of their attitudes towards those programs beforehand? Did that change during or after the session?</i>
4)	Comparison of this program with others they have had lived experience with	How do you think students' responses to this program compare with those previous experiences?	<i>Have you noticed or heard them saying anything positive/negative/interesting about their experiences?</i>
5)	What do they think students got out of the lessons?	Overall, what do you think the students got out of the transport safety lessons?	<i>What do you think the impact on the students has been?</i>
6)	What are the teacher's thoughts about how the students responded to the different CP activities used?	Thinking about <u>Lesson 1</u> , is there anything you noticed about their interactions with each other, usual or unusual? <ul style="list-style-type: none"> <li>• Lesson 2</li> <li>• Lesson 3</li> </ul>	<i>Depending on answers</i>
7)	Which specific students did they think this approach was more effective for, and why?	Were there any specific students you thought the lessons were more effective for?	<i>Why do you think the lessons were more effective for___?</i>

8)	Which specific students did they think this approach was less effective for, and why?	Were there any specific students you thought the lessons were <i>less</i> effective for?	<i>Why do you think the lessons were less effective for___? How could the lessons have been different to accommodate their needs?</i>
9)	What impact do they think students can have in the community after doing a transport safety education program like this?	Can you see and possibilities of how they could take their ideas out into the community?	<i>What's the likelihood of this happening? Can you give me some more detail? What would be needed for greater impact?</i>
10)	What is the likelihood of them using a program like this themselves, and why?	Would you use a transport safety education program like this yourself?	<i>Can you share your reasons for that decision? Would you use a program like this for every year level you teach? Can you share your reasons for that decision? What would be needed for greater impact/practicality?</i>
11)	What impact would this have on behaviour i.e. safety around transport? Why? Have they seen any changes in student behaviour since completing the program?	Do you think doing a transport safety education program like this would have on the students' behaviour in and around the transport system?	<i>What would be needed for greater impact/practicality? How much impact do you think the lessons would have beyond the local environment, e.g. if they attend an excursion to the city and need to catch trains, buses or trams?</i>
12)	Feedback on my teaching and the lesson structure.	Do you have any feedback for me on the way this was taught, or the lesson structure?	<i>Can you give me some more detail? What would be needed for greater impact/practicality?</i>
13)	Anything else to add?	Are there any more comments you would like to add?	<i>Can you give me some more detail? Can you share your reasons for that decision? How could it have been different?</i>

## **Appendix G: Evidence Map**



Table 3 Overview of evidence collected

Activity/who	Activity number/duration	Evidence type and number	Details
<b>Observation lessons</b>	3 lessons @ 50 mins (final lesson was a double period @100 mins) <b>Total 200 mins (3 hours 20 mins)</b>	Field notes x 3	<ul style="list-style-type: none"> <li>• Took field notes of my overall observations using notebook and pen immediately after each lesson</li> </ul>
<b>Lessons</b>	3 lessons @ 50 mins (planned) <b>Total lesson time 152 mins (2 hours 32 mins) (actual)</b>		<ul style="list-style-type: none"> <li>• Researcher as teacher (participant) and observer</li> </ul>
<i>Lesson 1</i>	10 students (1 absent) 52 mins class time (actual)	Audio recordings x 2 Transcription x 1 Field notes x 1 Photographs x 47 Student work samples x 4	<ul style="list-style-type: none"> <li>• Audio recording data was captured on two devices in Lesson 1 (iPhone and iPad), and three devices in Lessons 2 and 3 (iPhone iPad, and laptop). Devices were placed at different points around the room to have best chance of dialogue being captured, and as a back-up in case one or more device failed. Used Voice Record app and Windows Voice Recorder.</li> <li>• Transcribed partially (key narrative only), using foot pedal and Express Scribe Pro software</li> <li>• Took field notes of my overall observations using notebook and pen immediately after each lesson</li> <li>• Photographs were taken by both the teacher and myself</li> <li>• Student work was scanned or photographed</li> </ul>
<i>Lesson 2</i>	10 students (1 absent) 50 mins class time (actual)	Audio recordings x 3 Transcription x 1 Field notes x 1 Photographs x 83 Student work samples x 2	
<i>Lesson 3</i>	11 students 50 mins class time (actual)	Audio recordings x 3 Transcription x 1 Field notes x 1	

		Photographs x 4 Student work samples x 8 (Group 1 x 1, Group 2 x 7)	
<b>Focus groups with students</b>	2 focus groups @ 65 mins (planned) <b>Total recorded data 146 mins (2 hours 26 mins) (actual)</b>		<ul style="list-style-type: none"> <li>• 2 students were absent on day of focus groups</li> <li>• Audio recording data was captured on three devices (iPhone, iPad, and laptop). Devices were placed at different points around the room to have best chance of dialogue being captured, and as a back-up in case one or more device failed. Used Voice Record app and Windows Voice Recorder.</li> <li>• Transcribed partially (key narrative only), using foot pedal and Express Scribe Pro software</li> <li>• Photographs were taken by me</li> <li>• Student work was scanned or photographed</li> </ul>
<i>Focus group 1</i>	5 students 66 mins recorded data (1 hour 6 mins) (actual)	Audio recordings x 3 Transcription x 1 Photographs x 4 Student work samples x 16	
<i>Focus group 2</i>	4 students 80 mins recorded data (1 hour 15 mins) (actual)	Audio recordings x 3 Transcription x 1 Photographs x 18 Student work samples x 24	
<b>Interview with teacher</b>	1 interview @ 50 mins (planned) 84 mins (1 hour 24 mins) (actual) <b>Total recorded data 84 mins (1 hour 24 mins) (actual)</b>	Audio recordings x 2 Transcription x 1	<ul style="list-style-type: none"> <li>• Audio recording data was captured on two devices (iPhone and iPad). Used Voice Record app.</li> <li>• Transcribed entire interview using foot pedal and Express Scribe Pro software, following Intelligent Verbatim Approach (Isaac, 2015)</li> </ul>
<b>Total data collected</b>	<b>582 minutes (9 hours 42 mins)</b>		

Table 4 Evidence category mapped to detailed research questions

No.	Question - what did I want to find out?	Evidence category: Observation (What did I observe about this during any of my interactions with the students?)	Evidence category: Focus groups (What did the students say during the focus groups about this?)	Evidence category: Interview (What did Julia say about this?)	Notes
<i>Primary questions–student focussed</i>					
1	How do the students 'respond to' the learning activities/lessons?	<ul style="list-style-type: none"> <li>• Students' prior knowledge</li> <li>• Students' ideas</li> <li>• Demonstrations of critical and creative thinking</li> <li>• Observations of students' work produced during learning activities</li> <li>• How they reacted to the learning activities</li> <li>• How they participated in the learning activities</li> <li>• How they reacted to teacher instruction</li> <li>• How they interacted with each other</li> <li>• Student disengagement</li> </ul>	N/A	IQ1, IQ6, IQ7, IQ8,	

		(Who? When/what task were they doing? How? Why?) • Any hidden meanings, unspoken language, or other things going on			
<b>How do the students 'view' the learning activities?</b>					
2	How do the students perceive the effectiveness of a variety of different learning activities/pedagogical techniques?		FGQ1 (Ranking)	IQ1	
3	What do the students think are the positive, negative and interesting points about the transport safety lessons we did together?		FGQ2 (PMI)	IQ5, IQ6, IQ7, IQ8	
4	How do the students feel about the key CP characteristics and some non-CP characteristics?		FGQ3 (Label generation)	IQ6	
5	What do students think about transport safety education programs after having done this one, compared to before?		FGQ4 (Visible thinking routine)	IQ2, IQ3, IQ4, IQ11	
6	What creative ideas do students have about transport safety education pedagogy?	N/A	FGQ5 (Magic tool)	IQ12	
7	What impact might students have in the community after doing a transport safety education program like this?	Lesson 3 – Charlize talking about her bus ride conversation	FG	IQ9	
8	What impact might the program have on behaviour i.e. safety around transport? Why?	My observation of Mila riding trail bike on street (journal entry).	FG	IQ11	

	Have there been any observed changes in student behaviour since completing the program?	Lesson 3 – Charlize talking about her bus ride conversation			
9	What did the students/teacher think about my teaching and the lesson structure?	Any plus, minus or interesting responses during lessons (PMI)	FG – ‘we want you to be our normal teacher Miss’	IQ12	
10	What surprised me? (student focussed)				
<i>Secondary questions–teacher/program focussed</i>					
11	What is the likelihood of the teacher using a program like this themselves, and why?	N/A	N/A	IQ10	
12	What surprised me? (teacher focussed)			Interview	

## **Appendix H: Focus Group Analysis**

Table 5 Student responses to PMI focus group activity

Plus	
Group 1	<p>L2 - Got to be ME</p> <p>Poster brain storm [sic]</p> <p>Roleplay - L2- We got to put our own thoughts and ideas into it</p> <p>Being able to step in to stop bullies and that stuff</p> <p>L 1 - Hexagons</p> <p>We got to do roleplaying</p>
Group 2	<p>Had fun role playing</p> <p>Doing the posters with drawings &amp; ideas!!</p> <p>Hexagon</p> <p>Open our minds to new information - lesson 1 &amp; 3</p> <p>Presentations coz we leard of they teacher [sic]</p>
Minus	
Group 1	<p>Lesson 3 - we had to sit at a desk and right [sic]</p> <p>Lesson 3 - it was boring</p> <p>Lesson 3</p> <p>Didn't go outside and do stuff</p>
Group 2	<p>Miss out on PDHPE Lessons</p> <p>Missed out on music</p> <p>Didn't quiet [sic] understand what to do in lesson 3 at the start</p> <p>Tading [sic] cards. I did not understand @ the start what to do</p> <p>Heaps</p>
Interesting	
Group 1	<p>Hexagons</p> <p>Lesson 2 role plays</p> <p>Being recorded</p> <p>Nicks pen has a [illegible] and wont [sic] let me see</p>
Group 2	<p>Learnt about PMI</p> <p>Learning new conseps [sic] when it comes to teaching</p> <p>Role Playing</p>

### Plus, Minus, Interesting activity - student views

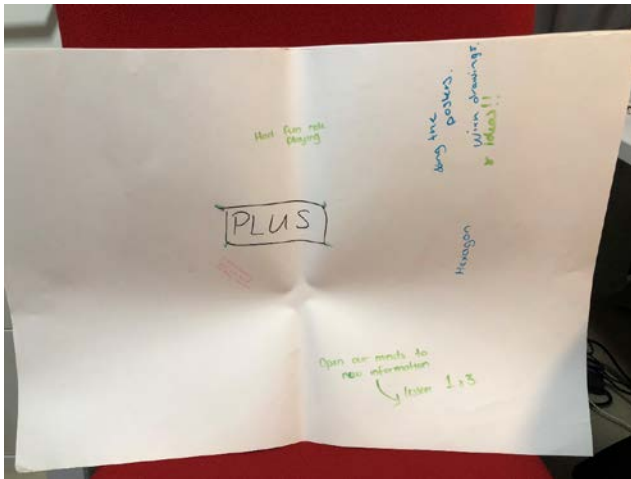


Figure 3 Group One's answers—what was 'Plus' about the lessons

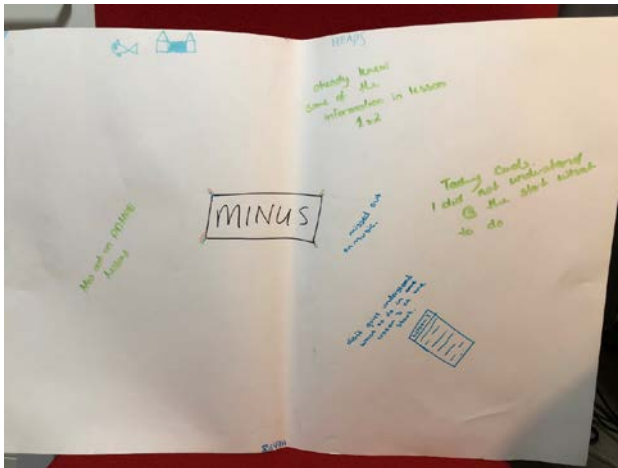


Figure 4 Group One's answers—what was 'Minus' about the lessons

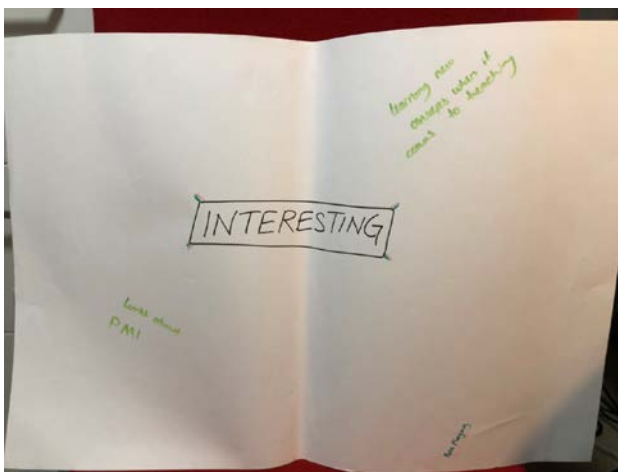


Figure 5 Group One's answers—what was 'Interesting' about the lessons



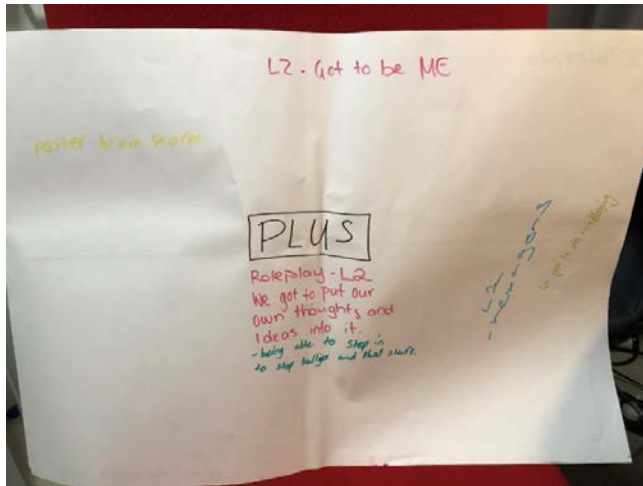


Figure 6 Group Two's answers—what was 'Plus' about the lessons

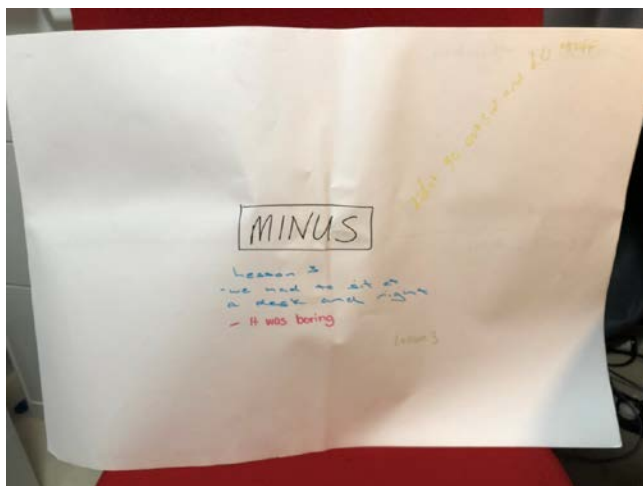


Figure 7 Group Two's answers—what was 'Minus' about the lessons

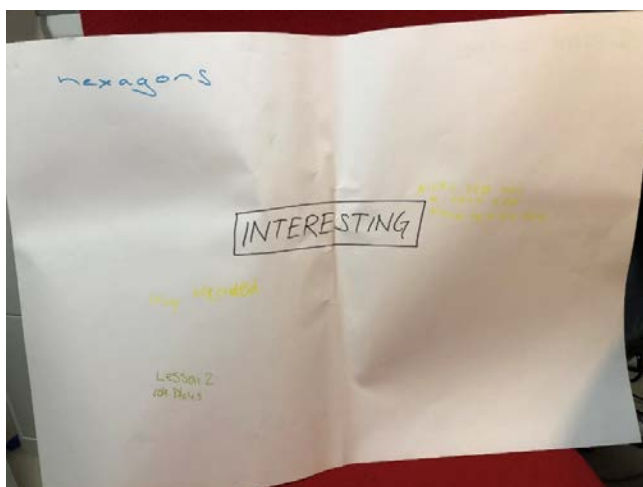


Figure 8 Group Two's answers—what was 'Interesting' about the lessons

Table 6 Student rankings for lesson activities

Activities I like				
Activity	Group 1 ranking	Group 2 ranking	Combined score	Overall Ranking
Excursion	1	1	2	1
Role play*	3	3	6	2
Have a class debate	2	6	8	3
Brainstorm using hexagons	6	2	8	3
Do a treasure hunt	4	5	9	5
Do an investigation	5	7	12	6
Brainstorm on board or paper	9	4	13	7
Forum theatre*	7	8	15	8
Copy off the board	11	9	20	9
Presentation by an expert	14	10	24	10
Write a story	10	16	26	11
Presentation by teacher	14	12	26	11
Contact an expert to ask a question	8	20	28	13
Create my own presentation and present it	11	17	28	13
Tell my family or friends about it	14	14	28	13
Teach primary kids about it	17	11	28	13
Read a text book	11	19	30	17
Presentation by a classmate	17	15	32	18
My own research on the internet	20	13	33	19
Own research at the library	20	18	38	20
Activities I learn from				
Activity	Group 1 ranking	Group 2 ranking	Combined score	Overall Ranking
Create my own presentation and present it	2	3	5	1
Teach primary kids about it	2	6	8	2
Read a text book	9	2	11	3
Tell my family or friends about it	5	6	11	3
Write a story	2	14	16	5
Brainstorm using hexagons	13	4	17	6
My own research on the internet	5	12	17	6
Presentation by an expert	9	9	18	8
Presentation by teacher	5	14	19	9
Presentation by a classmate	9	10	19	9
Copy off the board	1	19	20	11
Excursion	20	1	21	12
Contact an expert to ask a question	16	6	22	13
Own research at the library	5	18	23	14
Have a class debate	19	5	24	15
Do an investigation	14	11	25	16
Forum theatre*	14	13	27	17
Brainstorm on board or paper	12	16	28	18
Role play*	18	17	35	19
Do a treasure hunt	16	20	36	20
Activities that might be useful in everyday life				
Activity	Group 1 ranking	Group 2 ranking	Combined score	Overall Ranking
Brainstorm on board or paper	4	2	6	1
Do an investigation	1	6	7	2
Excursion	9	1	10	3
Brainstorm using hexagons	9	2	11	4
Create my own presentation and present it	6	5	11	4
Have a class debate	4	8	12	6
Contact an expert to ask a question	1	13	14	7
Forum theatre*	1	14	15	8
Teach primary kids about it	6	10	16	9
My own research on the internet	6	12	18	10
Own research at the library	14	4	18	10
Presentation by teacher	14	6	20	12
Tell my family or friends about it	13	8	21	13
Role play*	9	14	23	14
Write a story	14	11	25	15
Copy off the board	12	16	28	16
Presentation by a classmate	14	20	34	17
Presentation by an expert	18	17	35	18
Read a text book	18	18	36	19
Do a treasure hunt	20	19	39	20

\*In the focus groups, it became apparent that some students used the term 'role play' interchangeably with 'Forum theatre'. I kept them separate for the purposes of this study as I could not confirm if this was the case for all students.

## Focus Group 1



Figure 62 'Activities I like' ranked in order from most to least (Focus Group 1, part 1)

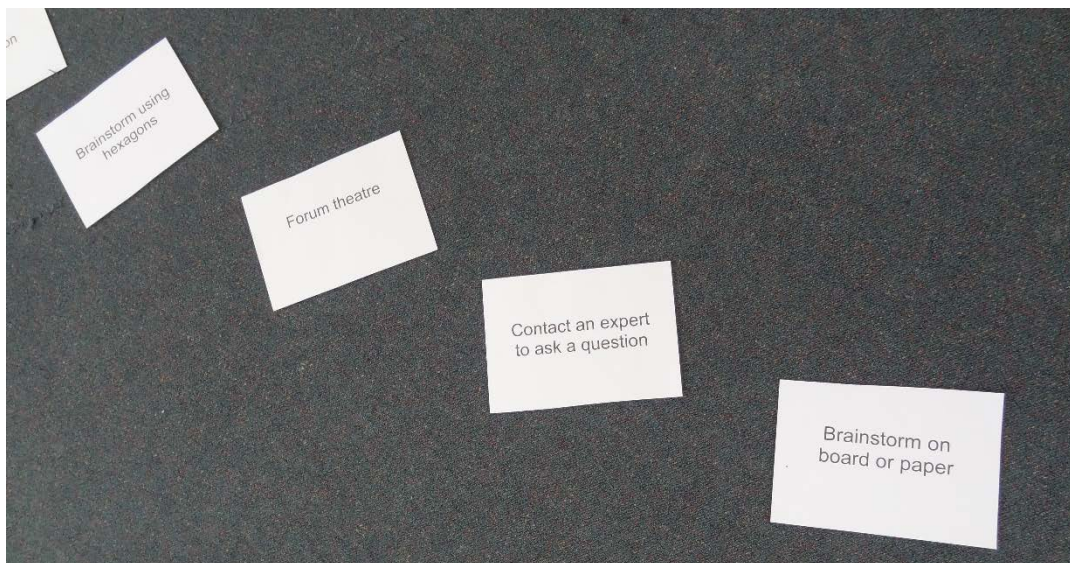


Figure 63 'Activities I like' ranked in order from most to least (Focus Group 1, part 2)

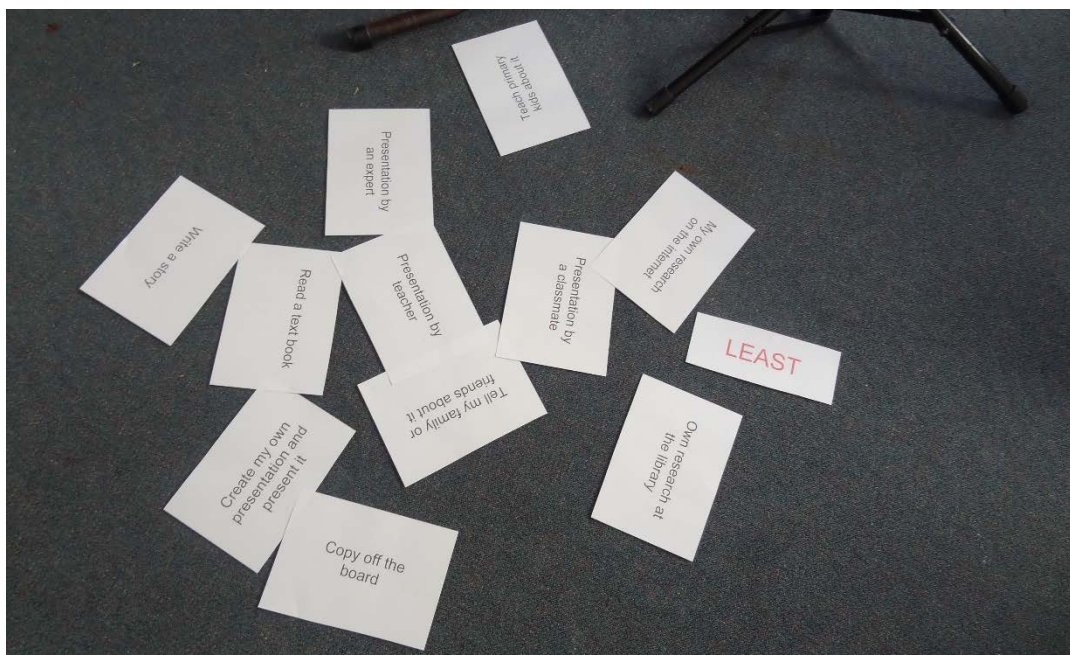


Figure 64 'Activities I like' ranked in order from most to least (Focus Group 1, part 3)



## Activities I learn from

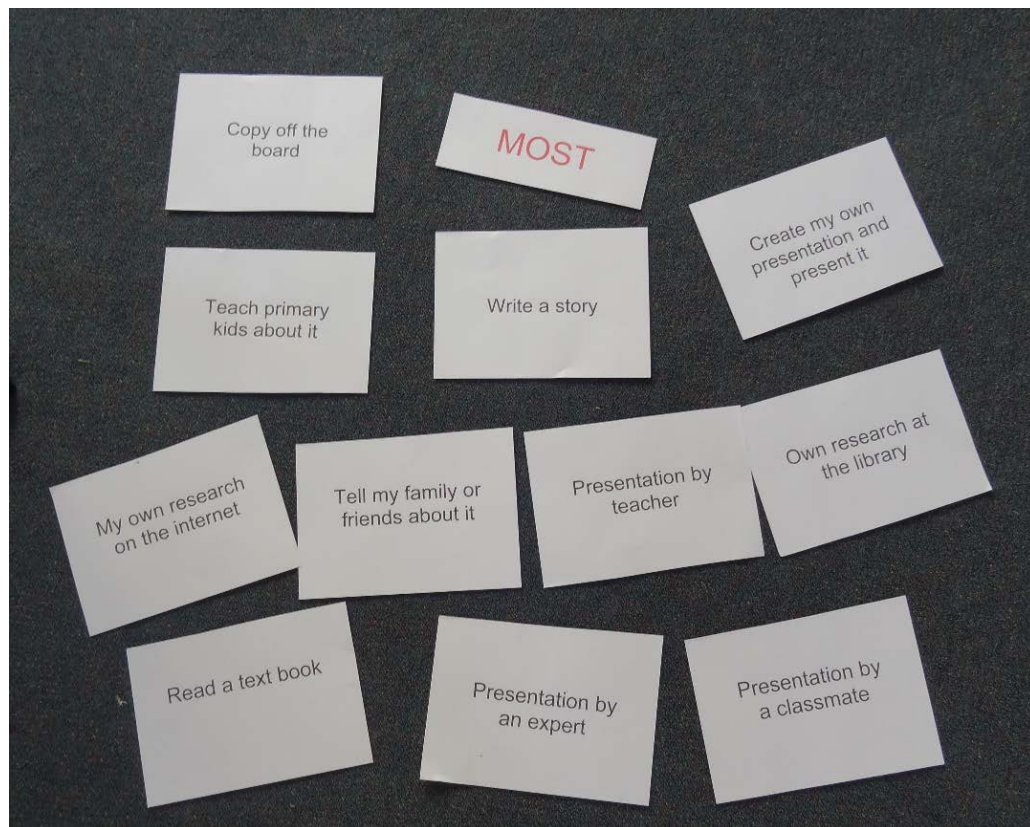


Figure 65 'Activities I learn from' ranked in order from most to least (Focus Group 1, part 1)

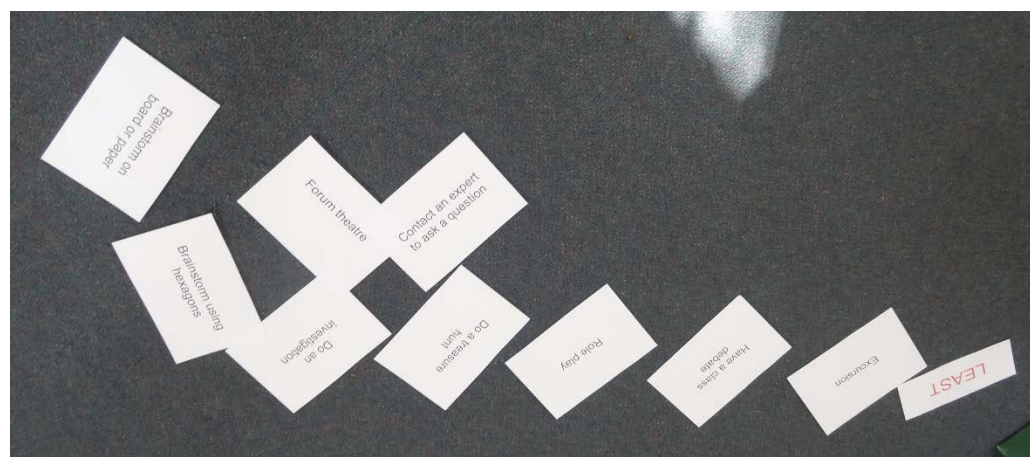


Figure 66 'Activities I learn from' ranked in order from most to least (Focus Group 1, part 2)

## Activities that might be useful in everyday life

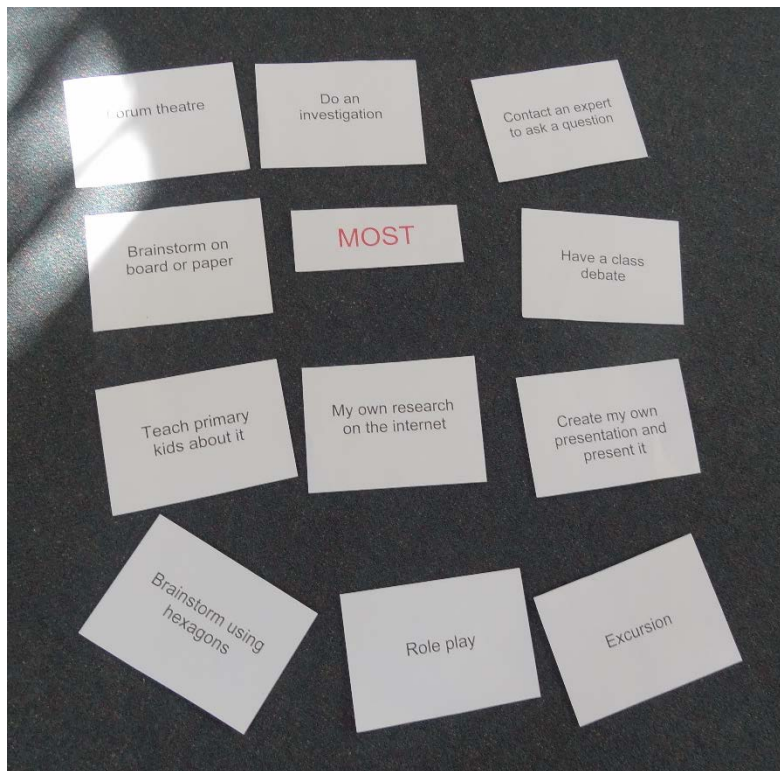


Figure 67 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 1, part 1)

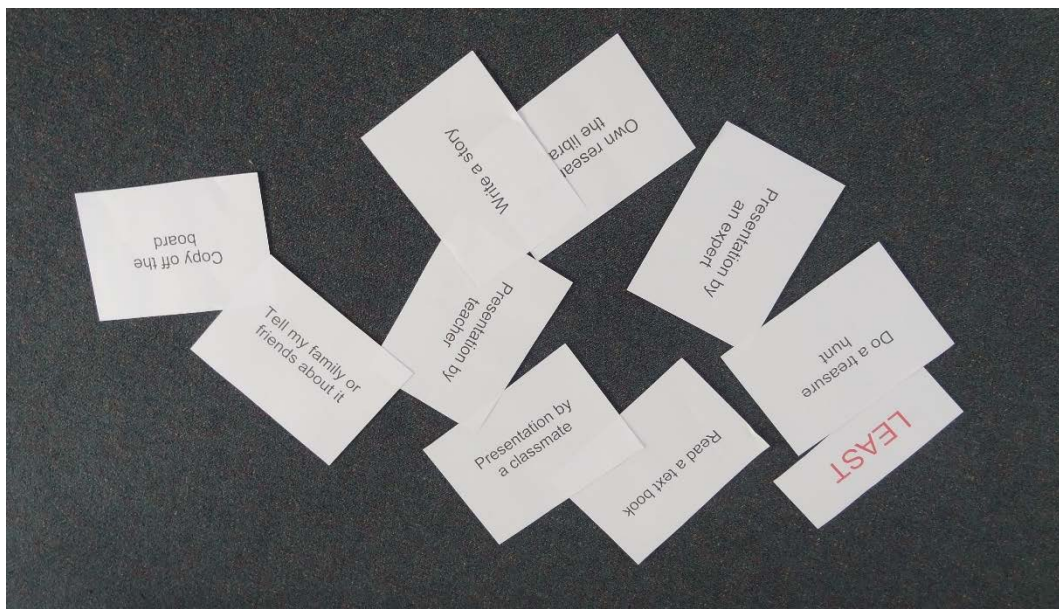
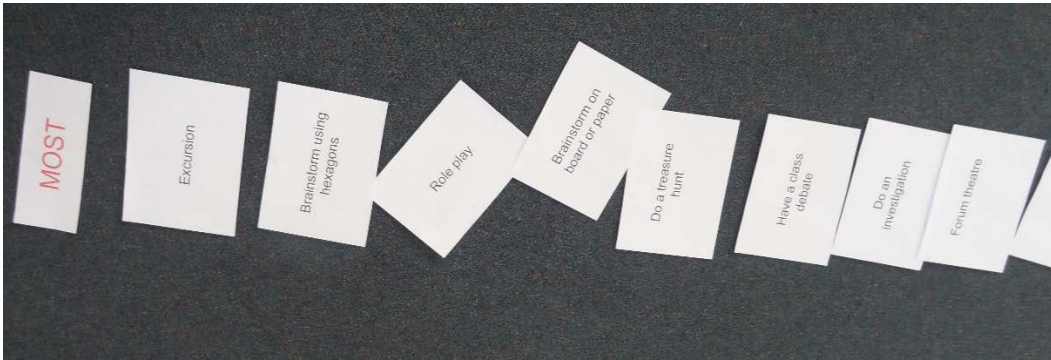


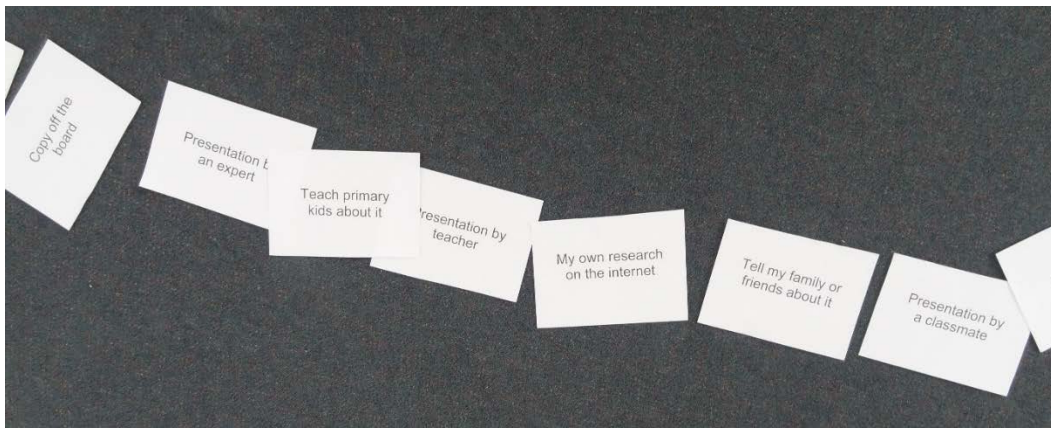
Figure 68 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 1, part 2)



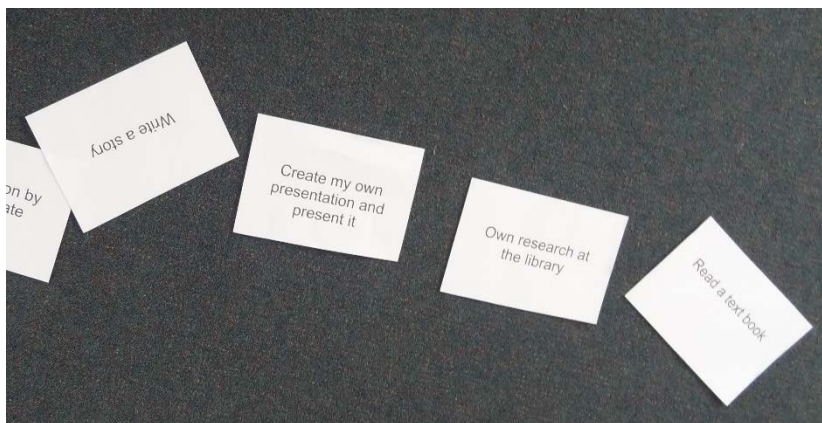
## Focus Group 2



*Figure 69 'Activities I like' ranked in order from most to least (Focus Group 2, part 1)*



*Figure 70 'Activities I like' ranked in order from most to least (Focus Group 2, part 2)*



*Figure 71 'Activities I like' ranked in order from most to least (Focus Group 2, part 3)*



*Figure 72 'Activities I like' ranked in order from most to least (Focus Group 2, part 4)*

## Activities I learn from

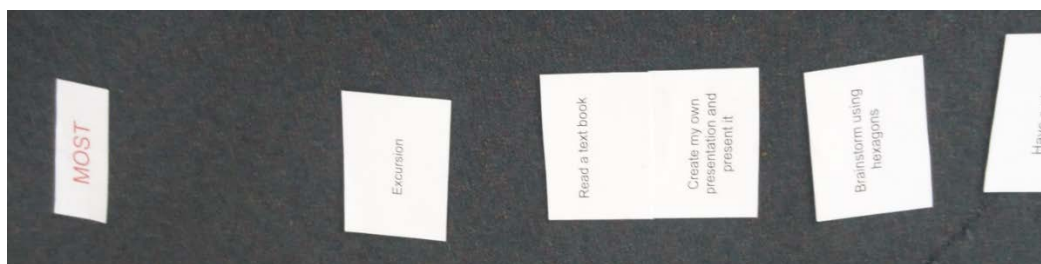


Figure 73 'Activities I learn from' ranked in order from most to least (Focus Group 2, part 1)

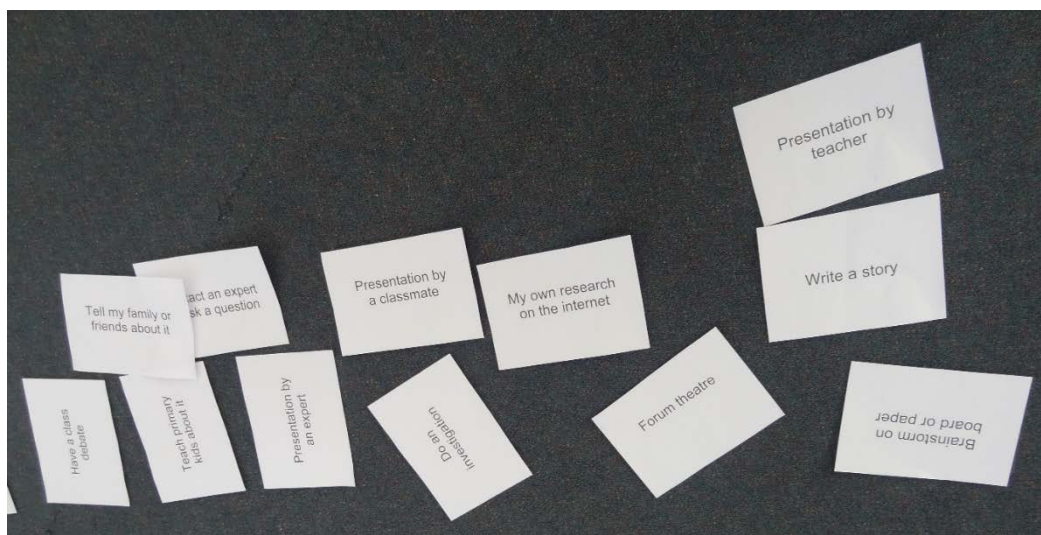


Figure 74 'Activities I learn from' ranked in order from most to least (Focus Group 2, part 2)

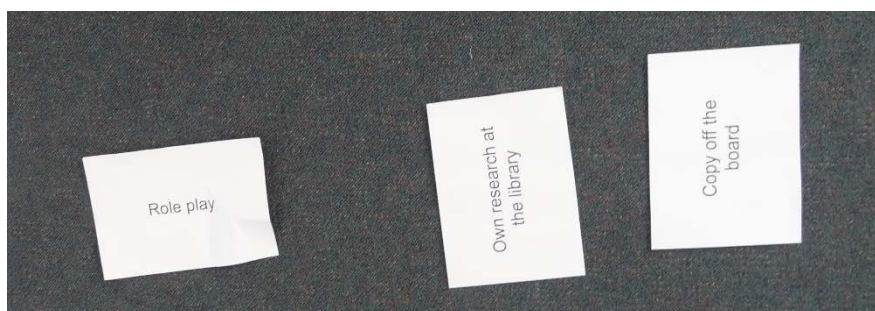


Figure 75 'Activities I learn from' ranked in order from most to least (Focus Group 2, part 3)

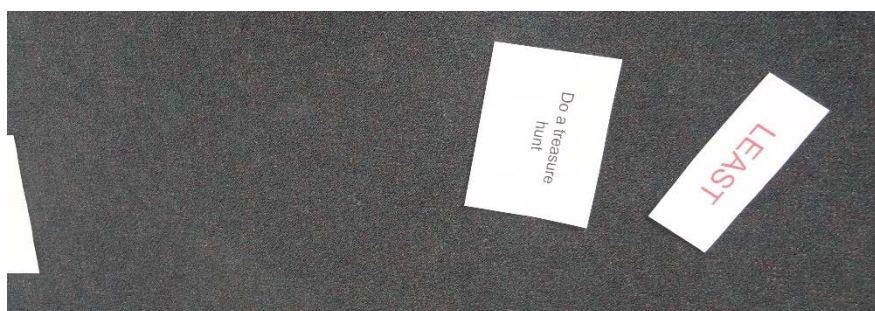


Figure 76 'Activities I learn from' ranked in order from most to least (Focus Group 2, part 4)



## Activities that might be useful in everyday life

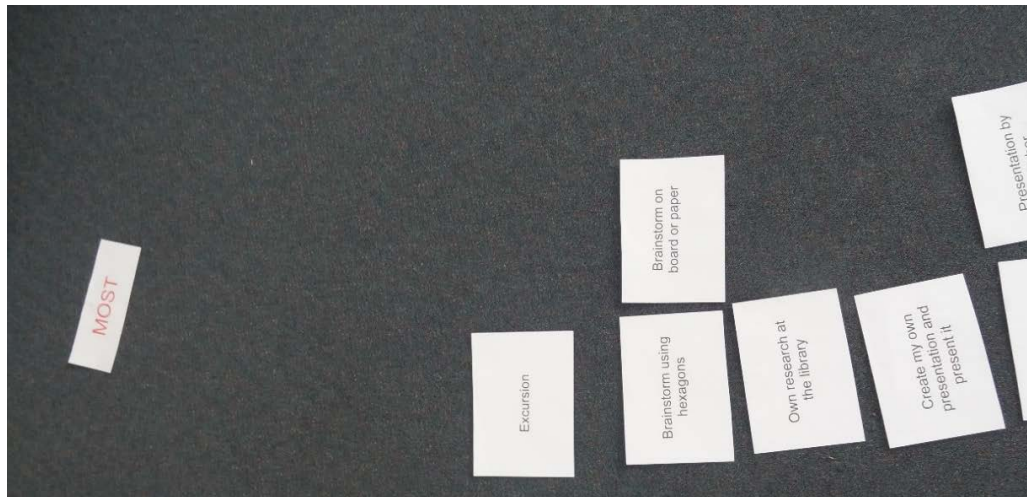


Figure 77 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 2, part 1)

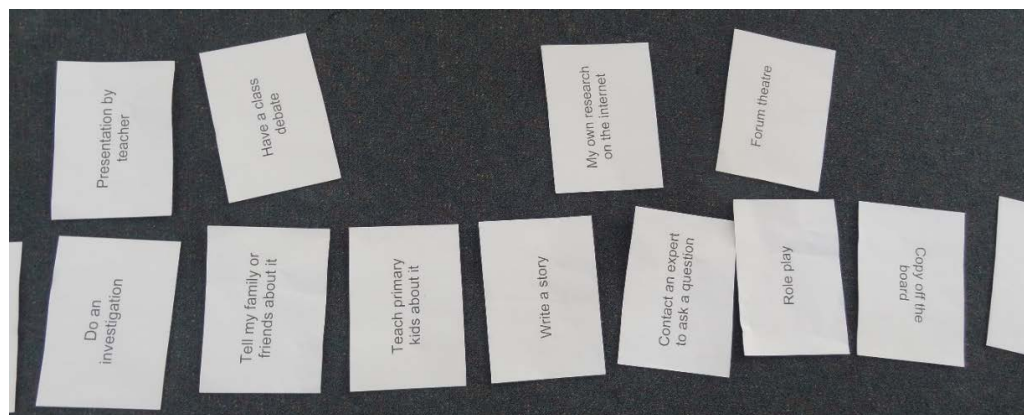


Figure 78 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 2, part 2)

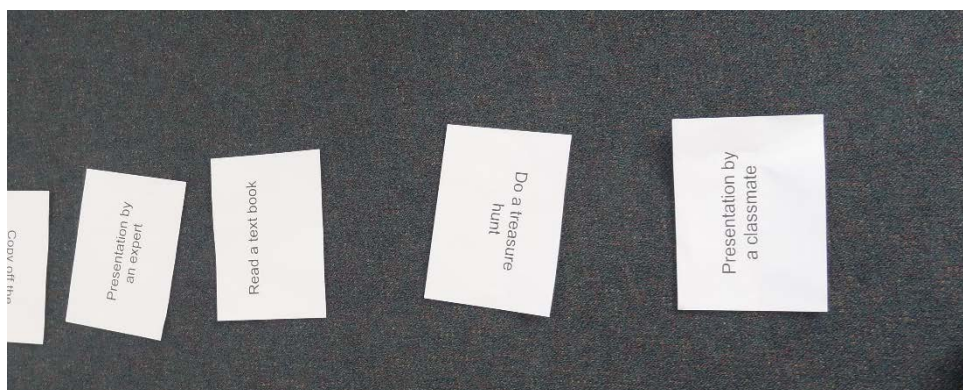


Figure 79 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 2, part 3)

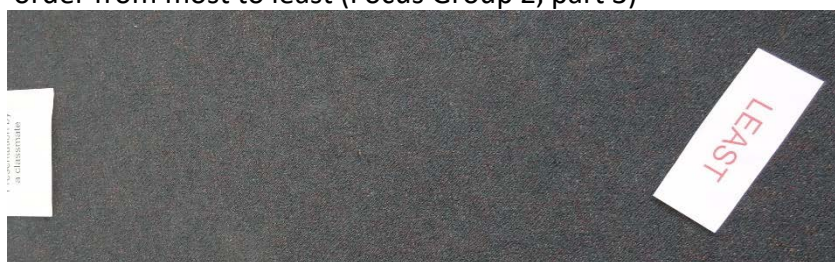


Figure 80 'Activities that might be useful in everyday life' ranked in order from most to least (Focus Group 2, part 4)



Table 7 Visible thinking activity student answers summary

<i>I used to think</i>	<i>now I think</i>	<i>I used feel</i>	<i>now I feel</i>	<i>I used to</i>	<i>now I</i>
I used to think that it's fun to speed, Now I think that speeding is dangerous.		I used to feel like I didn't care. Now I feel like I should pay more attetion [sic] about transport safety.		I used to be silly. No I am respectful about transport safety.	
I used to think that I can do what I want in the car. Now I think that I shouldn't distract the driver.		I used to feel that we didn't need to learn task about it. Now I feel that we should tell little kids about the risks of transport.		I used to be loud and stupid. Now I am a good boy - I believe about transport safety.	
I used to think it was fun to play on train tract [sic]. Now I think better not.		I used to feel that I wouldn't lern [sic] anything in this class. Now I think that I have leard [sic] heaps!! about transport safety.		I used to yell at my brother in the car. Now I don't yell and be causes [sic] about transport safety.	
I used to think nothing about it and now I think about it.				I used to not pay attention to transport that much (trains/trams) because I thought it didn't need to worry about it living in the country. Now I understand you should always rethink the risks of beings silly/distracting when around different types of transport.	
I used to think that we didn't need a lot to learn, but now I think we need to help more and tell people about transport safety.				I used to fight with my brother. But we hardly fight now.	
I used to think that we didn't play a big part in transport safety. Now I think that we are the future generation, who are a bit more educated about transport safety and can make changes when it comes to informing others about transport safety.				I used to sleep. Now I sleep.	
I used to think nothing about it and now I think nothing about it.					

## Visible Thinking activity-student views

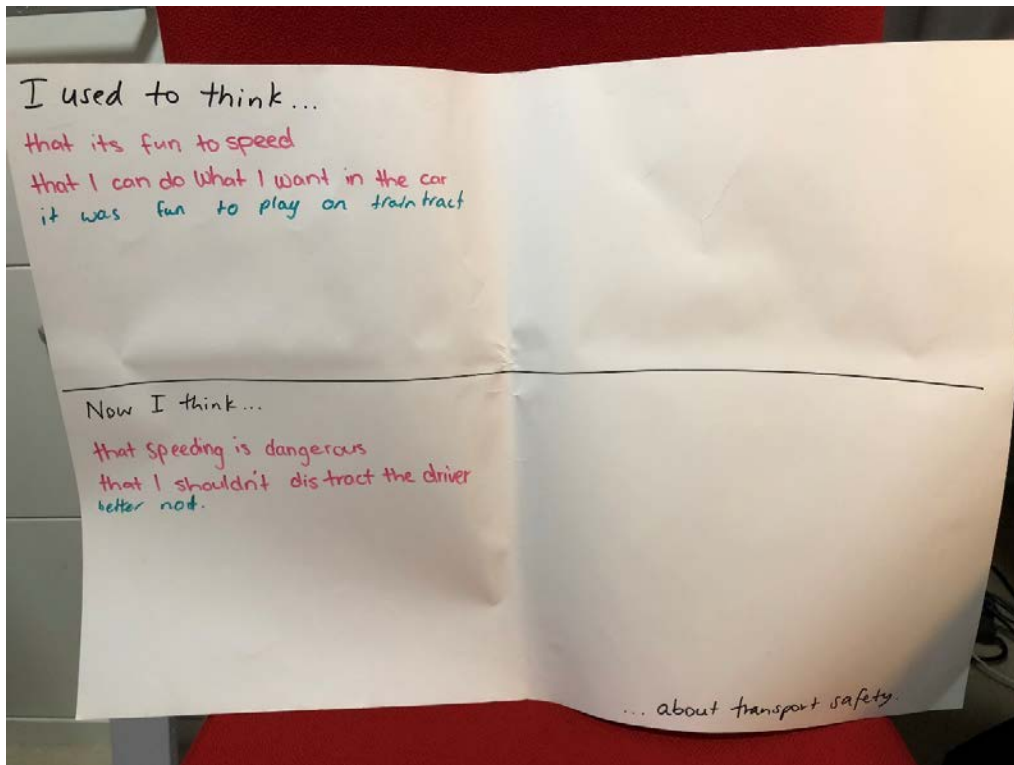


Figure 56 Group One's answers—'I used to think,...now I think... about transport safety'

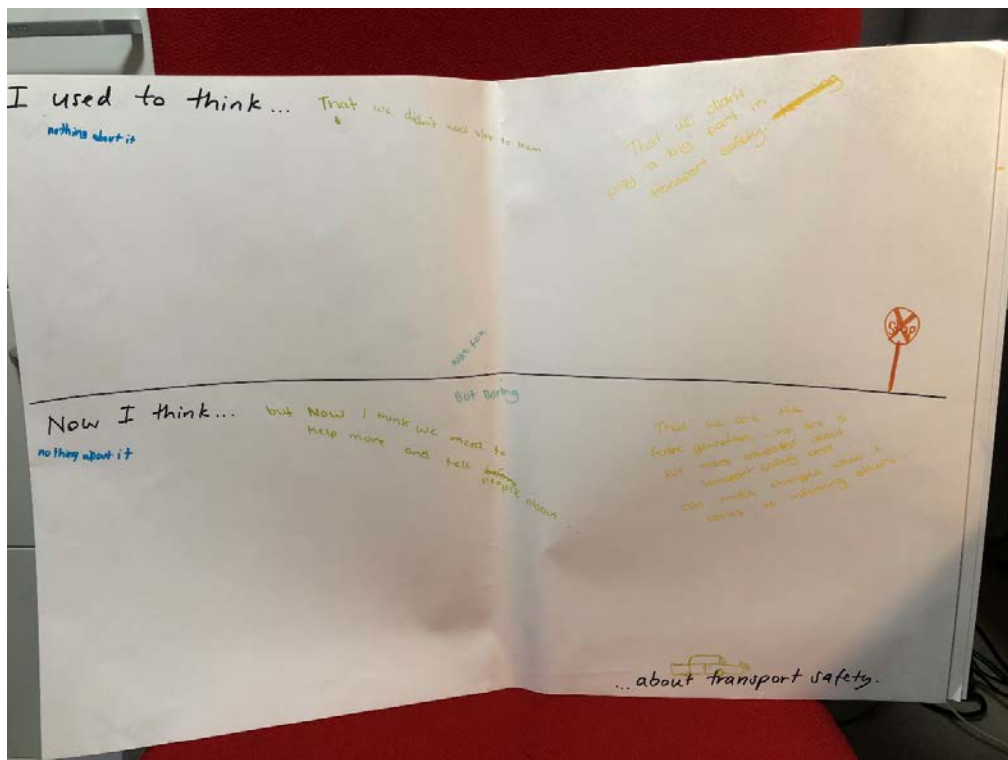


Figure 57 Group Two's answers—'I used to think,...now I think...about transport safety'

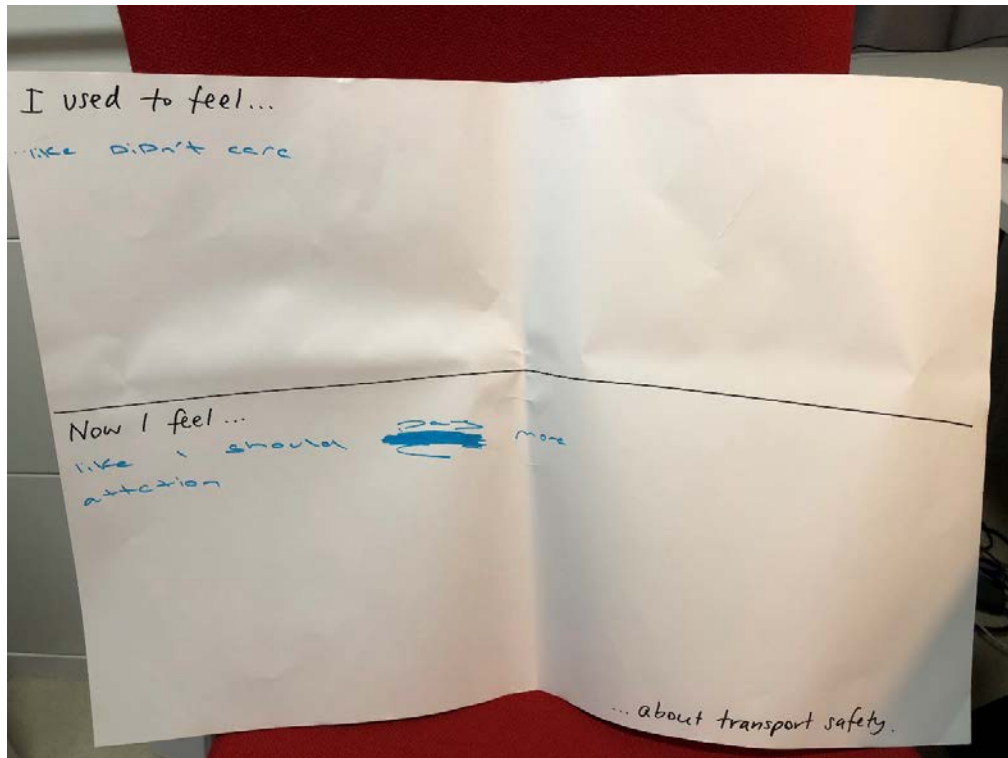


Figure 58 Group One's answers—'I used to feel..., now I feel...about transport safety'

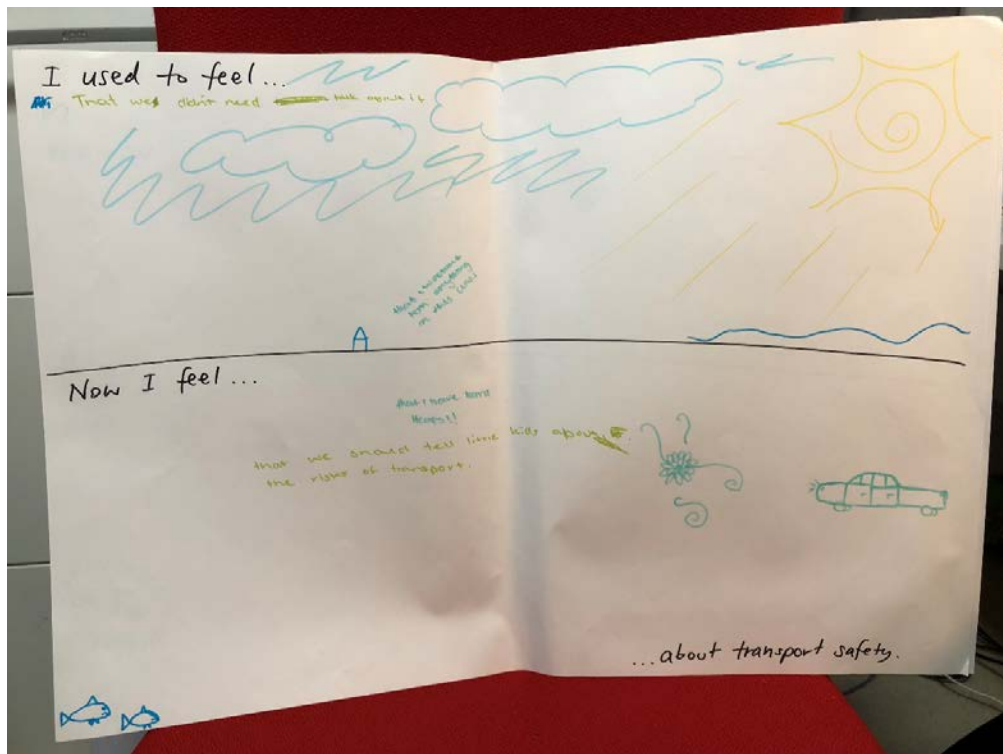


Figure 59 Group Two's answers—'I used to feel..., now I feel...about transport safety'

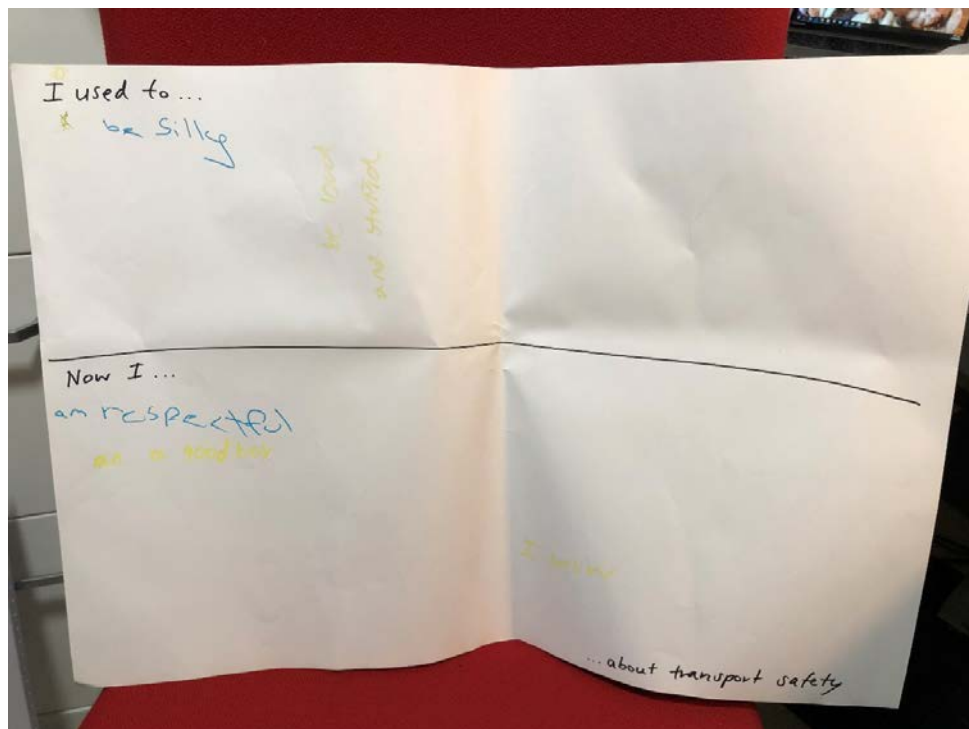


Figure 60 Group One's answers—'I used to..., now I...about transport safety'

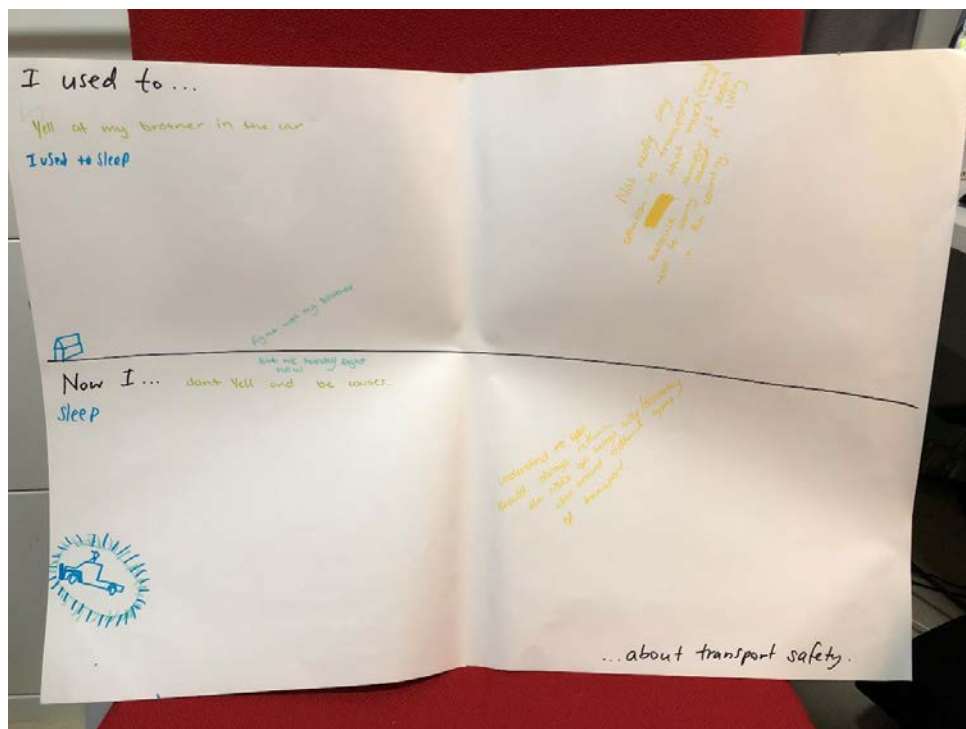


Figure 61 Group Two's answers—'I used to..., now I... about transport safety'

Table 8 Student answers for label generation activity

When my voice is heard, I feel _____.	<ul style="list-style-type: none"> <li>• Happy</li> <li>• Embarrassed</li> <li>• Annoyed, 'cos everyone goes, what did you say?</li> <li>• Alright</li> <li>• like I'm involved in the conversation and I'm contributing to learning</li> <li>• Confident</li> <li>• Yeah nah yeah nah</li> <li>• Good bra</li> </ul>
When I don't get a say in my learning, I feel _____.	<ul style="list-style-type: none"> <li>• Angry</li> <li>• Annoyed x 4</li> <li>• Miss won't let me say the answer. All the teachers are sexist.</li> <li>• Depressed</li> <li>• Upset because I like to understand my learning and ask questions</li> <li>• I don't care.</li> </ul>
When my opinion is valued, I feel _____.	<ul style="list-style-type: none"> <li>• Happy</li> <li>• Alright</li> <li>• I feel good</li> <li>• I feel smart</li> <li>• I feel great</li> <li>• Pretty good</li> <li>• Mad dog</li> <li>• I don't know. It's not always valued. I don't get much of an opinion at school [or home].</li> <li>• Heaps good bra. Cos like you get your like, your opinion, and that's why you do it.</li> <li>• Good, because my opinions are being shared around. The opposite of excluded.</li> <li>• Pretty good</li> </ul>
When sit and listen to someone doing a presentation, I feel _____.	<ul style="list-style-type: none"> <li>• Bored x 2</li> <li>• Jealous that they're smarter than me.</li> <li>• Sometime good or sometimes bored. Like that one at the library was mad. Where that girl that writes books came in.</li> <li>• It depends where the presentation is. Because if you do a school presentation and Mr De Niro is up there going blah blah blah, and then when you like, put full on drama into it, everyone just goes bang and they get into it.</li> <li>• When they go on and on about something else, go off the topic, I feel annoyed.</li> <li>• Included</li> </ul>

	<ul style="list-style-type: none"> <li>• Like I'm making them sorta feel good at the same time, because I'm listening to them and I'm putting all my attention to their presentation. And that could be helping them at the same time.</li> <li>• Making them feel important.</li> <li>• You'd want to pay attention cos it might be important.</li> </ul>
When my teacher allows me to contribute to my learning, I feel _____.	<ul style="list-style-type: none"> <li>• Sometimes when you ask for help your teachers say, try and do it yourself.</li> <li>• Yeah you ask for help and the teachers go, go and ask your friends, but your friends can't help ya.</li> <li>• Good, just 'cos.</li> <li>• I feel like I'm getting a deep understanding</li> <li>• Understanding in your own way</li> </ul>
When I get feedback about my work, I feel _____.	<ul style="list-style-type: none"> <li>• Depends on what sort of feedback. Sometimes I feel angry, or sad, or happy, or good, or bad.</li> <li>• When teachers compare us to other students, that's when it goes bad...</li> <li>• Annoyed because I don't like trying to go and fix stuff.</li> <li>• Good, because like it's something good to help me with my work. But then it can be bad and it can make you upset.</li> <li>• Sometimes I get feedback on my work and I feel like it's a big putdown and I've made all these mistakes, but then I know it's just an improvement, and it helps me get better.</li> </ul>
When my teacher has high expectations of me, I feel _____.	<ul style="list-style-type: none"> <li>• Yeah that's like a teacher actually telling us that they care about all of us.</li> <li>• Too high expectations are not good, when you feel you can't do the work but aren't being listened to.</li> <li>• Pressured x 3</li> <li>• That if I make a mistake I might let them down, and I'd feel really bad.</li> <li>• Like we have to get it done really quickly. Like we had a lot of work to do and had to get it done in that lesson. It was a lot of pressure.</li> </ul>
When my teacher listens to me, I feel _____.	<ul style="list-style-type: none"> <li>• Happy</li> <li>• Alright</li> <li>• Good</li> <li>• That I'm being heard.</li> </ul>
When I get to express myself in a way that suits me, I feel _____.	<ul style="list-style-type: none"> <li>• Good</li> <li>• Good and recognised</li> <li>• Good, because you're telling them what you're trying to explain to them in your own way not their way, it might be more complicated</li> </ul>

When my teacher respects me, I feel _____.	<ul style="list-style-type: none"> <li>• Good</li> <li>• Happy</li> <li>• Alright</li> <li>• Respected</li> <li>• Good</li> <li>• Included</li> <li>• Like she's listening. Cos some teachers don't listen.</li> <li>• Important that my opinion is valued</li> </ul>
When my teacher views me as an expert in the things that interest me, I feel _____.	<ul style="list-style-type: none"> <li>• Annoyed</li> <li>• Weird</li> <li>• When people</li> <li>• Alright, but then when they want to learn something but you don't know how to teach them.</li> <li>• Good</li> <li>• Nervous, because I might not be a complete expert. I don't know everything in the world about it.</li> <li>• That you know more than what they know, and they might pressure you into you should know it. Or take I the wrong way and think you're a smart arse. Some teachers are rude.</li> </ul>
When I'm actively learning about something, I feel _____.	<ul style="list-style-type: none"> <li>• Really really good</li> <li>• Heaps good</li> <li>• That I'm getting a different understanding of what I'm learning. So when I'm doing it I feel like, I can do this, I understand it now.</li> <li>• More confidence.</li> <li>• I'm like, I'm still bad at this, I can't do it, I need more help.</li> </ul>
When I can ask and solve problems by working on them myself or with my class, I feel _____.	<ul style="list-style-type: none"> <li>• Happy</li> <li>• Depends on the classmates</li> <li>• When you got something that you're really good at, which is different for everybody, when someone says, can you help me with this, and then the teacher goes up the front and tells the whole class, and you get told to stop when you really know what you're doing, just because of that one kid you gotta stop.</li> <li>• Like I'm on track, cos I figured it out, which means I've learnt something.</li> <li>• Confident, cos I'll probably use it every day to remember</li> <li>• A little bit smarter, cos you're getting through it</li> </ul>
When I share my knowledge with others I feel _____.	<ul style="list-style-type: none"> <li>• It's weird</li> <li>• Smart, because I like know it, and can tell them, and you feel like really smart. When I tell things to</li> </ul>

_____.	<p>Mila I'm like, I'm smart!</p> <ul style="list-style-type: none"> <li>• Intelligent</li> </ul>
When my classmates listen to me, I feel_____.	<ul style="list-style-type: none"> <li>• I feel bad. Cos I get them in trouble when they listen to me.</li> <li>• Included</li> <li>• Like I'm being heard.</li> <li>• Good.</li> <li>• OK. Maybe nervous because I'm looking around going, ah, but it's OK.</li> </ul>
When _____ I feel _____.	<ul style="list-style-type: none"> <li>• When my friends get in trouble, I feel like it's my fault.</li> <li>• When I am allowed to choose my groups I feel happy. I feel happy because I get to be with my friends, but then I feel bad because sometimes you're only allowed to choose a few people...I don't want anyone to be mad at me.</li> <li>• When the teacher changes the slide and I'm not finished, I feel angry.</li> <li>• When someone isn't listening in class, I feel upset, because I could be learning.</li> <li>• When people are laughing for no reason I feel annoyed.</li> <li>• When the teacher yells at people, I think they're yelling at me too because I'm part of the class, and I feel sad. I'm a real person everyone.</li> </ul>



## **Appendix I: Hexagon groupings**

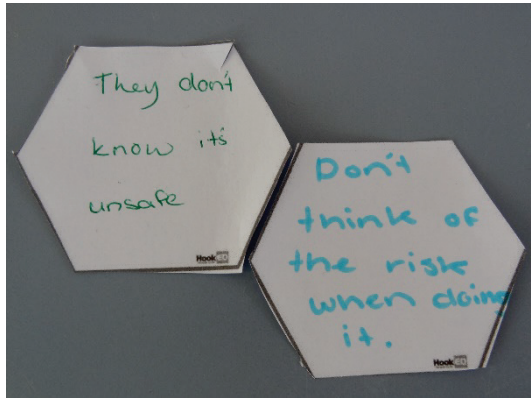


Figure 18 Hexagon grouping: lack of knowledge

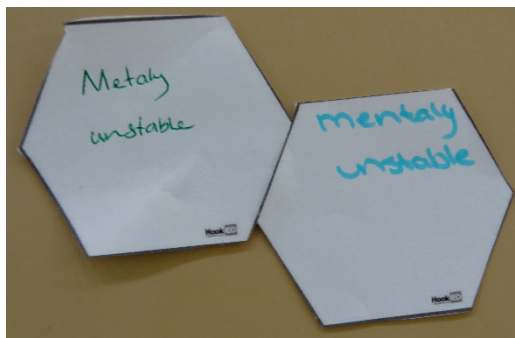


Figure 19 Hexagon grouping: poor mental health

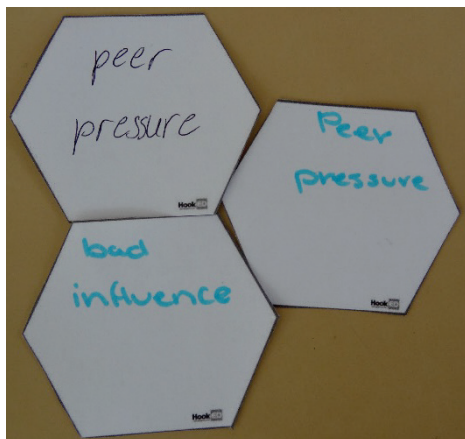


Figure 20 Hexagon grouping: influenced by others

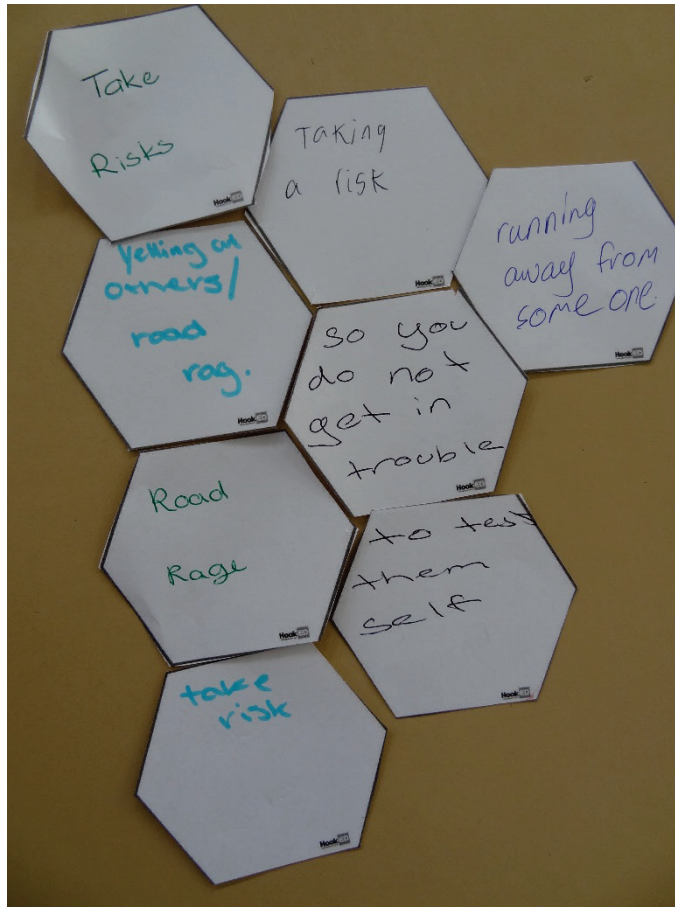


Figure 21 Hexagon grouping: risk taking and fear response

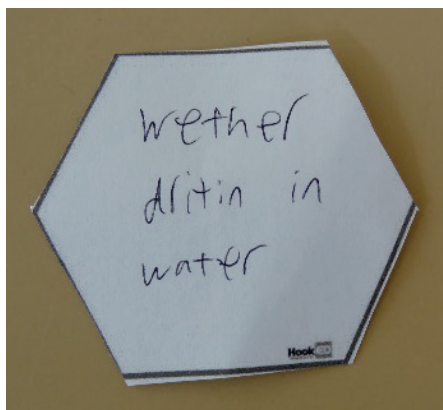


Figure 22 Hexagon grouping: environmental factors

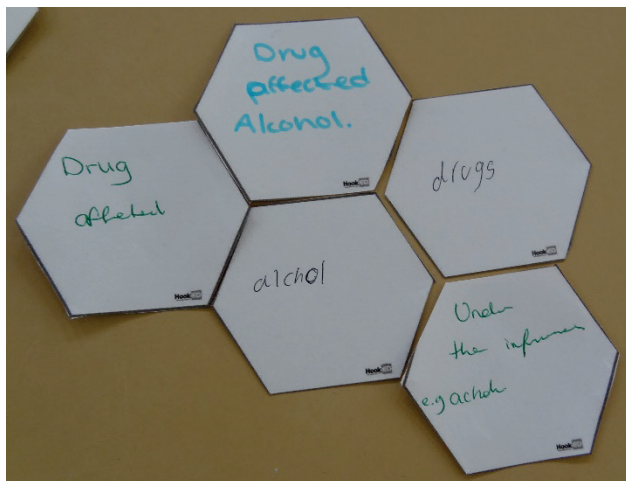


Figure 23 Hexagon grouping: influenced by substances

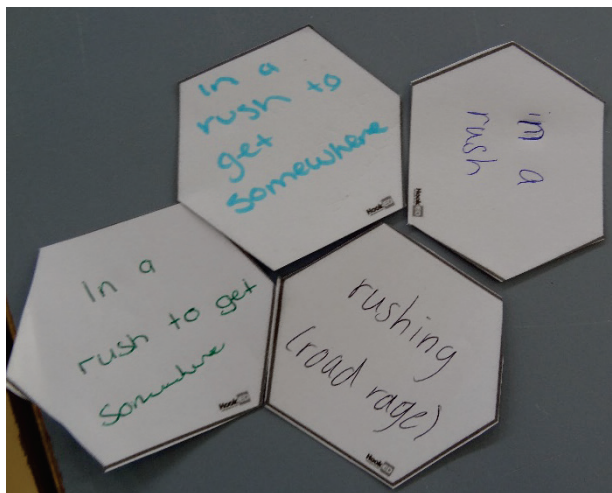


Figure 24 Hexagon grouping: time pressure

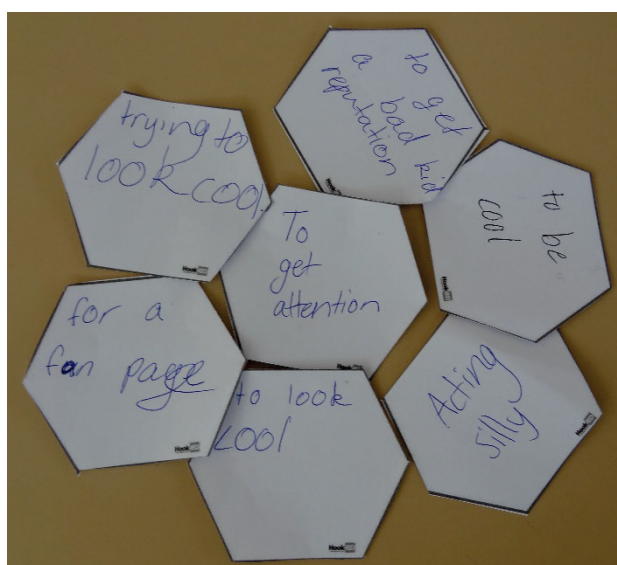


Figure 25 Hexagon grouping: wanting to improve image

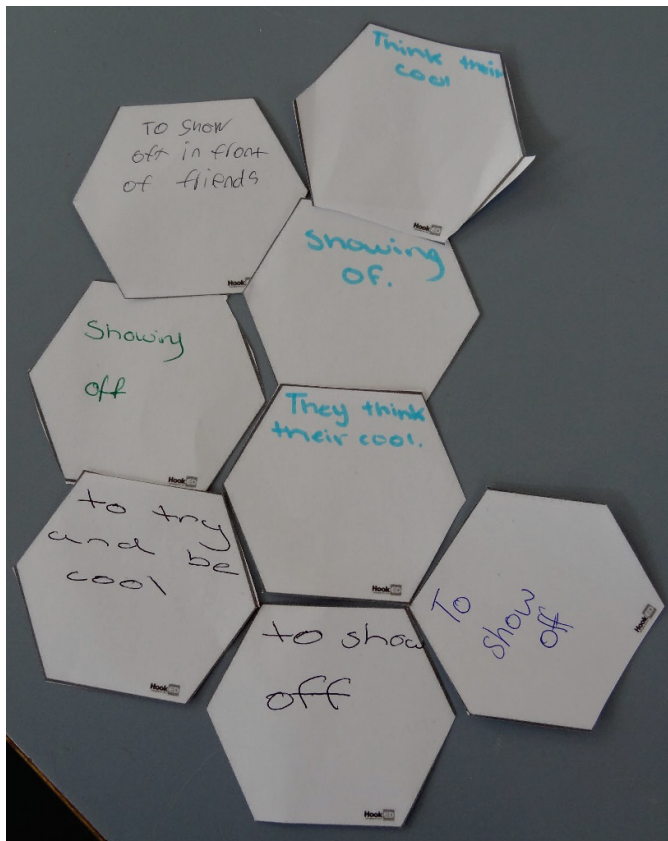


Figure 26 Hexagon grouping: showing off to friends

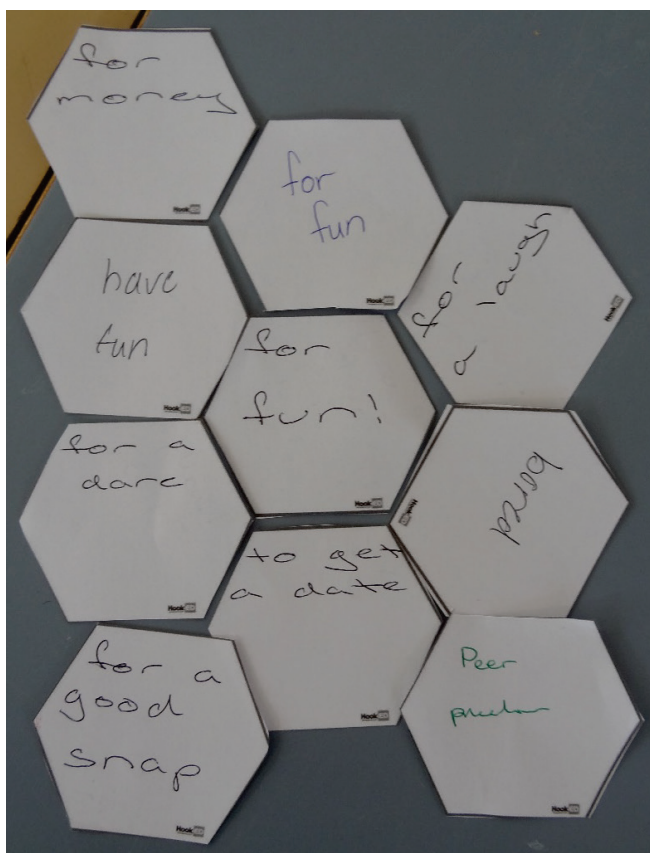


Figure 27 Hexagon grouping: fun/recreation

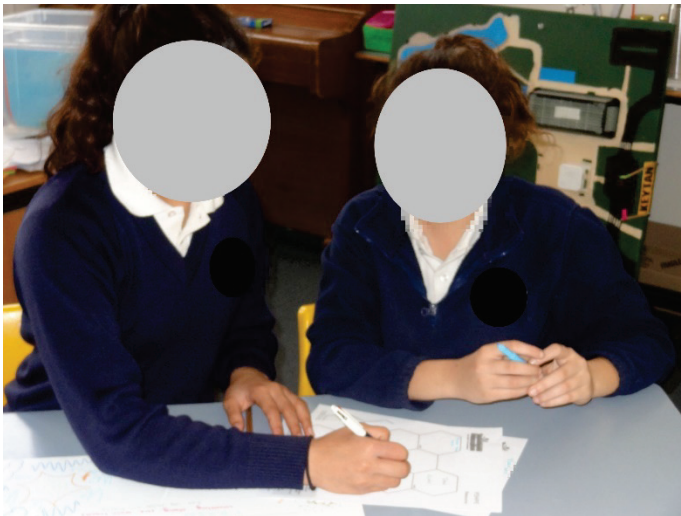
## **Appendix J: Photos of students during the lessons**



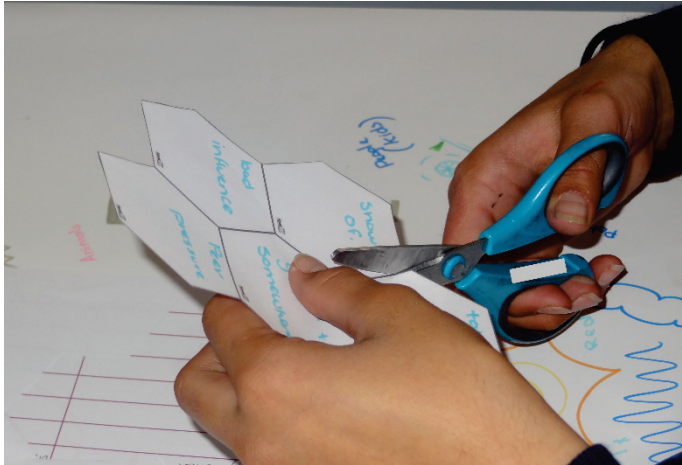
## Lesson One



*Figure 13* A student working individually on the hexagon activity



*Figure 14* Two students working together in a pair on the hexagon activity



*Figure 15* A student cutting out their hexagons ready for the group brainstorm



*Figure 16* Researcher-teacher Janine explaining how to connect the hexagons to find the big ideas or themes





*Figure 17* Students grouping the hexagons to find the big ideas or themes

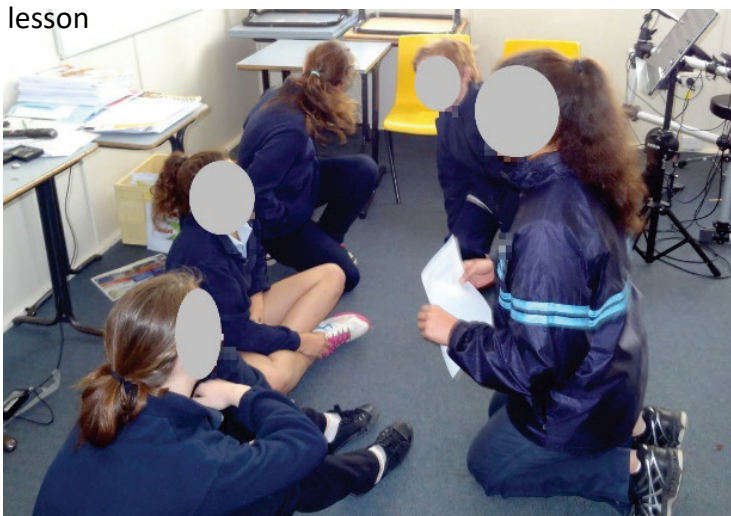
## Lesson Two



*Figure 28* Introduction to lesson with a recap on previous lesson



*Figure 29* Researcher-teacher Janine going over the group's hexagon linkages from the previous lesson



*Figure 30* Group One planning their play



*Figure 31* Students from group one applying 'makeup' (marker pen) to symbolise blood



*Figure 32* Groups One and Two rehearsing their plays



*Figure 33* Group One's performance: driving





*Figure 34* Group One's performance: hitting pedestrians



*Figure 35* Group Two planning their play



*Figure 36* Group Two's performance: bullies start to rough up victim



*Figure 37* Group Two's play: bullies push victim toward tracks



*Figure 38* Group Two's play: bullies push victim onto tracks



*Figure 40* Group Two's play: alternative scenario—Salma steps in as upstander



*Figure 41* Salma as upstander, stopping the bullies in rerun of Group Two's play



*Figure 42* Group Two alternative scenario—Angelina steps up and says no



*Figure 43* Group Two alternative scenario—Charlize steps in





*Figure 44* Group One alternative scenario—Angelina questions the others

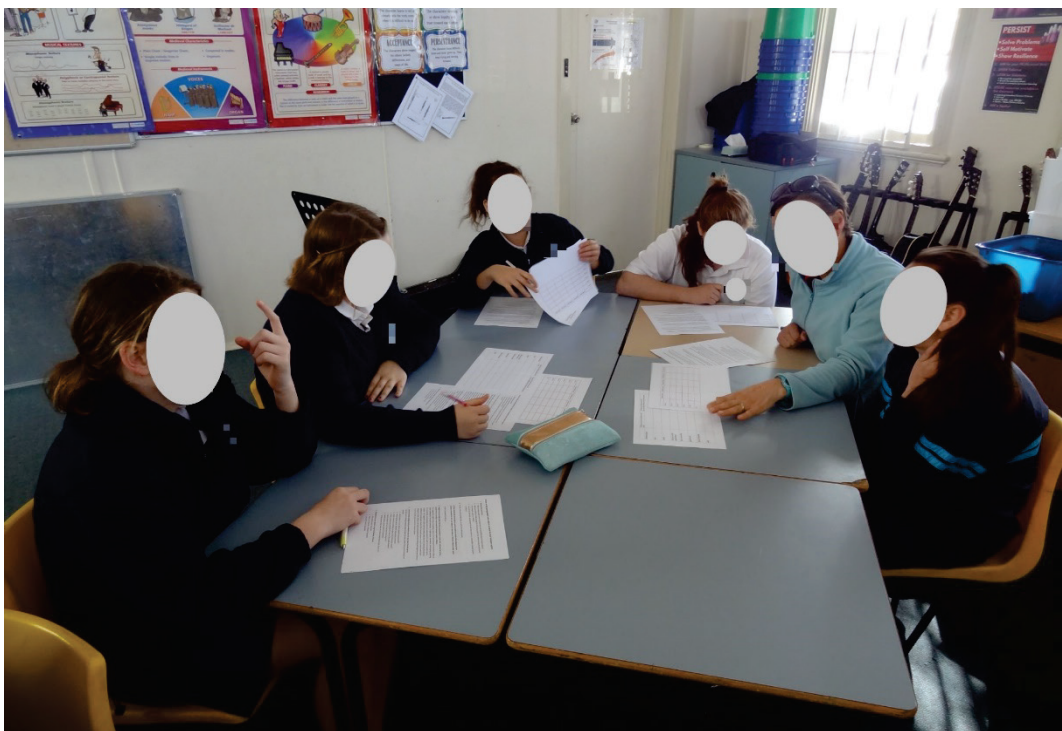


*Figure 45* Wrap up discussion as a whole class

### Lesson Three



*Figure 46* Whole class doing their respective tasks



*Figure 47* Group One undertaking their activism task, with Julia leading the discussion





Figure 48 Group Two doing the Trading Cards task

## **Appendix K: Samples of student work**

## Lesson 3

	Possible solution 1	Possible solution 2	Possible solution 3	Possible solution 4	Possible solution 5
Criterion 1 School bus transport.	- empower people with skills.	- make people aware.	- inform others. - school - parents - police.	- tell the schools	-
Criterion 2 Youth group	- having someone for young people to meet	- running activities for the young	- people who can relate to kids.	- an anti bullying program	- bridge - happy colours - chill area - garden
Criterion 3					
Criterion 4					
Criterion 5					
Total					

Figure 49 Sample One of Group One's work from Lesson Three (activism task)

	What can be done by students at this level?	Example of an action you can do/ how you might influence others to take action
individual (you)	<ul style="list-style-type: none"> <li>- be aware of rules (know)</li> <li>- up holder</li> <li>- inform others.</li> <li>- <del>lead</del></li> </ul>	<ul style="list-style-type: none"> <li>- wear a helmet</li> <li>- talk to others</li> <li>- beware of risks</li> <li>- education, police talks, support each other.</li> <li>- set example.</li> <li>- follow a good example.</li> </ul>
class	<ul style="list-style-type: none"> <li>- follow rules</li> <li>- educate others</li> <li>- lead by example</li> </ul>	
school	<ul style="list-style-type: none"> <li>- educate younger students</li> </ul>	<ul style="list-style-type: none"> <li>- set example</li> </ul>
clubs and youth organisations	<ul style="list-style-type: none"> <li>- watch out for each other</li> </ul>	<ul style="list-style-type: none"> <li>- teach other of dangers.</li> </ul>
local community	<ul style="list-style-type: none"> <li>- enforce the rules more. (good, others, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- don't do it for attention.</li> </ul>
government	<ul style="list-style-type: none"> <li>- leading by example</li> </ul>	<ul style="list-style-type: none"> <li>- speak for others</li> <li>- inform more often.</li> </ul>
places of worship	<ul style="list-style-type: none"> <li>- respect the rules</li> <li>- progress to help.</li> </ul>	<ul style="list-style-type: none"> <li>- run programs.</li> </ul>
other	<ul style="list-style-type: none"> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-</li> </ul>

Figure 50 Sample Two of Group One's work from Lesson Three (activism task)

Front	Back
<div data-bbox="379 264 810 488" data-label="Image"> </div> <p data-bbox="363 504 821 743">In this situation the victim is being pressured by fellow peers to run across the train tracks, while a train is coming for a good scoop.</p>	<div data-bbox="874 347 973 645" data-label="Text"> <p>Being bullied into doing something by fellow peers</p> </div> <div data-bbox="1008 280 1308 421" data-label="Text"> <p>If you are being pressured into doing something that puts you @ dangerous risk, don't do it + tell someone trusted, because (you are not alone)</p> </div> <div data-bbox="1008 430 1305 571" data-label="Text"> <p>Tell them to stop</p> </div> <div data-bbox="1008 582 1305 712" data-label="Text"> <p>Ignore them, pay no attention</p> </div>
<div data-bbox="507 779 678 945" data-label="Text"> <p>5</p> </div> <p data-bbox="363 945 821 1124">The risks of being pressured into something like this could end in terrible self harm, possibly death.</p> <p data-bbox="363 1131 821 1258">It is illegal, if the footage gets out you are in alot of trouble with the law. (this is if you survive)</p>	<p data-bbox="842 772 997 1191">By following some of the advice above, it could help you manage peer pressure a get a positive outcome and help.</p> <div data-bbox="1024 779 1311 945" data-label="Text"> <p>I am a individual. I don't have to give in to peer pressure. I can say no if I choose</p> </div> <div data-bbox="1098 990 1225 1169" data-label="Image"> </div>

Figure 51 Angelina's completed trading card



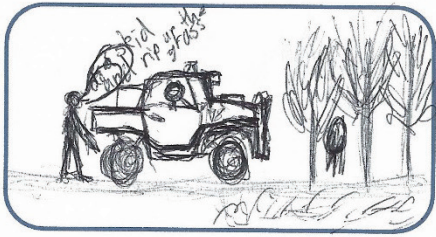

Front	Back
 <p>It could kill someone or injury could occur. people could become scared. Am</p>	<div data-bbox="869 347 965 649" style="border: 1px solid black; padding: 5px; display: inline-block; transform: rotate(-90deg); transform-origin: left top;">Managing putdowns</div> <div data-bbox="1005 280 1300 414" style="border: 1px solid black; padding: 5px; display: inline-block;">ignore them and walk away</div> <div data-bbox="1005 425 1300 571" style="border: 1px solid black; padding: 5px; display: inline-block;">don't answer back</div> <div data-bbox="1005 582 1300 716" style="border: 1px solid black; padding: 5px; display: inline-block;">put them down too</div>
<div data-bbox="502 772 678 952" style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">4</div> <p>Because it could pressure people into doing something dangerous, effect other people</p>	<p>the peer pressure might stop if you ignore them. because they will get bored of it.</p> <div data-bbox="1021 772 1308 963" style="border: 1px solid black; padding: 5px; display: inline-block;">I'm not doing it. I'm not stupid, you can it you want i'm not</div> 

Figure 52 Brad's completed trading card

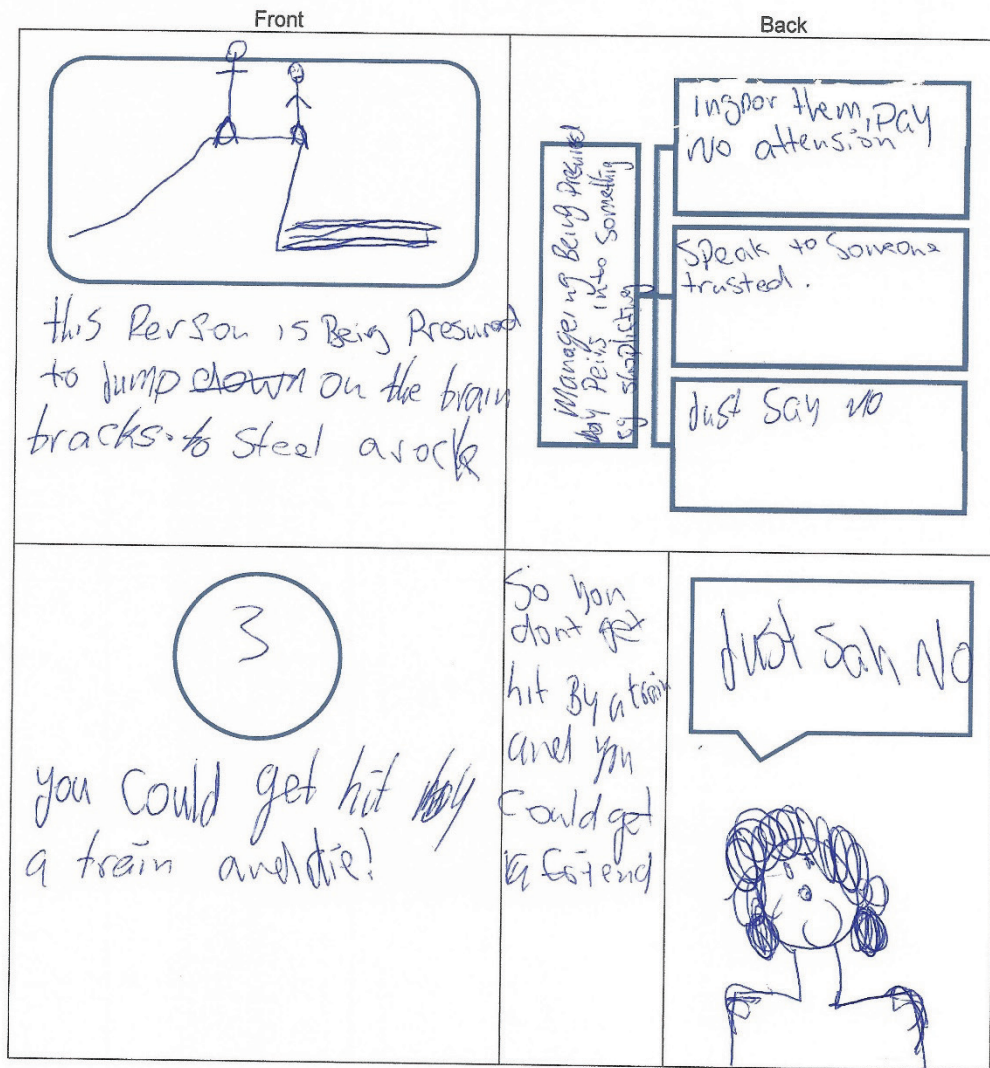


Figure 53 George's completed trading card

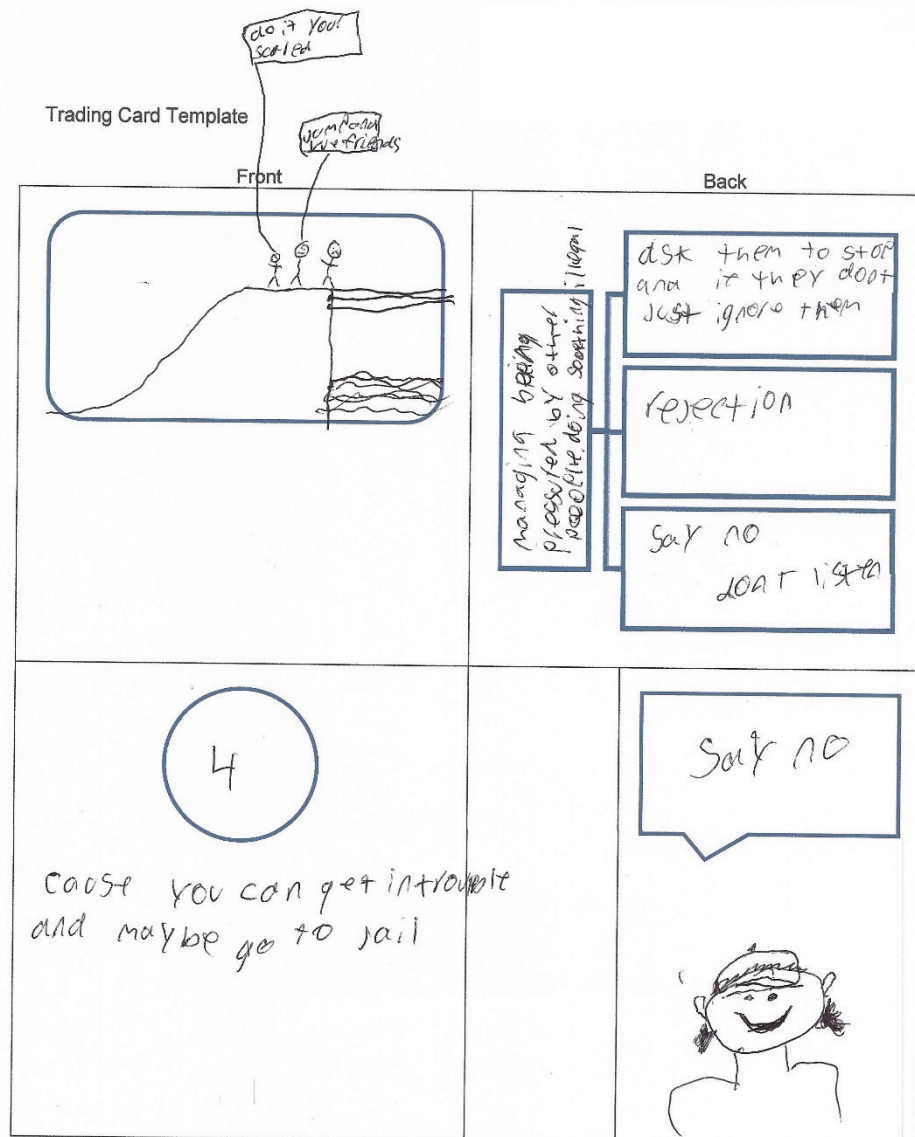


Figure 54 Hugh's completed trading card



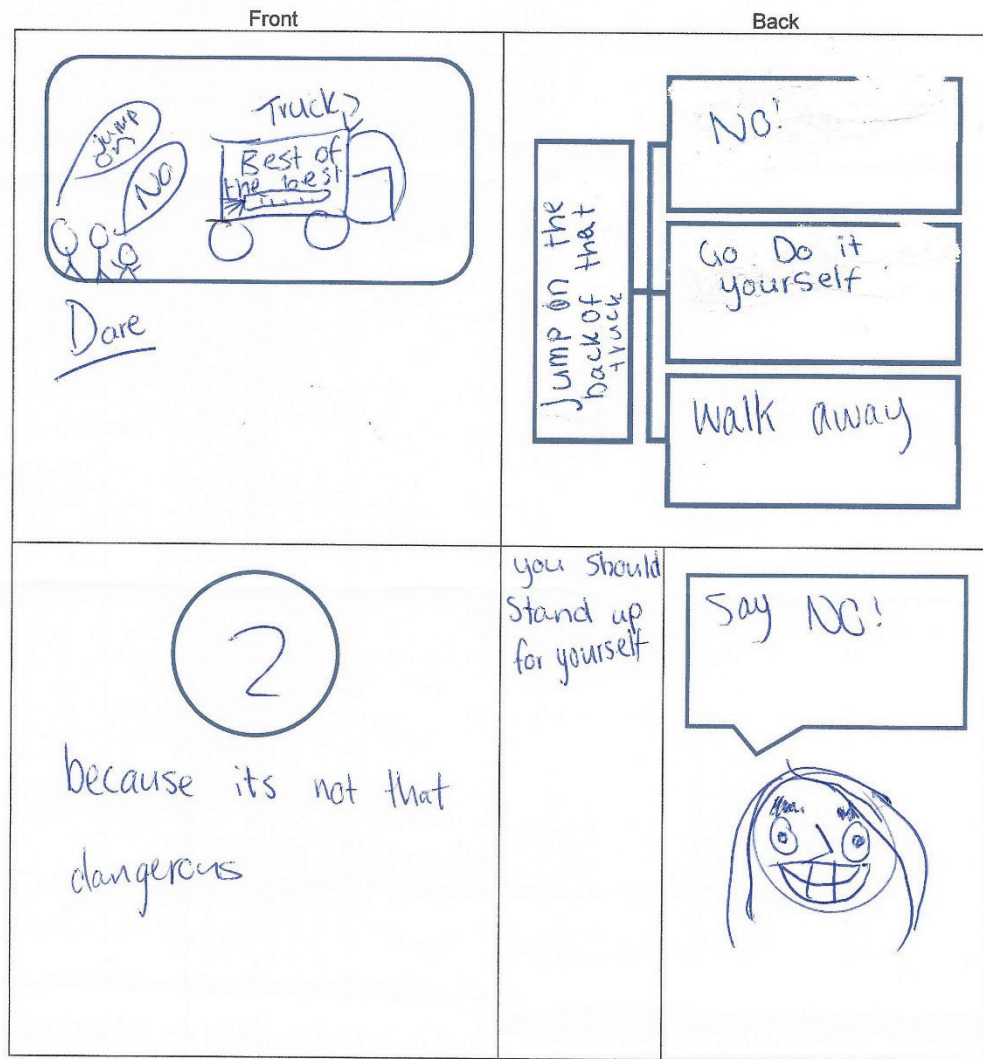


Figure 55 Sandra's completed trading card