

From Preschool to Year 12, a preparation for Driving.

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Assistance and collaboration with Mr Graham Smith,
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Field of study: The relevance of the teaching of effective traffic safety education in elementary school through to year 12 to development of safer young drivers. The observations and developments of a practical traffic safety education program of over 17 years supported by school based feedback, participant feedback, and self reporting of students. Students accessing this program (from 10000 to 15000 per year) range in age from 5 to 18 years of age and come from a variety of backgrounds.

From a young age this program is developing hazard awareness, problem solving skills, road law understanding, culture of safety, visual efficiency, and haptic capabilities. Some self reporting has highlighted problem areas not made evident by road casualty statistics. This paper will highlight the value of an holistic approach closely relating theory to practical, providing a base of understanding which is then applied in a reasonably intense practical application. The culmination of these programs is the two or three day driver education programs where students gain an in-depth understanding of energy, the road environment, their own capabilities (and fallibilities), and roadlaw.

By Lyle Schefe, teacher appointed by Education Queensland, now the Department of Education, Training, and the Arts, in charge of the development, and delivery of programmes for all school age children accessing Roadcraft. This has included kindy and preschool groups, all ages of primary school, and programmes for secondary classes age range from 13 to 18.

For 17 years, school programmes have been provided both at Roadcraft and in school to students of all abilities and behavioural characteristics. A typical year may see 8000 primary schoolers and 2000 preschoolers visit with many parents and staff, 7000 students taught in schools, 1800 secondary (mainstream) students participate in Student Driver Development courses of two or three days duration, as well as a number of special education classes visiting on a regular basis, and 120 secondary age special ed students completing three day courses.

The primary and preschool courses are structured around covering the topics of

- a) passenger safety including seatbelts, car and bus behaviour
- b) pedestrian safety
- c) bicycle safety- riding safely, helmet wearing
- d) and recently motorbike safety.

In secondary school, the programme moves onto Driver Development courses covering in detail

1. vehicle preparation
2. seating position, haptic awareness, and visual effectiveness
3. road law -for compliance understanding, road culture, usefulness, and limitations
4. vehicle energy for appropriate speed , following distance, braking
5. personal limitations combining with vehicle & environmental limitations leading to the development of a deep respect for the dangers – an attitude so developed that a positive change in behaviour occurs.

From preschool to year 12, the curriculum seeks to constantly expand the understanding and awareness of students in a spiral curriculum, thus providing for new and more complex experiences each visit which reinforces previous learnings including those gained in the many classrooms from which these children come.

For all age groups the areas of concern are

1. **Hazard awareness-** In many cases, it seems that young children are taught to look, but not what to look for. For example, teaching about pedestrian crossings and school crossings should highlight all the elements that make up a crossing and why it works. All ages are taught to look right, left, right and left again ensuring a better visual coverage.
2. **Problem solving-** In a system of driving we talk about forward observation and planning. This is not inherent but can be developed from a very young age. Of course the age of cognitive maturation affects what can be achieved at early ages.
3. **Road law understanding –** Road laws and Road signs can be learned about and understood at young ages. A key element of this teaching is leading all students towards understanding the reasons for the laws, and signs etc.
4. **A culture of safety versus risk taking and acting in ignorance-** Dependant on age, students are led to understand consequences for actions.

5. Visual efficacy Taking into account, maturational limitations, students are helped to develop to a far greater extent, their ability to use primary vision, as well as gain greater awareness and use of peripheral vision. There is a significant lack of development of vision in our young people indicating a real necessity for training, this to include where and how to look, and what to look for.

6. Haptic Capabilities- At primary school level this mainly involves using vision effectively and sitting correctly on bikes / trikes/ 'cobber' cars so that balance is effective and enables good observation. During secondary Driver Development courses, this is developed so that each student can feel, and respond to, the energy changes of their vehicle. Students, who have had no previous experience driving when compared with Provisional Licence holders after all have completed a programme, indicate similar levels of understanding and use of this skill. It appears that there is a serious lack of development of this in the training of most beginning drivers. If haptic awareness is not developed, drivers find significant difficulty choosing appropriate speeds.

Preschool to Year 12

Motorbike experience. – Following the presentation by Associate Professor Ann Williamson on injury risk management, a need for a greater awareness of motorbike injury levels was apparent. Since then each primary class has been surveyed using a simple self reporting system, showing that approximately 70 percent have some motorbike riding experience either as rider or passenger and 30 percent have suffered some injury. Given that most students are from rural or semi-rural areas, this is probably higher than metropolitan areas but has ensured that we now include a segment covering rules such as parental awareness and permission, appropriate teaching, correct apparel including helmet.

Passenger safety - Students are guided in finding answers to the following.

How difficult is the driving task?

The necessity of the driver concentrating

The effects of vehicle impact with pedestrians

School zone - How difficult for drivers dropping off or picking up students.

40 kph – Why do we have this speed limit? (In the order of 60% + fatalities and 30% + permanent incapacities.)

Vehicle behaviour rules

Seat belt wearing – Students are shown how to correctly wear seatbelts and use other safety equipment correctly.

Pedestrian safety - where to walk, pathways, presence of bikes etc. which side, signs, who must give way, where to cross, school zones/crossings, pedestrian crossings – look right, left, right and left again.

The difficulty for the driver to see those in the wrong place

Bicycle safety - This is not bike education.
We are not teaching children to ride bikes.
We are teaching safety rules regarding bike use.

Both at school and at the Roadcraft centre, students are helped to make correct decisions about where to ride, being aware of the necessity of rules, the limitations of their vision capability (dependent on age), and the necessity of being in the company of someone responsible as well as having Mum or Dad aware.

Rules for the use of pathways and roadways are developed. These need to be age specific. Pre schoolers and prep students complete activities on trikes. This allows considerable teaching about road laws and appropriate behaviour without having to teach bike riding or provide trainer wheels. Again looking is high on the list of skills and teachers gain tremendous amount of information about development deficits of pupils.

Looking – where to look? Why? Even at preschool level, children are able to develop some understanding of vision.

What do the signs tells? Two things are already apparent at this age. They can respond to and understand signs, light signals, etc and they have already learned wrong meanings for some of these. Careful explanation follows. Many drivers do not see a purpose for road laws and road signs because no logical reason for many of our laws has ever been presented.

Primary schoolers – bikes.

A lot of time at this level is spent developing vision awareness to enable road law adherence as well as effective forward planning for safety. This is really the same process confronting beginning drivers.

Co-ordinating hands / feet and eyes such that balance is established , enabling head to be held correctly for most effective vision, begins development of both haptic and vision awareness.

Effective forward planning is based on this forward observation.

Sequencing of process – stop sign, give way sign, overtaking parked car. Activities of this complexity help develop the problem solving skills so necessary in today's traffic.

Driving in small vehicles- For upper primary classes, a short session driving 'cobber' cars helps to cement the hand – eye co-ordination developed on the bikes while adding another aspect of feeling the vehicle.

Secondary age pupils - Driver development

(A course to provide an experience of the energies, dangers, and awareness of potential outcomes as well as knowledge about safe driving is available to year 8 and 9 groups. This is a one day , non driving course.)

Driver development courses are available for students age 15 plus. They are 2 or 3 day courses, the 2 day course requiring students to be available for 18 hours of intense, highly structured activities.

The courses extend the ideas developed in pre/prep and primary. Students with this previous exposure are able to uptake the learning's much more rapidly.

Course structure – Each element in the course is, at least in part dependant on the preceding activities. A degree of planned repetition ensures good retention. The spiral arrangement of the curriculum ensures each element leads on to the next with key elements revisited with greater complexity through the course. No element is stand alone.

Desired outcome- The objective for the students becomes to develop an ongoing committee to the correct will and skills for driving defensively, smoothly and efficiently to the limit of his/her potential. The instructors are not satisfied unless the vehicle energies, road dangers, driver capabilities, etc are understood to the extent that a change in attitude is effected that is strong enough to be evidenced by a change in attitude.

There is a minimum time required to ensure this can be achieved? Extensive research and development over many years, together with constant feedback from students has helped ensure that potential dangers are minimised. Anecdotal evidence suggests a comparatively very low injury and fatality rate for students from this program but much research is needed.