

Roadcraft's philosophical approach To driver education

The underlying philosophy of all Roadcraft courses is to foster and promote attitudinal change.

This is done by embracing best practice and sharing the proven driver training techniques, systems and principles, in order to enhance the participants' understanding of the simple need to maintain more space, look further ahead, concentrate on the task, drive smoothly and be "in the car" in order to stay safer on the roads.

Participants need to leave with the appreciation that **human beings have no natural responses for driving** a motor vehicle. In fact if they rely on their natural reactions they will most likely make any emergency driving situation worse and contribute to a crash.

It is an expectation that all participants attending Roadcraft courses leave with the understanding that they will be much safer on the road by relying on Low Risk Driving principles and techniques and avoiding any need to react at all times, and that if they do react, there has been a breakdown in their technique.

Roadcraft's aim is to have participants complete the course with the understanding that they have a choice in their driving destiny and that their safety is first and foremost their responsibility.

We do not want them to leave believing that they are a better driver or good driver. We want them to appreciate that by using the systems and techniques advocated they will be safer, more aware and attentive drivers, thus improving the safety of all road users.

All course information, demonstrations and exercises are to be presented and carried out with the above philosophical tone in mind.

Time & Space

What drivers need to understand is that everything we do when driving is related to Time and Space.

If every driver in a crash was given one extra second of time or space up to 90% of all crashes would be avoided.

With half a second 50% of crashes would be avoided.

Save a Second Save a Life 1994

Our drivers are currently killing or maiming themselves for the sake of a second and they "have no idea." ☹

Once drivers become aware that their own natural responses are inappropriate for driving they become more motivated to apply the appropriate low risk driving techniques and systems ,that enhance safety and reduce risk when driving.

They now understand that genetically we have no natural responses for driving. We have not evolved long enough into the driving task to have developed the genetic adaptations required for travelling at school zone speeds, let alone highway speeds.

The current licencing system is like waiting until they are about to drown, to then teach them to swim.

What experiences, understanding or system of response do they have for when they make a mistake and things go wrong?

Absolutely none.

What we have found is that by exposing drivers to their inappropriate reactions and building the understanding and awareness of their natural deficiencies, and how they are likely to react when their life depends on it, we see a change in attitude, they become more disciplined and **motivated to apply safer driving management practices** and take responsibility for their driving destiny.

With the realisation that no matter how much they prepare or what they do, if they get into such situations on the road they will most likely crash due to their natural human reactions. Then we see a change in attitude and a desire and motivation to apply the systems and techniques conducive to safer driving outcomes.

As a species, we are as much out of our natural environment when driving at speed as we are when flying a plane. But like flying a plane, we can adjust with the appropriate training and development.

Currently we just tend to get; Very, very good at driving very, very badly.

- **At Roadcraft we have developed exercises that highlight the human inability to respond appropriately when life threatened. That creates the **light bulb moment** that allows participants to understand, “What is in it for them” and why, they need to keep applying the low risk systems and techniques they have been taught.**
- **It now becomes their own decision to stay motivated and keep working towards being a safer, more aware and attentive driver**
- **They now understand the risk and can make educated and informed choices**

OBSERVATION

Everything you do while driving is determined by what you see or fail to see. Good vision is paramount for safety.

So it is therefore a logical conclusion that developing higher order visual skills plays a primary role in the enhancement of safer driving practices.

One of the easiest strategies to employ, but hardest to master, is simply lifting the line of sight and looking much further ahead.

The further ahead you look, the more relevant information you will receive in order to make the appropriate safe driving decisions earlier. The later you see it, the less time and therefore space you will have to respond.

The most common statement at crash sites is -

I DIDN'T SEE IT OFFICER.

I DIDN'T SEE IT TILL IT WAS TOO LATE!

In order to be a **Safer More Aware Driver** we need to learn to tell our eyes **where to look and what to look for**, at all times when driving.

In order to do this, we need to be paying attention to the driving task and consciously be present in the car, not day dreaming or distracted.

We need to be **concentrating** so we can-

TELL OUR EYES WHERE TO LOOK AND WHAT TO LOOK FOR

Unfortunately few drivers on the road know of this simple strategy.

- **Your eyes are your Primary Guidance System.**
- **Your PERIPHERAL Vision is your Early Warning System.**

So it makes good sense to learn to use these systems effectively.

OVER REACTION

The Over Reaction when faced with a potential hazardous situation is caused by the brain receiving the wrong message.

Because we are looking at the problem our brain assumes that is where we want to go. As we get closer and closer to the problem, the brain is not receiving or processing an avoidance message, but is receiving a **very strong I HAVE TO STOP message**, leading to Fixation and in most Cases over Reaction or panic.

The only way that this will not happen is to move the eyes from the problem and look to the space where you really want to go or end up.

Looking away from the threat is not a natural response and is unlikely to happen unless the driver tells their eyes where to look and does it early in the sequence of events.

The longer the driver looks at the pending problem the less **time and space** they will have to deal with it appropriately, the stronger the **fixation tendency** becomes, often with catastrophic results dictated by the laws of physics.

So it is apparent that in life threatening or even less threatening events we tend to overreact on the steering and the brake and causing the loss of grip that ends up in a crash .

The evidence of this is often very obvious as there might be one tree, post, or parked car with lots of space either side, but the result is more often than not impact with one of these hazards.

These natural human responses are contributing to the large number of us being killed or injured on the roads.

FIXATION (Hard eye focus)

The Human ability to use hard eye focus is a critical contribution to our ability to survive as a species, and works really well for our design parameters and natural speed, assisting humans to become the dominant species on the planet. It is the primary visual skill used in most ball games and performance sports as your hands are guided by your eyes, and you tend to go where you look.

This fixation tendency is a very powerful tool that we feel is not well recognised and plays a major role in the high casualty rates being experience from motor vehicle crashes.

So with this understanding we set out to get Drivers to understand that they need to avoid these human survival responses that are killing us at all costs.

This is easiest done by first:

1. **Being aware that these inappropriate responses exist in all of us**
2. **Understanding that we don't need to let these responses affect us**
3. **Looking further ahead to identify hazards much earlier to have more time and space in which to process, understand and respond**
4. **Always endeavouring to have more space at all times**

The Roadcraft exercises, systems and techniques are designed to maximise the participants' ability to respond most appropriately, but also give them the complete understanding that they have a choice when it comes to safety and it is as easy as 1,2,3 and 4.

- 1. Concentrate on the job - Driving**
- 2. Have more space, especially at speed**
- 3. Look further ahead more often**
- 4. Avoid Fixation tendencies**

Implementing these 4 strategies will make them much safer.

Further to this, in order to become as crash proof as is possible, there are other areas that they need to develop, and these are :

Applying the Foundation Techniques of the appropriate:

- **Posture**
- **Bracing**
- **Steering**

And the higher order observation techniques such as:

- **Looking much further ahead**
- **Developing Peripheral awareness**
- **Scanning**
- **Covering the blind spots**

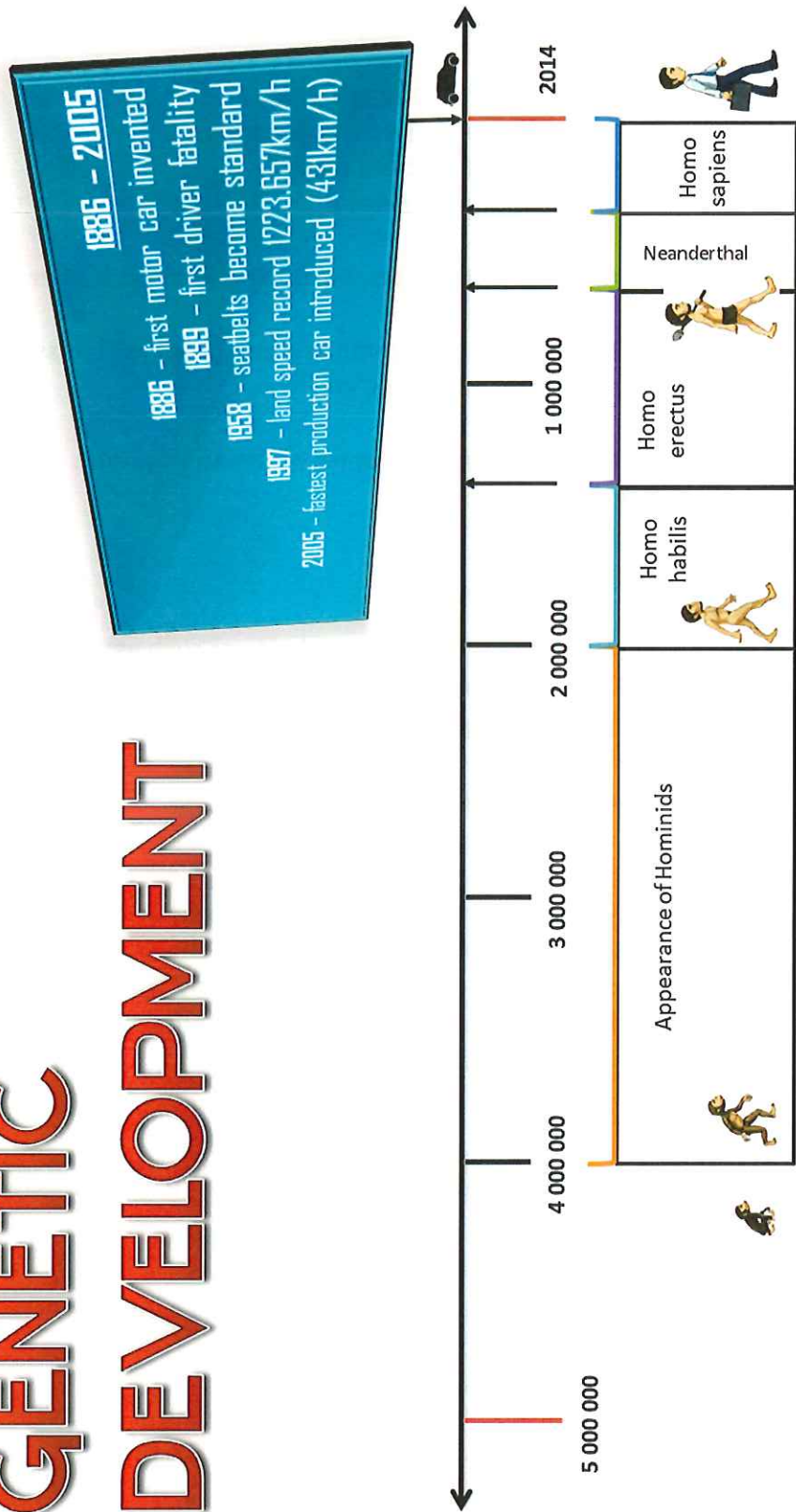
Then by introducing the application of appropriate cornering techniques and a systematic approach to driving, a crash proof driving future can almost be guaranteed. Roadcraft courses, manuals, demonstrations, exercises and training strategies have been developed from the observations and experiences of many highly accomplished and experienced professional drivers who have engaged many thousands of course participants over the past 35 years of Roadcraft's existence.

References

- Roadcraft is the chosen industry partner in the Linkage research project *Developing and evaluating a theoretically grounded novice driver education program incorporating simulators* led by Dr Bates with Griffith University, QUT & TMR
- The "Save a Second Save a Life" Road Safety series from the USA.
Dr Joseph L Shapiro & Robert G H MacGowan
- A Twist of the Wrist Motorcycle Road Racing Handbook, Human Survival Responses
Keith Code USA
- Jacki Stewart - Road Safety Video Series
Jackie Stewart 3 Times World Formula 1 Champion
- Roadcraft Driver Education Report 2013 "The Young Driver Crisis"
David Horswood

Why we have no natural responses for driving motorcars

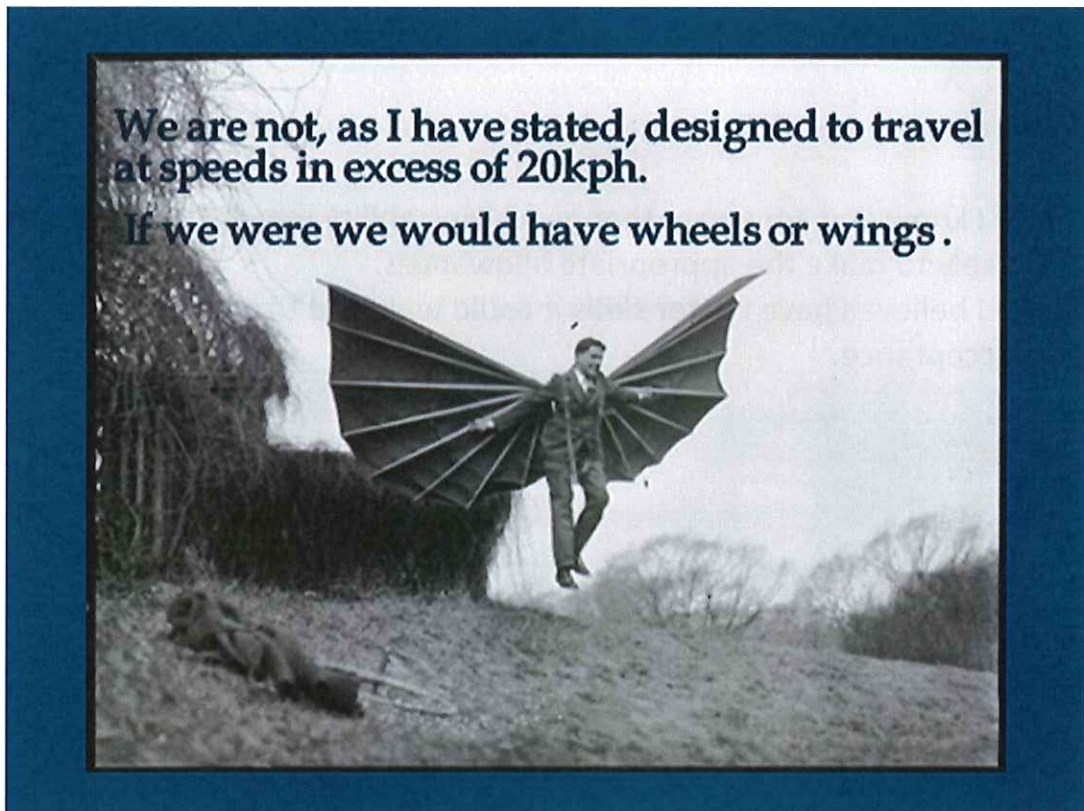
GENETIC DEVELOPMENT



4 000 000 years of human development ... 119 years of motorcar development

So, What We Know

- ▣ Humans have no natural responses for driving in vehicles at speeds above 20 kph
- ▣ We can only respond to what we see, but we will only respond appropriately to what we understand
- ▣ So the sooner we see and understand an emerging situation the more time and space we will have to deal with it, and less the need or potential to react inappropriately.
More Space - Keeps me Safe
- ▣ The better we build the roads and the safer we make the cars the higher our risk acceptance
- ▣ When exposed to a threat, or even a perceived threat, we have to look at it in order to develop the appropriate understanding
- ▣ This takes away Time & Space
- ▣ This leads to Fixation and the longer the fixation the less opportunity to avoid the problem.
- ▣ This leads to the second inappropriate response humans have – Over Reaction
- ▣ Most drivers do not have the required discipline to constantly apply the techniques and systems required to remain safe while driving



It's all about being human

We also know that the subconscious does not differentiate between, walking, jogging, seeing a snake or being faced with a threatening situation.

Or

Being faced with a life threatening situation in a motor vehicle.

- All the reactive responses are the same
- At Roadcraft we have observed some very inappropriate responses in training environments and have asked ourselves, "What is going on here?" Something very profound.

What we have come to appreciate is that once the subconscious body feels out of balance or threatened, it will subconsciously have us grip the wheel harder and focus on the perceived threat at hand.

This is a natural and automatic response that all drivers need to be aware of and avoid.

- ▣ Human Survival Responses
- ▣ The lack of appropriate Time & Space Management
- ▣ An inappropriate Attitude to Safety
- ▣ A high level of Risk Acceptance
- ▣ A lack of the discipline necessary to manage safety while driving

All play a part in the ability to get desirable safe driving results.

- ▣ If I know and am aware that my driving ability **may be poor**, I am more likely to make the appropriate allowances.
- ▣ If I believe I have **better skills** it could well lead to a **higher risk acceptance**.

A Systematic approach to driving

At Roadcraft we strive to give drivers real life experiences, in realistic timeframes. We expose them to potentially life threatening situations, in a controlled environment, where they can learn what works, and what does not work, when their life, a friends' life, depends on the result. Without the risks associated with being in the real world.

- ▣ We focus initially on the development of the appropriate Systems and Techniques to assist participants to become **Safer, More Aware and Attentive drivers**. In doing so we are developing **Systems of Response**, This gives drivers some understanding of the forces and potential consequences of **risk taking** and the ability to **respond most appropriately** when things **go wrong**, rather than reacting and trying to learn what works when **their life may depend on the result**

▣ But to take it one step further.....

▣ By exposing them to their inappropriate responses under pressure they usually have their **LIGHT BULB** moment and realise that it is far better not to need to use these advanced (Offensive not Defensive) driving techniques in the first place

- ▣ **Now we find they become more motivated to apply what does work**

▣ So we then give participants the appropriate techniques and systems to maximise their ability to identify hazards and respond most appropriately in all driving situations

▣ Roadcraft courses are designed to fast track participants' ability to -

- Identify
- Understand
- Address potential risk events and developing situations

- ▣ **These abilities can take many years of risk taking activities, crashes and pain to develop in the current system**

- ▣ Our courses conclude by showing participants why they need to **adjust** their **Risk Acceptance**. Risk identification and acceptance is a primary consideration when developing **Safer, More Aware and Attentive drivers**

In Summary

- ▣ We teach participants how to sit appropriately
- ▣ Use their vision more effectively
- ▣ Steer in a manner that will enhance their ability to manage the vehicle most effectively
- ▣ Understand the energy and the dynamics of the vehicle
- ▣ Give them some practical vehicle handling experience, in a controlled environment
- ▣ Expose them to emergency situations and the difficulties faced with these

All with the view of in the end –

- Motivating drivers to have a disciplined approach to their driving and apply accepted Low Risk Driving practices at all times to maximise safety and reduce risk
- Assisting drivers to appreciate that it is far better to avoid situations in the first place, than have to use reactive and aggressive inputs to get out of the
- If there is enough space
- That there is often not enough space
- So the mantra, **More Space – Keeps me Safe** becomes even more relevant

The outcome

By the end of the course drivers realise they have a choice.

They now know and understand:

- Why they need to apply the Low Risk Driving techniques advocated
- What they need to do, to maximise their safety
- How to apply, the techniques taught
- When to apply them

All in order to develop, a **Crash Proof**, as is reasonably possible, driving future.

THE SECRETS TO BECOMING A SAFER DRIVER

- BE **ATTENTIVE & CONCENTRATE** ON THE DRIVING TASK
- LEARN TO MAXIMISE YOUR **VISION**
- MANAGE YOUR **SPACE** (More Space - keeps me safe)
- UNDERSTAND – YOU HAVE **NO NATURAL RESPONSES FOR DRIVING** AT SPEEDS ABOVE 20 KPH
- ACCEPT THAT IN THE END - **YOUR SAFETY IS ULTIMATELY YOUR RESPONSIBILITY**

You have a choice

IF IT IS TO BE – IT IS UP TO ME!

By developing these areas you will go a long way towards becoming a

Safer, more Aware and Attentive, Crash Proof driver.

It is that easy. 

Committee Secretary
Senate Standing Committees on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
CANBERRA ACT 2600

6 August 2015

Dear Secretary

I am the lead Chief Investigator for an ARC funded linkage project that will develop and evaluate a theoretically grounded novice driver education program incorporating simulators. Roadcraft Driver Training, the Queensland Department of Transport and Main Roads, Griffith University and the Queensland University of Technology are working together on this important research project which aims to improve attitudes and reduce injuries and fatalities for young drivers.

Roadcraft Driver Training are a key partner within the team. They are very experienced driver educators who have operated since 1979. As well as providing education for young drivers, they provide this service for commercial organisations and other groups.

Roadcraft is a member of the Road Safety Research Network which is run by the Centre for Accident Research and Road Safety – Queensland (CARRS-Q) based at the Queensland University of Technology. They also regularly attend the Queensland chapter meetings of the Australasian College of Road Safety. As a result, Roadcraft has regular interactions within a research supportive context.

Yours sincerely

Dr Lyndel Bates
Lecturer, School of Criminology and Criminal Justice

30 JUL 2015



Minister for Main Roads, Road Safety and Ports
Minister for Energy and Water Supply

Our ref: MC80901

29 JUL 2015

Ms Sharlene Makin
Chief Executive Officer
Roadcraft Driver Education
31 Drummond Drive
GYMPIE QLD 4570

Sharlene,
Dear Ms Makin

Thank you for your letter of 17 April 2015 about future impacts of Section D (Keefton Road to Curra) of the Bruce Highway (Cooroy to Curra) project on land leased by Roadcraft Driver Education (RDE).

I recognise the valuable work that RDE has undertaken, and continues to undertake, to help reduce trauma on Queensland roads. As noted in your letter, effective driver education is an important tool in reducing road crashes and RDE's services are of great value to road users and the broader community.

The Department of Transport and Main Roads (TMR) advises that its guidelines and processes for property acquisition have been developed to ensure impacted land owners and tenants are fairly compensated for the loss of property or infrastructure associated with transport infrastructure projects.

A claim for compensation only arises where an interest in land is resumed by TMR. In this instance, I am advised that your lease over the site with the Department of Natural Resources and Mines, is due to expire on 12 September 2016 and therefore, any claim for entitlements will be discussed at this time.

TMR is still undertaking the planning phase for Section D of the Bruce Highway (Cooroy to Curra) project and the project team remains committed to working closely with RDE throughout this current phase, as well as the design and construction of the upgrade.

The project team will discuss any progress on construction funding and timeframes with you and endeavour to maintain access arrangements within the RDE property and the Vehicle Dynamic Areas throughout construction.

I trust this information is of assistance.

Yours sincerely

MARK BAILEY MP
Minister for Main Roads, Road Safety and Ports and
Minister for Energy and Water Supply

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Feedback received from Participants who attend Roadcraft courses

This is a small representation of some of the feedback from several thousand participants over the last 2 years.

SDC (Student Driver Course) Participating secondary schools

- Stopping distance and how much different they are to what you think. The dangers of driving. That time and space are very important **Levi B**
- Heaps! The push pull steering, looking ahead, trust your peripheral vision, every driver wants to kill you – cars are capable humans are not. **Caitlin M**
- I believe everyone should attend this course so as to improve all drivers and make roads safer **Aynn R**
- The course was extremely professional and the instructors experienced. This should be mandatory course before getting P's **Lachlan D**
- Should be made a must before getting your P1 licence **Jana W**
- The course should be compulsory for everyone **Monique R**
- It would be great to get community funding to enable more of our students to complete this course. The cost does prevent a number of students from participating, even though it is an investment in their future/safety. All driving instructors should do this course. **Alicia R**
- I think absolutely ever young person/adult should do this course so WORTH IT! I am so so appreciative of Roadcraft for doing this for us, it is a fantastic course. I now will not speed on my way to school **Yasmin M**

LDC (Learner Drivers Course) on their L's

- I understand that driving is a lot more complex than I thought and it takes a lot of concentration to make sure I can drive safely **Rachael A**
- A lot, I am aware of the fact we aren't built for driving vehicles, now I can account for our short fallings **Tully P**

PDC (Provisional Drivers Course) Mostly just out of L's

- I have gained knowledge about driving and never knew something as basic could stop a crash... 1 more second. **Alexis R**
- Basics like vision, grip, space and mirrors, indicators, break. An understanding that smoother = safer. A knowledge that my car does not have ABS and I am human. **Laura R**
- This course should be mandatory for all persons trying to obtain a licence or should be included for persons buying new cars to learn their cars handling **Shai S**
- This course should be mandatory **Frances L**

CDC (Corporate Driver Course) Professional business people

- Lots of information which I should have learnt while I took my driving lessons **no name**
- It was mind blowing. This should be made a part of all driving tests. But funded by the government
Tonia G
- Really good. Wish it was mandatory for EVERYONE or implemented in Government campaigns
Elsie H
- Safer approach to dangerous situations think & act earlier, keep space from cars, observation. I recommend this PDT to everyone, very educational **Kyriakos Y**

Queensland Ambulance Service

Paramedic & 4WD course participants

- This was a great example of trainers engaging with students and encouraging an atmosphere of learning as well as imparting valuable knowledge. I hold a Master of Education and Training degree. These lecturers are first class trainers and are to be commended for their grasp knowledge and skill in delivering the course
- Extremely valuable course. Highly knowledgeable facilitators. Should be done by all staff
- Really enjoyed my two days training. Learnt heaps that I can apply to driving with QAS, QFES, at home, and pass onto my wife. Thanks heaps
- This will definitely change the way I drive forever

Letter of support from a parent

11/08/2015

Being the parents of three sons we were apprehensive as each son gained their licence and left home to follow their career path. The boys were typical young men who believed they were invincible and nothing would happen to them. While you can't put old heads on young shoulders you can provide some education. With this in mind, immediately after they each gained their licence we had each attend a 2 day Roadcraft course, which they thoroughly enjoyed and said they had gained much from. Then over the coming few years we received the dreaded phone calls "I'm OK but the car may need some work". One had been caught in loose gravel on a corner out west, one caught in heavy rain on a slippery road and one just in heavy traffic and shunted from behind. In each case they said they had averted more serious damage and injury because they knew what to do and were able to control the situation to some extent. They all acknowledge that the training they received at Roadcraft had helped them to know what to do when they needed it. As parents we feel that the Roadcraft training that they received helped them to deal with the situations that they found themselves in. While we cannot give young drivers the years of experience they need to become good drivers, we can provide education about what can happen and what to do if it should.

Robyn & Brian

Extract from

Roadcraft Driver Education Report

"The Young Driver Crisis"

by David Horswood 2013

THE RESEARCH

Young novice drivers: careless or clueless?

Accident Analysis & Prevention, Volume 35, Issue 6, November 2003, Pages 921–925

A.James McKnight, A.Scott McKnight

Key point from Summary

The overwhelming majority of non-fatal accidents appears to result from failure to employ routine safe operating practices and failure to recognize the danger in doing so rather than what might be viewed as thrill-seeking or other forms of deliberate risk-taking. Only a very small minority of accidents involved what could be termed deliberately risky

behavior, such as operating at very high speeds or engaging in what was characterized as reckless driving.

Additional training of drivers

Transport Problems: An International Scientific Journal, 6(2), 89-92

WĘGRZYN, T., SZCZUCKA-LASOTA, B., & KAMIŃSKA, J. (2011).

Conclusion

Analysis of the survey allows the following conclusions:

- 1) Young drivers, without experience need additional retraining courses. It shows:
self-esteem drivers (drivers, experienced less than two years assess their driving, or at most as good and declare their willingness to participate in training courses), each of the drivers who have declared that they drive more than two years had a situation in which there may or there were bumps, collision, accident.
- 2) The experience depends on the driver's age, number of kilometers driven, continuity driving, as evidenced by the fact that only drivers with at least 3 years experience, passing through more than 10000 km / year rated their skills at a very good and higher.

Effects of higher-order driving skill training on young, inexperienced drivers' on-road driving performance

Accident Analysis & Prevention, Volume 43, Issue 5, September 2011, Pages 1818–1827

Robert B. Isler, Nicola J. Starkey, Peter Sheppard

Summary

The findings support a more holistic and modern approach to driver training and education to ensure that all aspects of unsafe driving are covered, addressing cognitive, perceptual and attitudinal risk factors, in addition to the more 'traditional' vehicle handling skills. Furthermore, 'insight' based training may provide the crucial ingredients to combat 'poor calibration' (Kuiken and Twisk, 2001) in young drivers and to correct inappropriate motivational and lifestyle factors (Gregersen and Berg, 1994), which have been identified as a major crash risk in young drivers.

Young novice driver subtypes: Relationship to high-risk behavior, traffic accident record, and simulator driving performance

Human Factors and Ergonomics Society, Issue 4, December 1999, Pages 628 – 642

Deery, Hamish A; Fildes, Brian N

Readersalt has been doing this for 30 years.

Conclusion

The results of this research indicate that young novice drivers are not a homogeneous group. Five distinct subtypes of young novice drivers were identified based on differential levels of general personality and specific driving-related attitude and behavior measures. Subsequent analyses revealed that the subtypes differed in terms of several demographic, attitude, and behavioral variables, including self-reported driving style and traffic accident involvement. They also differed in terms of their level of risk perception and attentional control skill. These results would seem to have implications for driver training programs and other countermeasures that are designed to address the young novice driver crash problem.

CONCLUSION ON THE SCIENCE OF YOUNG DRIVERS

Much of the attention given to the crisis surrounding young drivers is related to the fatal crash statistics. Due to the increasing safety of vehicles and the restrictions imposed as part of the GLD have isolated many of the fatal crashes to speed / alcohol / drug use.

The science establishes that experience and proper technique is the main cause of non-fatal crashes in QLD.

THE LITERATURE ON YOUNG DRIVER EDUCATION

Is there a case for driver training? A review of the efficacy of pre- and post-licence driver training

Safety Science, Volume 51, Issue 1, January 2013, Pages 127–137

Vanessa Beanland, Natassia Goode, Paul M. Salmon, Michael G. Lenné

Conclusion

Based on existing evidence, some forms of pre- and post-licence driver training appear to be beneficial for driving skill development. Although some forms of post-licence driver training may also have the potential to improve novice drivers' safety, these safety benefits either have not been evaluated (e.g., hazard perception) or have not been evaluated adequately (e.g., procedural skills). Some evidence suggests that the majority of unsafe driving behaviour by young novice drivers does not result from deliberate risk-taking, but rather from factors that could potentially be addressed through driver training such as overconfidence, ignorance and poor hazard perception. Road safety professionals should aim to make driver training courses more effective at promoting safe driving behaviours and ensure that they are appropriately evaluated, in order to ultimately determine whether driver training can improve the safety of young novice drivers.

THE LITERATURE ON SUPERVISED DRIVING

Parents and young drivers: The role of learning, behaviour modelling, communication and social marketing

by M Franks Papakosmas and G Noble, Centre for Research in Socially Responsible Marketing, University of

Wollongong, Northfields Ave, Wollongong, NSW, 2522, email: mar.yp@uow.edu.au

Selected Conclusions

- Identifies the potential positive or negative influences of parental supervision

The young driver crisis

- Further research is suggested into the significance of the social milestone
- Identifies the benefits in having parents of varying social and driving backgrounds
- Highlights the potential of social media to change individual behaviour

Attitudes toward accompanied driving: The views of teens and their parents

Transportation Research Part F: Traffic Psychology and Behaviour, Volume 13, Issue 4, July 2010, Pages 269–276

Orit Taubman – Ben-Ari

From the abstract

The findings indicate a correspondence between parents' and children's ATAD scores, as well as significant associations between teens' ATADs and their parents' driving styles and involvement in car crashes. Specifically, higher Tension, Relatedness, Avoidance, Disapproval, and Anxiety reported by the young driver were positively correlated with higher reports on the same attitudes by parents. In addition, parents' maladaptive driving styles were positively associated with their offspring's Tension, Avoidance, Disapproval and Anxiety ATADs, whereas parents' careful driving style was related to offspring's higher relatedness and lower negative ATADs. Higher involvement of parents in car crashes contributed significantly to teens' higher Tension, Disapproval, and Anxiety, and lower relatedness.

THE LITERATURE FOR ATTITUDINAL INTERVENTIONS

The contribution of a novel intervention to enhance safe driving among young drivers in Israel

Accident Analysis & Prevention, Volume 43, Issue 1, January 2011, Pages 352–359

Orit Taubman - Ben-Ari, Tsippy Lotan

This paper discusses the effectiveness of a novel program to moderate risky driving. However, the described findings go beyond the specific evaluation of the program and provide some basic understanding related to young drivers and the contributors to their tendency to take risks while driving. These will be summarized below:

- The commission of more traffic violations is directly predicted by a lower evaluation of these behaviors as risky.
- The role of peers is critical. Peers present a model and provide norms. These can enhance as well as reduce risk taking. Peers play a significant role in young drivers' risky driving by contributing to increased involvement in risky driving and by the encouragement of driving without an accompanying driver.
- Female drivers drive less without an accompanying driver, perceive traffic violations as more risky, and take fewer risks while driving than male drivers. It turns out that female drivers are less involved in risky driving, since they evaluate it as more risky.
- More hours of accompanied driving contribute to more positive perceptions of the ADP and a greater evaluation of traffic violations as risky.