

It's driver learning not driver training- why have we crashed the debate?

ABSTRACT

Workplace health and safety laws recognise the weakness of threatening workers who are at risk and blaming and punishing them if they are involved in accidents. Instead, these laws require workers including drivers to be trained to address the risks. By contrast, road safety authorities even blame motorists who don't have crashes and the community has become cynical about their motives. This is hardly an environment that encourages drivers to learn better safety strategies and it fails to recognise the important research about the learning needs of drivers in relation to risk management. Instead, there has been an intense debate about the value of driver training without clarifying what constitutes effective driver training. Furthermore the debate has failed to focus on the learning needs of each driver in relation to their own risk awareness, risk taking personality and their motivation to apply safe driving behaviour. This paper describes the **BAAMS Safety System** developed to address the driver training dilemma by linking the five human elements that contribute to a safety culture on the road. Based on Occupational Health and Safety systems and Behaviour Based approaches, the model recognises that the **behaviour** of drivers is dependant on their **attitude**, **awareness** and **motivation** in addition to essential vehicle control and risk management **skills**. Providing drivers with learning opportunities based on this system is a crucial component of a multifaceted approach to road safety

1 THE DRIVER TRAINING DEBATE

The debate about the value of driver training has the potential to distract well intentioned efforts in road safety initiatives from achieving the next level of improvement that is obviously required. Given the road toll statistics have stabilised in recent years, a significant change in strategy is required. The impact of initiatives introduced over the last thirty years credited with reduced road trauma now seems to have bottomed out. In an attempt to squeeze further improvements, the authorities are running the risk of losing community support as its cynicism about revenue collection overtakes its commitment to the various initiatives previously introduced.

The Jim Murcott Driving Centre (JMDC) experienced an unprecedented demand for driver training in the days before the 2001 Christmas season that clearly indicates that, while the motoring community has embraced the road safety initiatives in recent years, like Government, it is frustrated and is seeking additional strategies to further reduce road crashes.

Many motorists, particularly parents, have voiced their concern that more stringent licensing and training systems need to be introduced. The call for ongoing post-licence driver training is a common theme in their comments on talk back radio and in their letters to newspapers.

The public is becoming cynical about raising fines for speeding and other road misdemeanours because they punish drivers, especially young drivers, who have had limited training to deal with road risks.

The debate is also riddled with personal opinion delivered from positions of power and influence but not supported by research or technical and psychological evidence. For example, Dr Max Lay, RACV Chairman, claims you don't need training to drive within the speed limit. He says it's just a matter of personal resolve.¹

If only safety was that easy!

Others claim that training makes drivers over confident and they take more risks.² Consider teaching kids to swim, it doesn't stop them from drowning but it builds in a useful safety factor.

If research was conducted pre and post swimming lessons, it would likely show a statistical connection between the training and an increased rate of drowning. Obviously, most drownings occur for people who have had swimming lessons. Would we argue, therefore, that teaching people to swim increases their confidence and puts them at additional risk over those who haven't been taught? Not many parents would. But that is the argument offered by some commentators on road safety. They say that defensive driving training leads to over confidence and increases crash rates - teaching them to drive better is killing them!

It sounds plausible because the facts are that most people killed and injured on the roads have had some form of driver training and are licensed. The issue is that driving, like swimming, is a hazardous activity. Just as some swimmers drown, some drivers will have crashes, not because they have been trained, but because training alone cannot eliminate all of the risk factors present in the highly dangerous activity of driving. To not teach drivers to improve their skills in the face of such risks is negligence.

Additionally, critics of driver training hold up one-day courses as evidence of the ineffectiveness of the training as a crash proofing strategy. Crash proofing like drown proofing is a myth.

Assisting people to become safer drivers and swimmers requires ongoing learning and must include hazard awareness training.

The greatest flaw in the debate about the benefit of driver training is the lack of definition. There has been little attempt to define what is meant by skills training and usually the negative comments are directed to courses that teach a very narrow menu of vehicle handling skills and some even refer to motor racing situations.³ Reference to research is often selective and some unreliable findings are described as “overwhelming research” to allow claims such as “... it is known that advanced off-road training courses entice young drivers to take risks”.⁴ Such claims fail to acknowledge more balanced comments such as from Chris Brooks Director of Research, Management and Policy, Federal Office of Road Safety, who says “... all studies done so far are far too small or are otherwise unreliable”.⁵

Most importantly, the most recent research in Australia actually indicates benefits from driver training that targets psychological factors⁶, but this must also be considered in the light of Brook’s comments.

2 LEARNING VERSUS TRAINING

The debate might more usefully focus on *learning* rather than training. A problem that the driver training debate misses is that it regularly refers to training concepts that are laid on drivers rather than training developed around drivers’ learning needs. Rarely is the debate based on well documented theories of adult learning that acknowledge the value of life long learning; that recognise the individual differences that increase with age; that build curriculum around learners’ needs and interests; that acknowledge that adults need to know why they need to learn something before undertaking the learning; that accept that if adults’ experiences are ignored then they as persons are being rejected, and, that adults’ motivation to learn may be blocked by negative self-concepts, lack of opportunity and teaching that violate principles of adult learning.⁷

Driver training is only useful if it investigates the driver’s motivation to learn and to apply new skills in every day situations. Additionally, training must increase a driver’s awareness of the risks or hazards likely to be confronted on the roads and teach the skills necessary to avoid hazards.

Effective training provides experiential learning - learning from the experience of applying the new skills and knowledge in a practical situation. Such learning can alter perceptions and attitudes of drivers. In contrast, preaching and increased punishment has a limited effect.

Unfortunately, those of us who have survived on the roads tend to preach to others based on the learning we have derived from our experience. We gained that experience through making mistakes and errors of judgement that other motorists accommodated – hence, we enjoyed a practical learning opportunity, although a lengthy one.

Many so called “experienced” drivers have developed a cunning sense of the road and traffic situations and we make adjustments accordingly. This does not mean that years of experience always produces better drivers - for many drivers this cunningness combined with poor techniques that emerge over time, lead to subtle bluffing and bullying of other motorists. These drivers often exceed the speed limit and break other laws (roll through stop signs, follow too closely, fail to give way at roundabouts, etc) but this behaviour usually does not lead to collisions. These drivers have developed skills in reading the road situation and risk perception, but they use these skills selfishly to “assert” themselves on the road in an aggressive manner (sometimes passive). Inexperienced

drivers may copy this model of self-serving competitive behaviour (often from their parents), but they lack the instinctive reading of the road situations and that comes with experience, hence their higher crash rates.

We need a better system of learning for safer motoring than simply relying on years of experience. The learning needs to be condensed into shorter chunks of time earlier in our driving careers so that a culture of safe driving practice can emerge. Like other complex undertakings, refresher learning should occur to ensure skills and knowledge are up to date and are still being applied.

3 LINKAGE TO OCCUPATIONAL HEALTH AND SAFETY

We would never condone a worker using a chainsaw or forklift vehicle without training. But despite training and enforcement of Health and Safety laws and regulations, some workers are still injured or killed. This does not mean that the training, or for that matter, the law, should be removed. Addressing serious and complex hazards calls for systematic and multi-faceted solutions combined with demonstrated commitment to action, not rhetoric or simplistic solutions. Like road safety initiatives, occupational health and safety strategies often fail to address the complex issues associated with operator behaviour and motivation. Workers sometimes take short cuts, fail to use safety systems or equipment and have poor perception of the risks and hazards. Like drivers, they are sometimes more focused on completing the task than on their safety.

Despite the legal requirements for employers to ensure that their employees have been adequately trained, there is a strong debate that training reduces safety for motorists on the road and that also denies the evidence. Forty nine percent of all workplace fatalities occur on the roads (National Occupational Health and Safety Commission 1998). Even after adjusting for kilometres, company cars are involved in almost 50 percent more crashes than "ordinary drivers".⁸ As with the control of many occupational risks, appropriate training is required as a component of an effective risk management program and this notion is supported by state Health and Safety authorities as per the following examples:

“...road related work injury is very concerning and an employer of drivers of any type carries responsibility to ensure their safety. The circumstances under which they work, the conditions they may encounter, the appropriateness of the vehicle used and the adequacy of the training provided are all factors to be considered”. Minister for WorkCover, Victoria, Mr Bob Cameron.⁹

“...employers should assess associated risks and where necessary put in place control measures. In the case of the introduction of a different model/make of car these might be simply identifying to drivers the new location of the wiper control, light switch etc. In other cases, such as the introduction of ABS or front wheel drives, it would be appropriate to arrange some theory and practical training”. WorkSafe Western Australia’s Chief Inspector, Mr John Randall.¹⁰

4 JMDC TRAINING PROPOSAL

This paper presents the case for a more comprehensive review of the contribution driver training can play in a total road safety strategy.

It is acknowledged that in presenting this paper, Jim Murcott Driving Centre is attempting to influence the debate about driver training and that our commercial interest must be taken into account.

The following describes the underpinning concepts, objectives and principles of Jim Murcott Driving Centre training. It does not prescribe a method, but rather highlights the outcomes and issues to be addressed. It does not advocate that the training must be conducted off-road or in-vehicle, although Murcotts have found these methods meet learners' expectations and enhance their engagement in the learning. The proposal is that these be studied either independently or by accessing participants who undertake our program with the aim of arriving at a generic model for effective driver training.

At the time of writing this paper, the Victorian Government had promised to fund independent research into driver training using Monash University Accident Research Centre, but no further action has been taken to clarify what will be researched. This paper offers a model to be researched. Murcotts are willing to be the subject of that research depending on the scope of the research brief.

In essence, Murcott training is based on a systematic model with the overall aim of creating a safety culture through a multi-faceted strategy of which driver training is one element. The driver training component is based on defensive and protective driving concepts and incorporates the BAAMS Safety System™.

5 SAFETY CULTURE

It is our belief that further improvements in road safety are likely if the concept of a safety culture can be progressed. Research into organisational safety cultures may provide some insight but safety culture has not yet been extensively studied in the context of driver behaviour in the community.

Some evidence arising from fleet management case studies demonstrates that the safety culture of the organisation has a positive effect on the safety performance of fleet drivers.¹¹ The same elements contributing to the safety culture of a work organisation may apply to society if we accept society as an organisation. For example, the influencing factor of management commitment to safety may be replicated similarly by government commitment.

The problem is that research about safety culture, which is a complex multi-faceted matter, has lacked a systematic joining of theory and practice through a genuine inter-disciplinary approach that explores wider complex human issues than just attitudes and behaviour.¹² If culture is a reflection of sociological, economic and political factors, then the human factors need to be considered within this context and how this may have a bearing on road safety.

An effective safety culture must be based on agreed values not slogans. It is a culture in which individuals are encouraged to accept responsibility for their behaviour and are encouraged to overcome the natural desire to deny that they need to change. It is a culture that provides real help, skills, knowledge and incentives that motivate that change. A true culture of road safety requires more than a superficial approach in the media and a cynical revenue based strategy for correcting poor driving behaviour.

Everyone must be engaged in the process of road safety in practical ways. For drivers, a safety culture means knowing and demonstrating the skills and behaviours that underpin crash free driving and acceptance that this outcome is dependent on their attitudes, awareness and motivation.

Our driver training experience has highlighted the importance of safety culture. As with other road safety initiatives such as enforcement and advertising campaigns, there are many drivers who still do not respond or comply. This is evidenced by increasing enforcement activity that in Victoria forecasts almost a doubling of revenue in the next twelve months. Many will be repeat offenders. They, like some drivers who attend driver training, may revert to their previous risky driving despite exposure to alternatives during the training. What is missing is a genuine supporting road safety culture that is based on values that are celebrated rather than behaviours that are punished.



Fig 1.

A road safety culture requires a balance between several elements all of which play a part, but none on their own will achieve significant results (Fig 1). To achieve synergy in a road safety culture, there will need to be a shift in emphasis in current strategies.

For example, focusing on accident statistics results in reactionary safety management measures - often punishment driven strategies that fail to link the unsafe or risky behaviour with potentially damaging hazards and may be counterproductive over time. Furthermore, punishment is usually linked to non-compliance with road laws, but crashes are not. The majority of crashes involve speeds below the legal limit and vehicles driven by sober drivers.¹³

The problem with punishment as a safe behaviour enforcer is that it focuses on so called unsafe behaviour, eg exceeding the speed limit, while ignoring safe behaviour eg staying back from the vehicle in front. In Behaviour Based Safety approaches, safe behaviour is more likely when soon, certain and positive reinforcers are applied eg traffic police officer congratulating a driver for dropping back when another motorist cuts in taking up the safety cushion between the car in front. This contrasts starkly with any uncertain, late, negative reinforcers received from inconsistent

punishment for “unsafe behaviour” eg receiving a hidden speeding camera infringement notice in the mail weeks after the offence.¹⁴

Enforcement may need to be repositioned to target groups that behave badly and crash as a result, rather than just those who behave badly.

Licensing and training for young motorists requires review. There is little doubt that younger drivers are overly represented in road trauma. Their natural exuberance coupled with a feeling of invulnerability too often combines with tragic results. We also know that 'shock' advertising, while having a short term effect on young drivers, is quickly lost within the excitement of the freedom which a motor car brings to their lives.

It is this youthful enthusiasm for driving that we need to tap into. To us it seems ironic that we can train young people to achieve the most extraordinary heights in industry and commerce, science and academia, not to mention sport, yet as a society, we are not yet prepared to train them to handle one of the most dangerous activities they have to deal with every day of their lives.

The problem is that drivers, especially young drivers, lack the skills of reading the road situation for potential risks and hazards and altering their driving accordingly. The skills of hazard detection and avoidance are essential for safe driving, but they are best learnt through practical experience - the theory must translate into less risky driving behaviour.

As recent TAC advertisements have shown, the effect of poor role models such as aggressive adult drivers is probably a stronger influence on the behaviour and attitudes of young drivers than their pre-licence instruction.

JMDC has always subscribed to the belief that training drivers of all ages is a crucial factor in a total road safety system. But the type of training is important. Training should be based on defensive driving principles particularly the skills of risk management but just as importantly the training must address the psychological factors.

JMDC driver training incorporates Behaviour Based Safety concepts.¹⁵ It recognises that positive and proactive strategies are the most successful in changing driver behaviour. It draws on the fact that most drivers enjoy their motoring and respond well during training to the positive consequences of understanding concepts of driver and vehicle safety and successfully applying the associated psychological and practical skills and strategies during the training exercises. Further reinforcement occurs post training for those drivers who continue to practise and apply what they have learnt, resulting in collision free driving and the satisfaction of knowing that they are contributing to a driver safety culture.

By contrast, simplistic or single point focus approaches to road safety through media campaigns that use slogans and lay blame avoid the real problem of drivers who make errors of judgment because they lack the knowledge and skills necessary for safe driving. Furthermore research indicates that blaming and punishing individuals for their errors has, at best, a short-term effect and, at worst, it may compound anti-social attitudes and behaviour on the roads.¹⁶

6 DEFENSIVE AND PROTECTIVE DRIVING

Defensive and Protective Driving - is driving behaviour that avoids being involved in collisions by taking into account:

- Our own potential driving errors (self awareness);
- The potential driving errors of other drivers (attitude);
- The hazards and risks of the immediate driving environment including adverse conditions (awareness & skills); and
- Factors external to the driving environment that affect it (motivation).

We like the term **Proactive** driving and the two key behaviours are:

- Look up** - look up and read ahead - HAZARD DETECTION
- Stay back** - increase following distance - HAZARD PREVENTION

These two behaviours may seem obvious enough, but drivers are unlikely to adopt them unless they engage in a learning process that changes their awareness about risk assessment, increases their skill to accurately estimate headways and prompts self assessment of their motivation to maintain the changed behaviour beyond the learning process. For example, driver error in estimating headways highlights the need for experiential training that modifies individual perceptions related to time and distance.¹⁷

The complexity of human behaviour and the complexity of the situational factors that lead to safe and unsafe behaviours requires structured learning in road safety that targets behaviour as fully as possible, noting its antecedents and consequences, and the situations in which the behaviour occurs. Different groups of drivers need different treatment ie, different training.

It is not sufficient to describe a target behaviour problem broadly such as “speeding” or “drink-driving”. Behaviour occurs in response to specific events or situations and can have different causal influences on different occasions. Speeding at night is a more precisely targeted behaviour.¹⁸

Given that 95 percent of all road accidents involve some human error and, that in 76 percent of road accidents, the human is solely to blame, alternative ways of treating the problem need to be explored. In the first instance, the notion of blame is inappropriate and lacks an appreciation of the multi-faceted nature of crashes. Further, it fails to acknowledge the effect of a framework of structural competition in which drivers operate that replaces cooperation with more aggressive win/lose behaviour.¹⁹ Examples include merging traffic due to lane blockages and freeway on-ramps during heavy traffic.

7 BAAMS SAFETY SYSTEM

JMDC driver training is based on the **BAAMS Safety System**. It challenges all of the five driver elements that underpin a **driver safety culture** - behaviour, attitude, awareness, motivation and skill (Fig 2.).

Driver training involves learning and applying practical skills, knowledge and strategies around risk detection and hazard reduction. At the same time, drivers need to increase their awareness

about their behaviour, attitudes, thinking and perception. There must be a balance between the application of vehicle control skills and the psychological factors in driving safely.

Teaching vehicle handling skills without addressing the associated attitudes and self-awareness may lead to over confidence or arrogance, the psychological characteristics that are known to contribute to collisions. Drivers who already suffer from anti-social behaviour may become more aggressive towards others as a result of narrow skills only training.



Fig 2.

8 BAAMS SAFETY SYSTEM ELEMENTS

8.1 Behaviour

Behaviour describes our observable actions - how we conduct ourselves. In the context of driving, our behaviour has to meet various expectations such as in road law and those of other road users and society generally. Driving itself requires multi-level skilled behaviour.

Behaviour will reflect the psychological profile of each individual and the situations to which the individual is exposed. Behaviour may be aggressive, passive, distracted, alert, ignorant, confident, timid, skilled, arrogant, tolerant, angry, polite, competent, vindictive or many other descriptors.

Behaviour can change as a result of learning provided there is follow-up reinforcement of what has been learnt. However, repeated risk taking behaviour rarely results in crashes, therefore, there is not a cognitive connection between the behaviour and the risk. The training challenge is how to make the connection and generally, experiential exercises will be more useful.

8.2 Attitude

Attitudes represent our evaluation of our environment based on our life experience. Attitudes are clusters of positive and negative feelings, beliefs, opinions and behaviour tendencies towards people, ideas, objects or any other elements in a person's environment.

The debate in the road safety industry around the need to change attitudes and behaviour has prevailed for a couple of decades without resolution. It seems simple enough that if we can get drivers to adopt different attitudes then their behaviour may fall in line with expectations.

Many people who express correct attitudes to road safety often exhibit behaviour that contradicts their utterances. Furthermore, our attitudes are often rationalisations of our past behaviour and are not predictors of future behaviour.

There seems little evidence that attitudes will be a predictor of behaviour and therefore, programs that address attitudes without other complementary strategies, will be of limited value in changing behaviour.

At JMDC, we see this during every driver training course we run. Drivers express attitudes in line with road safety information and laws, but given an opportunity to demonstrate that attitude through the application of their skill behind the wheel, they realise that there is a significant mismatch. The most common example of this occurs in the first practical driving exercise of our Defensive Driving course in which drivers are required to stop their vehicles while travelling at speeds of 50 and 60 kph. While they are familiar with the TAC advertisements that depict the benefits of reducing vehicle speeds by 5 kph, the majority of drivers over-estimate their ability to stop their vehicle - and by a large potentially fatal margin.

This exercise clearly connects the five BAAMS elements. A driver's *attitude* may concur with the requirement to travel at 50 kph in residential streets, but until they become *aware* that they do not possess the *skill* to stop when travelling faster than 50kph, they may lack the *motivation* to change their *behaviour*. It is only when they have the opportunity to demonstrate their behaviour that their attitude is confronted. Lecturing to them about correct driving attitude is not effective because most of them already know and express attitudes in line with the presented message. They just don't behave consistently with their attitudes.

Many drivers come to our courses with pre-conceived attitudes. Case in point is the anti-lock braking system (ABS) on modern vehicles. ABS was expected to significantly reduce crashes by sensing lockup and releasing the brake before applying it again rapidly thus preventing skidding while maintaining steering control. But studies have shown that they have not had a significant effect on overall crash rates because drivers with ABS have traded off the improved safety for forward mobility by adapting their behaviour in ways that reduced or eliminated the safety cushion with the result that the emergency stopping distance was no different than with standard brakes.²⁰ A test track study showed that when drivers could choose their speed, they travelled slightly faster after practicing with ABS on wet surfaces. Some form of education is needed for drivers if safety benefits are to be realised. During our practical in-car exercises drivers learn that their ABS vehicle does not stop in less distance than a non-ABS vehicle. Many are shocked by the pedal pulsations and lift their foot thus reducing braking effectiveness. By experiencing the situation in training, their awareness and attitudes change resulting in behaviour that includes slower speeds and leaving a greater gap.

Through this type of experiential driver training - learning through practical experience, drivers are more likely to change their on-road behaviour. This will be enhanced if there is follow-up reinforcement provided by employers through safety sessions, family conversations, constructive media campaigns and refresher learning opportunities. But the training needs to happen first or there is nothing to reinforce.

Often safety training is based on the notion that if we can change a person's attitude then their behaviour will change. But the training may be attempting to confront attitudes that have been developed as a result of years of experience and confirmed through rewards and associations with other influential people, especially parents.

To achieve a culture of road safety, we need to focus on behaviour change in preference to attitude change. Why? Because objective, observable behaviour ie, the application of new knowledge, awareness and practical skills can be accomplished as a result of learning whereas changing attitudes is not easy to assess and may not ultimately affect driver behaviour on the road. Additionally, changed behaviour through repetitions in practice as part of the learning process and subsequent reinforcement may lead to changed attitudes.

8.3 Awareness

Awareness has two crucial components - self-awareness or insight and awareness of one's environment. Both components are necessary for successful learning.

To take up new ideas, skills and knowledge, a person needs to be aware of their capabilities and their limitations - the existing gaps in their capability. Additionally learners must be aware of the inner self, that is, having a sense of one's internal states, being able to observe and reflect on the various experiences encountered in life. The emotional self is an important factor here.

Why does a normally polite person yell abuse or make a provocative gesture to another motorist who infringes his space on the road? The same person when bumped by another pedestrian in a busy walkway would probably apologise.

Effective drivers monitor their emotions and reflect constructively on incidents with other road users even those that may violate their rights. This is a skill that can be learned and fits with the notion of assertiveness. Assertive drivers make headway without violating others and they accommodate the errors of other road users in the knowledge that they also make errors - they are self-aware. Knowing and accepting that you get angry when other drivers cut you off is a risk factor that you can control. Discovering the motivation to do so is an example of driver risk management.

The other aspect of awareness relates to the environment and, in this discussion, we mean the road environment. Having a keen sense of awareness of hazards and risks is the most important attribute of an effective driver. Vehicle control skills will be of limited value without a mindset around risk management. Some of this awareness develops over time, but it can be enhanced by training directed at increasing hazard perception through scanning techniques and looking up ahead as well as around and behind.

8.4 Motivation

Motivation moves a person to action. It involves the will to channel the psychological forces or energy in a particular direction and to use ability to achieve particular ends.

Simply put, I may be motivated to comply with a road law if a police officer is in the vicinity. In the case of a person driving for their employment, he or she may be motivated to override the need for safe driving behaviour in order to meet performance requirements in their work, especially if there is an incentive for doing so.

The issue for those attending driver training is around their motivation to change their driving behaviour. This needs to be driven internally rather than through factors such as enforcement.

8.5 Skills

Skills are an essential component of ability. Skills are crucial to effective behaviour. Safe behaviour is skilful. Skills generally can only be acquired through training and repeated practice. Considering the complexity and multi-tasking demands of driving and the limited training for obtaining a licence, the collision rate is probably not bad. For example, very few new drivers have been taught or tested on the open road and at speed. Developing hazard awareness skills at 100 kph is very challenging compared to 50 or 60 kph.

Fortunately, many individuals and organisations recognise the need for further training that advances a driver's skills beyond the level required for licensing. The issue is, what skills will be developed in post licence driver training courses?

JMDC driver training is directed towards advancing a driver's knowledge, skills and competencies crucial for developing a driver safety culture and include:

- Reducing key risk behaviours;
- Hazard perception, detection and risk assessment;
- Developing risk management skills;
- Multi-tasking demands of vehicle control on road and in traffic conditions;
- Vehicle control to **avoid** emergency situations;
- Vehicle control to **deal** with emergency situations; and
- Recognition of the environmental benefits of safe driving.

This type of training requires an intense ongoing learning process that has not been part of the driver licensing system and has not been accepted by authorities as a function of a total road safety approach. It requires creative methods to assist learning including new innovations. One initiative developed by the Monash University Accident Research Centre called "DriveSmart" uses an interactive CD ROM program to simulate on road situations that increases hazard detection through scanning, concentration and awareness of the multi-tasking requirements of driving. The program is directed at new drivers, especially young drivers, and can assist them to develop these higher order skills through the experiential environment created in the safety of the computer screen. It is an excellent preparation tool for driver training that allows for focus group work with peers to share their perceptions.

Murcotts have developed various exercises and training tools to assist the learning process to ensure that both in-class or in-class situations, experiential learning is the underlying approach.

9 CONCLUSION

This paper is presented with some confidence based on many years of developing driver training programs in the context of significant changes in road safety management. However, there is some uncertainty about a genuine desire by governments and authorities to take the necessary action to achieve further improvement. This reluctance is understandable because future strategies may involve some risks both political and financial. As a driver training organisation, Murcotts face similar risks and could take the more comfortable line of supporting the status quo and enjoying

continued commercial success from the thousands of motorists and organisations that have placed us as market leader in the industry.

Murcotts has another imperative. Our business objectives dictate that we take a leading position in the road safety education and training field and that we continue to strive for improvement and respond to the challenges that confront us.

To that end, we have no doubt that the future will see compulsory driver training within approved courses as one part of a total road safety management system that contributes to a road safety culture encapsulating the principles of environmental management and protection.

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