

# Sustaining Safe Driving Behaviour in the Aid Sector

## Introduction

The theories behind developing and maintaining safe driving behaviour has grown by leaps and bounds in the past 25 years. Although there are some good summary reports designed for the layperson, much of the literature tends to remain opaque. This document provides a select review of the literature and best practices. It is intended as a primer on the key conclusions from the past 25 years of research. Questions and comments can be directed to Daniel Hardy, Road Safety Manager at Toyota Gibraltar Stockholdings (TGS), [daniel.hardy@toyota-gib.com](mailto:daniel.hardy@toyota-gib.com).

## Making Driver Training Work

In the 1990s and early 2000's, a series of research projects arrived at an unsettling conclusion: **driver training didn't appear to work**.

Researchers identified several obvious reasons for this (cf Thomas et al, 2012):

- training providers, both private and institutional, did not evaluate their training impact
- there were no common standards or a guiding methodology
- there was an overwhelming focus on control skills and emergency manoeuvres.

**Training that emphasises how to get out of emergency situations** (e.g. skid training, evasive swerving and emergency lane changes) **is ineffective in creating safe driving behaviour and can increase crash rates** (cf Peräaho et al, 2000; Elvik and Vaa, 2004; Elvik et al 2009; Vlakveld and Wren, 2014). For example, in 1997 an evaluation of an Australian company's (Q-FLEET) crashes found that more at-fault crashes were caused by drivers who had received driver training, as compared to a baseline of other drivers in the industry. This was attributed to over-confidence created by the defensive driver training program they were using, which focused on teaching vehicle control skills at a driving circuit (Haworth et al, 2000)

The International Road Federation adopted the following resolution in 2014:

*Training programs aimed at enhancing the **skills to regain control in emergency situations should not be included in basic driver education nor in post-test driver training programs**. The learned skills from such training programs erode quickly, and the noted training programs result in more risk taking due to driver overconfidence... Well-calibrated drivers can detect latent hazards in traffic situations, do not underestimate the likelihood that these hazards will cause adverse effects (i.e. they are aware of the risks), and do not overestimate their own skills (i.e. they are aware of their own limitations).*

**Safe drivers avoid emergency situations; skilful drivers try to evade them as they happen.** The focus on skills, particularly evasive manoeuvres for emergencies, places the emphasis not on avoiding these emergencies in the first place, but rather evading them when they do happen (Peräaho, 2003).

**Post-license professional driver training must have sufficient time to change behaviour.** The PRAISE Report 2 (2010) notes that **a short (e.g. two days or less), one-off training will have little impact on driving behaviour** for drivers within a European organisational context (e.g. having received a generally high level of initial driving education, robust testing, and operating on roads that are generally well designed and enforced). Most aid worker drivers do not have the benefit of quality driving education, rigorous testing, or enforcement of the Highway Code on the roads.

**Evaluations of driver training programs have consistently shown that they frequently fail to meet their objectives, and in some cases produce effects opposite to those intended** (cf Mayhew and Simpson, 1996, 2002; McKenna, 2012). This applies both to novice and post-license training, although the effect tends to be greater in the former, particularly with young male participants (Glendon et al, 2014)

**Drivers tend to drive at the limits of their perceived ability.** Driving behavior can be related to the way individuals assess their own driving skills (Boccaro et al, 2011). Since **drivers who have great confidence in their driving skills tend to drive at the upper limit of their driving skills** (Matthews, 1986; McKenna, 1993), training should avoid both inflating a driver's sense of confidence, particularly through exercises that focus on driving to the limit of adhesion.

**Drivers rate themselves as being better than they are.** A common finding is that drivers tend to rate their own driving skills more positively than the "average driver" (Delhomme, 1991; OECD, 2006). **Drivers rate their skills as higher with increasing experience, even though the experience gained may not actually consist of greater proficiency** (Spolander, 1983; Lajunen and Summala, 1995).

## How driver training can develop safe driving behaviour

Driver training and education has a recognised methodology. **The Goals for Driving Education (GDE) was developed to address the identified weaknesses of skills-focused driving training**, and to create and sustain safe driving behaviour, and now includes the GDE PRO5 for professional drivers (PRAISE, 2010).

**Skills-based training can be useful if paired with the GDE and risk awareness.** Petersen et al (2006) found that drivers who received training on braking techniques with and without antilock braking systems (ABS) used a smoother braking profile when approaching stops and had fewer ABS activations than control group drivers. Treffner et al (2001) also indicated that this type of skills-based training led to better vehicular control in emergency situations.

However, as Peräaho (2003) noted, **skills-based training can be effective if it forms one aspect of a holistic approach based on the Goals for Driver Education (GDE) framework.**

**A systematic driving framework is effective at building safe driving behaviour.** There are few clearly articulated 'systems' that incorporate hazard perception and proactive response. The **most well-known is the 'system of car control', or 'IPSGA'**. This involves hazard perception or "Information", followed by action (considering and adjusting, as necessary to avoid a perceived hazard, the vehicle's "Position", "Speed", "Gear", followed by "Acceleration" once clear of the hazard).

**The System of Car Control is an internationally recognised framework for safe driving.** Stanton et al (2007) found that individualized driver coaching using a systematic model of driving (IPSGA) was effective at increasing driver safety.

Haworth et al (2000) noted that the **UK traffic police are "indisputably seen to be the most highly-trained safe drivers in the world"** for several reasons: their advanced driver training is by far the most extensive in the world and comprehensive in the world, is conducted on public roads, with a methodology that has been continually refined for over 80 years. **Roadcraft is the manual that their advanced driver training is based upon.**

**In-car coaching is effective at creating awareness and responsibility for safe driving.** According to Thomas et al (2012), **drivers who received in-car coaching "demonstrated statistically significant improvement** in speed, limit points, roadcraft, steering, headway, use of mirrors, gear changes, and

overall performance, while those in the control groups actually performed worse in steering, responses to hazard, gear changes, and overall performance.”

**Developing safe driving behaviour is most effective with a coaching (learner-centered) approach.** The CIECA-RUE (Road User Education) Project (Weiße et al. 2015) affirmed the findings of contemporary research, noting that “driving teachers need to be able to encounter their students as individuals and be able to recognise their strengths, needs and interests. **They should also be able to motivate and support the students in becoming self-reflective drivers who learn throughout their lives...** they must be able to teach the students not only vehicle control and tactical level skills, but also transfer values and attitudes that are conducive to a culture respecting traffic safety and the environment.”

## The Professional Driving Context

**Professional drivers tend to have a higher crash rate than private drivers:** in a UK study, it was 50% higher (Lynn and Lockwood, 1998).

Harrison et al (1998) found that **higher driving speeds** were often associated with driving an office vehicle, particularly large, relatively new vehicles owned by someone other than the driver.

**In the UN context, crash rates tend to be the inverse of the security situation.** Hardy (2019) found that high risk missions reported significantly lower crash rates than moderate risk missions with similar sized vehicle fleets.

According to Downs et al (1999), an organization’s driving culture may put business needs before safety, and that **a strong ‘safety culture’ within a company will positively impact road safety.**

Adams-Guppy (1995) identified the **most common reason for speeding** in a company car was the perception of being late for a meeting.

**Many Aid Organisation drivers have knowledge and skill deficits.** In a review of the threshold knowledge assessments for c.200 drivers who participated in the Advanced Safe Driver Training (ASDT) between 2018 and 2019, Hardy (2019) **identified significant knowledge and skill gaps in both license and post-license driving competencies.**

## Incentive and Reward Programs

The scientific research suggests that **incentive programs are most effective:**

- when the time period in which the desired outcome is expected is short
- their power to prevent accidents is increased once they have been earned

**There is evidence to indicate that drivers with good records who are given a reward either show no difference or an increase their accident rate.**

**Small yet probable rewards tend to be more effective than large but uncertain ones** (Wafa, 2021), particularly when implemented with a combination of surveillance, rewards, and informing the drivers about their driving performance in real time.

For example, there is no evidence that the UN \$200 ‘safe driving’ incentive, awarded at the end of a year, has been effective at changing driving behavior; however, if \$50 was provided on a quarterly basis for driving behavior KPIs using a mix of telematics and active surveillance that specifically encouraged the knowledge, skills and attitudes modelled in a training program, the results would likely be different.

## Awareness Campaigns

**General campaigns targeting large, diverse groups** across multiple offices or countries **do not show discernible impact on behavior**. Multiple issues addressed at once are not effective (Gregersen, 1996).

**Campaigns should be based on specific problems with a clear target group in mind**. Data on crashes and driving behavior should be used to identify clear target groups. Seasonal or specific issues should be identified and are best taken one at a time (Gregersen, 1996).

**General campaigns don't change unsafe behaviour**. Campaigns tend to reinforce behaviour in those already doing that behaviour, but have little effect on unsafe drivers (Ludwig and Geller, 2000).

**Campaigns should be used to reinforce other interventions**. Mass campaigns targeting large groups in companies show little effect, and should be paired with more robust, planned interventions (Hoekstra, 2010).

## Behavioural Approaches to Driver Training

**Driving is habitual, unless something new or unexpected happens**. (Gardner, 2009): behaviour is likely to be governed by habits in the absence of conscious reasoning (e.g. Aarts & Dijksterhuis, 2000a). This means that we don't tend to make conscious decisions, or use higher level 'slow' or logical thought processes (cf Thinking Fast or Slow) when we drive. **The more experienced we are, the more habitual we drive, and the less we think about it.**

**Habits dominate behaviour, and habits beat intentions**. Modifying habitual behaviour may require different intervention strategies to those used to change motivation (Aarts, Verplanken, & Van Knippenberg, 1997).

The hypothesised relationship between habit and motivation in predicting behaviour is inversely proportional: **intentions inform behaviour where habit is weak, but strong habits disrupt the transition of intention into action** (Triandis, 1977; Verplanken et al., 1994).

(Gardner, 2009): Information-based driving reduction initiatives which target attitude and belief change may have only limited impact on habituated behaviour and so intervention strategies must be employed which acknowledge the limited cognitive engagement that characterises habitual decision-making.

What does this mean to us?

- It helps explain why short or one-off driver training has little to no impact.
- It highlights, once again, that awareness and other informational interventions do not work in isolation, and when used as with other actions, continues to have limited impact.
- It highlights the importance of coaching and experiential learning to reinforce key messages and change habits.
- It emphasizes why forming a habit of using IPSGA is a way to avoid the danger of typical driving habituation: IPSGA encourages the use of methodological thinking, hazard perception and a proactive driving style.

## Select Tools & EU Projects

[Driver Assessment Tool | Road Safety at Work](#)

EU GADGET Project: Guarding Automobile Drivers through Guidance Education and Technology (1999)

EU [ADVANCED](#) Project: Description and Analysis of Post-Licence Driver and Rider Training (2002)

EU [MERIT](#) Project: Minimum Requirements for Driving Instructor Training (2005)

EU [TRAIN-ALL](#) Project: Integrated System for driver TRaining and Assessment using Interactive education tools and New training curricula for ALL modes of road transport (2009)

EU [HERMES](#) Project: Developing the coaching and communication skills of driving instructors (2010)

ETSC [PRAISE](#) Project: Preventing Road Accidents and Injuries for the Safety of Employees (Ongoing)

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