

WHITEPAPER

DRIVER EDUCATION – WHAT MORE CAN BE LEARNED?



iam
RoadSmart

Driving in the UK has become far safer over the last 50 years. Fatalities, which peaked in the 1960s and 70s at around 7000 a year, are down to fewer than 2000 but, worryingly, the downward trend has stalled in the last few years and the number remains too high. Of these fatalities, over 500 involve people driving for work-related purposes.

What can be done to address the problem of collisions involving business drivers?

Many organisations have been slow to accept their obligation to reduce the number of incidents. They employ drivers with appropriate licences and feel that their responsibility ends there. In some cases they may employ technology to monitor driver behaviour, but often this is used more as a way of maximising operational efficiency as opposed to improving safety. All too rarely is driver education seen as a cost-effective option for improving driver performance.

The failure to train

No business owner wants to feel that they are responsible for death and injury. However, there may be a tendency among some decision makers to think that businesses cannot be held responsible for bad driving. Instead they assume that it is a problem for individual drivers, and that a full driving licence is sufficient to assure safe driving.

It is well known that the standard driving test is designed to check whether a driver's skill meets a minimum standard, and does not necessarily prepare drivers for real-world scenarios or for the pressures of driving for work. Indeed, the effectiveness of any training given to pass a driving test will vary depending on the age, profession and experience of the student. Furthermore, for most drivers, the driving test is the very last time their abilities are ever formally assessed.

If organisations are unaware of shortcomings in their drivers' skill and/or behaviour, they are unlikely to see driver training as an investment that will produce a return. Rather they see it as a cost that can be postponed or avoided altogether.



“**MOST DO THE BARE MINIMUM IN TERMS OF EDUCATION. THERE SHOULD BE RISK ASSESSMENT, FORMAL TRAINING, REGULAR TESTS.**”
JOHN WEBB, LEX AUTOLEASE

John Webb, Principal Consultant with Lex Autolease explains, “The tendency for many companies is to present employees with a car policy and choice list and away they go, without assessing how much they know about driving. Most do the bare minimum in terms of education. There should be risk assessment and control measures built in to manage those risks; perhaps a formal training programme, a combination of online training, classroom sessions, regular tests about various elements, for instance the Highway Code.”

He adds: “Some companies are strong on education and training. But sometimes there's no real accountability.”

The cost of bad driving

Unfortunately it seems that some organisations fear the cost of putting a driver risk management programme in place without fully understanding how cost effective it can actually be, and indeed without a clear understanding of the cost. The truth, though, is that poor driving by employees can cost businesses a considerable amount of money.



Without doubt the biggest influencer in fuel consumption is the driver's right foot. Using an example of a driver doing 20,000 business miles per annum in a diesel vehicle, a 5mpg difference in fuel consumption is worth around £330 a year. Multiply this by 100 drivers (£33,000) and the cost of poor driver behaviour for a business fleet becomes substantial.

Fuel efficiency is not the only affected area. Tyre and brake wear can be directly linked to driver behaviour and, with over 90% of collisions involving human error⁰¹, mistakes by drivers have a knock-on effect on insurance premiums. Then, there is the matter of fines: business vehicles are estimated to rack up £55million per year in penalties for offences such as speeding and bus lane infringement.

In addition there is the cost of damage to leased vehicles. The average invoice value at end-of-lease was £322 for cars, with 39% of returned vehicles incurring this cost. The figure for vans was even higher at £376 incurred by 44% of returned vans. Typically, this cost is not budgeted for by the lessee⁰².

There are other costs too: medical and legal expenses, property damage, liabilities and lost productivity. In 2017, the average overall cost of a traffic accident in the UK was calculated at £7653⁰³. In many cases much of this cost won't be fully covered by insurance. Indeed, the International Loss Control Institute says that for every £1 an insurer pays out, the uninsured losses can range between £8 and as much as £53⁰⁴.

Given the influence that poor driving has on unbudgeted fleet costs and many other aspects of business performance, solutions are needed, and thankfully they do exist. The answer may not be in additional regulation: existing Health and Safety legislation has failed to push businesses towards implementing robust driver risk management programmes, a fact raised by IAM RoadSmart's 2018 whitepaper *The Corporate Manslaughter Act, ten years on*⁰⁵.

One option for businesses is to adopt technology such as telematics, dashcams and mobile phone apps to improve safety. More significantly though, driver education should be considered as an effective and complimentary tool for reducing fleet costs.



The benefits of technology

Technology is often relied upon to provide a solution to poor driving. In itself however, it rarely influences driver behaviour or attitudes. Instead it can be used to collect detailed data about driving behaviour and there are some good examples where businesses use this data to support the creation of appropriate training interventions.

Telematics

Telematics is a way of monitoring how a vehicle is performing. Data taken from the engine, gears, braking system, indicators and steering can be combined with GPS data to provide a detailed record of a journey. The ability to monitor driver behaviour in this way has allowed many companies to cut incident rates, manage fuel costs and plan more efficient delivery routes.

Harsh driving events can be isolated, and drivers who cause them too frequently can be identified and their behaviour addressed before the worst happens. In addition, vehicle health problems can be discovered before they cause a problem in the middle of a journey and, if a collision does occur then immediate intervention and recording of the circumstances of the can save costs, not least by managing any interactions with third parties who are involved.

There are downsides to using telematics to monitor driving quality. Companies can be overloaded with data and the systems can deliver frequent false alerts unless they are managed properly. Users need to have the relevant expertise to be able to interpret the data correctly and use it appropriately.

Dashcams

Telematics can help companies understand what is happening during a journey. A different technology will help them understand why: cameras mounted on vehicle dashboards and elsewhere can provide extra data that companies can use. They can record and replay what the driver saw and reacted to, and can potentially provide a 360-degree view of the environment around the vehicle.

TELEMATICS CAN HELP YOU UNDERSTAND “WHAT” IS HAPPENING DURING A JOURNEY. DASHCAMS HELP YOU UNDERSTAND “WHY”.

As well as helping to identify training needs, dashcams can be used to reinforce key messages and provide feedback. Showing drivers videos of their driving performance and behaviour is a highly effective technique. The retailer Iceland have educated their drivers by reviewing footage obtained from vehicles they drive. Andrew Tilman, Marketing Director of Trakm8, the system used by Iceland, says that over a six month period, the number of accidents in the business was reduced by in excess of 30%. Drivers were being made aware of their poor driving behaviour and made to consider the potential consequences.

The advantages of dashcams go beyond identifying training needs. They can be used to minimise third party claims and maximise loss recoveries. They can even be used to identify driver health problems or tiredness.

Mobile phone apps

App-based solutions, which use smartphones to monitor drivers' behaviour such as acceleration, g-forces and harsh braking, are increasingly being used too. One example is eDriving Mentor, based in the US, and recently launched in the UK.

Dr Lisa Dorn, Director of the driving research group at Cranfield University, reports that a 'new generation' of novice driver training programmes (involving computer programmes and apps) show 'considerable promise', even if their recent introduction means there is, so far, little evidence of their efficacy.

Education as a solution

Driver education is even more important than technology as a way of improving the quality of work-related driving. Today it does not simply comprise on-road tuition of the kind we all experienced when learning to drive: there are a number of techniques open to the fleet manager.

Type of training	Benefits	Limitations
Online	Flexible; interactive; recordable	Limited ability to explore driver-specific issues
Virtual reality	Highly engaging; ability to model dangerous scenarios	Expensive
Classrooms	Team working; ability to explore questions with trainer	Relatively inflexible
On-road	Provides genuine experience; ability to question trainer	Cannot model extreme scenarios





Types of education

Online learning

Online learning, or e-Learning, is a powerful tool. Because it is online it can potentially be delivered at any time and at any location, meaning flexibility and convenience for the learner and cost savings for the employer who can use planned downtime for training purposes. In addition it is interactive, meaning that it can be customised for individuals. People can be given tests or educational games to play, or forced to undertake certain steps before progressing to other areas of training. And the online nature of e-Learning means that trainees can potentially interact with other trainees sharing experiences and learning from them. A record of an individual's training activities can be kept and if necessary linked to other HR systems.

These are powerful benefits although there are of course problems as well. Badly written e-Learning can be very boring and consequently viewed as a chore, and may still fail to explore the subject matter in sufficient depth, or to test the learner's knowledge adequately. If poorly managed, it may be possible for people to get colleagues or friends to complete the training for them.

Virtual Reality

Virtual Reality (VR) training involves providing people with a highly immersive training experience through a headset that provides a visual environment they can react to. It is really a type of simulator, but a flexible and very engaging one. As well as all the advantages (and some of the disadvantages) of online learning, VR allows dangerous situations, such as an imminent collision or a skid on ice, to be modelled in complete safety. However, it is relatively expensive and in practice only a limited number of scenarios can be modelled. Nonetheless it may be worth exploring, if only as a way of opening a business to an important emerging technology.

Classroom learning

Classroom learning offers a useful alternative, or perhaps addition, to e-Learning. While it is inflexible – the trainer and the trainees need to gather in one place at a particular time – it does allow discussion among groups of people where particular issues and scenarios can be explored, and the trainer is there, ready to answer any questions.

On-road training

Training drivers on the road provides the most realistic experience, combined with the opportunity for the trainee to ask the trainer any questions, and the opportunity for the trainer to observe an individual driver's behaviour and tailor their training accordingly. It can be seen as expensive when compared to other forms of intervention. In addition it is difficult to replicate dangerous situations i.e. skidding on ice, without the risk of something going wrong.

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TONY GREENIDGE, IAM RoadSMART

Training in a specially adapted area such as a car park or disused airfield can alleviate some of these downsides – the public are kept at bay and at least some dangerous situations, such as skidding, can be modelled.

Tony Greenidge of IAM RoadSmart emphasises the importance of on-road training. “There is still nothing to replace the direct educational feedback that an individual gets from being in a car with a trainer who is actually experiencing what is going on around them. They help change the way you think by linking their advice to a real and live example.”

“For example, instead of telling a motorist about consequences (‘If you speed, you might run someone over and that’s bad’), says Dr Helman, “those delivering education could learn from what we know about ‘Implementation Intentions’. This is a behaviour change approach where people generate a statement such as ‘if I find myself late for a meeting and I’m tempted to speed, I will immediately slow down to below the speed limit and remind myself that I’m only saving a few minutes.’ It sounds simple, but such approaches have been shown to be more effective at helping people to remember that they’ve decided to make a decision. The idea is that that becomes a habit.”

Dr Helman says “good driver education is ‘not all about controlling the vehicle’. The evidence is to the contrary. As long as you’ve got the basic skills, you are fine.

What’s important is how you choose to apply those skills, how you choose to keep within your skill limits. It’s things like speed choice, wearing a seat belt. It’s not sexy at all, but it’s effective.”

Hazard perception

One area in which the UK has led the world is the introduction of the hazard perception test. Hazard perception, claims Dr Helman, is ‘literally the only driving-related training intervention that has been shown to be linked reliably to collision risk.’

“WHEN YOU TRAIN PEOPLE IN HAZARD PERCEPTION YOU ARE MAKING THEM AWARE OF THE RISKS THEY ARE TAKING.”

**FRANK McKENNA,
READING UNIVERSITY**



Frank McKenna, psychology professor at Reading University adds: “When you train people in hazard perception you are making them aware of the risks they are taking. When you do that, people are less inclined to take those risks. It’s training people to anticipate what other people might do. People are less inclined to choose higher speeds.”

According to Tony Greenidge, IAM RoadSmart Business Development Director, the same is true for fleet drivers. “Sitting alongside a trainer, in a one-to-one on-road session, when he or she sees what the trainee sees and shows them how to better read the road - and hazards ahead - is invaluable.”

Using digital technology

To some, the use of digital technology in training is an obvious development. To others, it provides little of relevance as it does not take place on the road. Dr Dorn says that training programmes developed to address skills such as hazard anticipation and attention maintenance ‘have been shown to transfer from one platform (typically a PC) to the open road’. They have also been shown to produce effects that ‘last up to a year with only an hour’s worth of training’.



“MONITORING AND MENTORING DRIVERS [USING SMARTPHONE APPS] IS PARTICULARLY ECONOMICAL TO IMPLEMENT.”

DR LISA DORN, CRANFIELD UNIVERSITY

Digital training has been introduced only recently. Dr Dorn says that means it is not yet known whether PC-based programmes translate to fewer road deaths. However she feels that online learning shows great promise. Her paper reports that there have been dramatic improvements in smartphone technology, in which “monitoring and mentoring drivers is particularly economical to implement.”

The paper says that driver behaviour was found to improve when drivers were asked to look at a smartphone interface presenting safety and fuel advice. There was a 14% increase in mean headway (the gap to the vehicle in front) to 2.3 seconds and a threefold reduction in time spent travelling closer than 1.5 seconds.

There was also evidence that students who accessed education material using a smartphone were ‘not significantly different on learning outcomes from students who did so using a traditional computer.’

The paper found that smartphone apps can encourage drivers to drive smoothly and less aggressively, discouraged them from driving for long periods or at excessive speeds, and from using mobile phones illegally while driving.

Dr Dorn concludes: “App-based driver education could improve a driver’s competency in particular skills (including) maintaining headway, in self-awareness of (their) risky habits e.g. speeding.”

Tony Greenidge agrees and believes that app-based driver education will be more widely adopted by the fleet industry as part of a full driver risk management programme. “Twenty years ago, if a driver was performing poorly, your only option was to put them on a ‘one-to-one’ in a car with a trainer,” he says. “The increased use of technology means that on-road intervention is often the very last stage of the driver risk management process.



1. Licence Check

The very minimum we should be doing with regards driver risk management

2. Annual Driver Audit

The opportunity for driver to confirm agreement to fleet policy, health and licence update

3. Risk Assessment

Identifying any areas of concern covering key areas of knowledge, skill and behaviour

4. E-Learning

Targeted training based on the outputs of the licence check and/or the online risk assessment

5. On Road Training

Remedial training designed to meet the further development needs as identified through risk assessment and e-learning processes

“The unfortunate corollary to that is that there’s nothing in the licence checking and e-learning to on-road training - the risk management journey - that defines at what point a fleet or driver is compliant with Health and Safety legislation. A company can say ‘we’ll spend the £30 on e-learning but we won’t worry about the £200 to put them in a car for half a day’s training because no one’s going to check anyway’. That is one result of the failure to apply legislation such as the Corporate Manslaughter Act in relation to incidents involving business drivers of all vehicle types.

“In the fleet world, masses of information is coming in from telematics but from an educational perspective there’s a big disconnect, between the generation of that data and how it is used to improve driver behaviour.”

Mr Greenidge says that a common reason for fleets not undertaking more extensive education - including one-to-one in-car sessions - is cost. “Companies will spend £400 a month on leasing a car and they’ll factor in road tax, insurance, maintenance and fuel. But finding the budget for training can involve a very long sign-off process. This seems odd when the cost of implementing a comprehensive risk management programme could be as little as just £5 per month, per driver. One area that typically delivers a quick win and tangible return on investment is Eco-Driving training; to support businesses there is a fuel saving calculator on the Eco-Driving page of our website⁰⁶.”

Life-long learning

However training is delivered, and whatever approach it takes, it needs to be regular. Dr Neale Kinnear, Head of Behavioural Science at TRL, observes: "We do not provide driver education throughout the lifespan, which is an area that could be improved. In the workplace if you work a piece of machinery it wouldn't be acceptable if you were only ever trained on it once and never checked again, years later. But the only time you have to demonstrate that you are still safe in a car, following your driving test, is after you've offended or been in a crash and that's too late. Road safety culture and education - from an early age - is important, for people to understand why rules are in place. But it has to continue."

Dr Helman points to a new approach in Australia where, he says, educators focus on life education, or resilience training. "They have schemes for novice drivers where they go along for a day and teach them about life skills; saying no to alcohol, drugs, and all the things that tempt us when we're teenagers. They found that those things have a knock-on effect on road collisions."

IAM RoadSmart's Tony Greenidge suggests a way forward: "Perhaps we should require people to retake their test after a certain number of years. There is a growing belief that we should. I cannot think of another single thing as difficult, as important, or as dangerous as driving, where, quite literally, you can perform something correctly for just an hour of your life - during the driving test - and then that's all that's required for the next 60, 70, 80 years without anyone really having an opportunity to question whether you should be doing it or not. Ongoing driver education is something we urgently need to address."

In the absence of any legislation that requires periodic driver reassessment, training and education prescribed by employers is the only way to address poor driver behaviour. Of course, there is a cost attached to training in the form of employee downtime while being trained, as well as the cost of the training itself but this should be set against the financial benefits that accrue from improved driving behaviour.

Conclusion

Driver education is in a state of flux as it adapts, and takes advantage of new and improving technology including telematics, online-based training and smartphone apps.

In the meantime, training remains controversial, with some experts claiming there's no firm evidence that it works. Others say that this is only because there has been too little research to date. They point to clear signs of better, safer driving by motorists who have undergone additional training, such as those Go-Ahead bus drivers, be it pre-driving test, or shortly afterwards or indeed for professional drivers.

Safety is important. But measuring success purely by the number of before-and-after training collisions might not tell the whole story. Driver training delivers tangible financial benefits because drivers are the biggest influencers on all elements of unbudgeted fleet costs. Unfortunately, many businesses are not very good at quantifying these financial benefits as they have little knowledge of the unbudgeted costs being incurred today, so how do they measure success tomorrow?

The benefits are clear. For instance, research by the Energy Saving Trust has shown that training in "eco-driving" can deliver average MPG improvements of 6.2% over the longer term⁰⁷.

The benefits from reducing bad driving can also reach way beyond cost. Good drivers tend to be happier drivers, less stressed and more productive. There is a reputational benefit too of having drivers who are considerate towards other road users, especially when they are driving liveried vehicles.

Tony Greenidge of IAM RoadSmart is convinced. "Better driver education at a professional fleet level delivers dividends in terms of lower fuel costs, reduced collisions, reduced insurance premiums, reduced wear and tear to the vehicle, reduced driver and vehicle downtime, and improved driver wellbeing. It also protects your brand, makes a positive contribution to corporate emissions targets and fulfils CSR objectives.

"For the price of a large coffee per driver, per month it is possible to put a comprehensive, fully auditable and compliant driver risk management programme in place and deliver substantial savings."



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