# Change blindness – road safety demonstration

A computer-based road safety demonstration to raises awareness about the importance of paying attention on the road.

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## Key details

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|---|---|
| **Does it work?** | Untested – new or innovative |
| **Focus** | Prevention |
| **Topic** | Crime prevention |
| **Contact** | • Melina Kunar – m.a.kunar@warwick.ac.uk<br>• Mel Vincent – melvin.vincent@dorset.pnn.police.uk |
| **Region** | West Midlands |
| **Partners** | Police<br>Community safety partnership<br>Local authority |
| **Stage of practice** | The practice is implemented. |
| **Start date** | January 2017 |
| **Scale of initiative** | Local |
| **Target group** | General public |

## Aim

The aim of the road safety demonstration is to:

- educate road users about the importance of paying attention while driving
- change attitudes and behaviours around road safety
- reduce the number of road traffic collisions

# Intended outcome

- increase understanding around the importance of paying attention on the road
- reduce incidents of distracted driving
- reduce road traffic collisions

# Description

The research team at the University of Warwick developed a computer-based intervention that can be used in driver education programmes. The intervention has been created based on a ‘change blindness’ paradigm. This paradigm suggests that it is difficult to notice changes in a scene if those changes occur while your vision is disrupted.

The intervention involves participants viewing an image of a driving scene which flashes on and off. Each time the image flashes, something within the image changes (for example a car disappears and then reappears on the next image). Participants are asked to look for and identify the change. In total, the participants are asked to try and find visual changes in six different driving related scenes.

Despite there being notable differences each time the image flashes, most participants find it difficult to see the changes. This finding illustrates the limits of an individual’s attention and observational abilities, and highlights to drivers that they can often miss crucial information.

Before the intervention starts, the participants are given a questionnaire to complete. The questionnaire asks participants how well they think they see things when driving. After the intervention, the drivers are given another questionnaire which asks them again how well they think they see things when driving. After the change blindness intervention, drivers report feeling less confident in their ability to see everything while driving. They also report raised awareness around the need to pay attention on the road.

The intervention is free to use and is currently being disseminated to road safety education teams for schools and driver education programmes.

# Evaluation

An evaluation of change blindness has been conducted by the University of Warwick.

The evaluation involved collecting both quantitative and qualitative data to evaluate the effectiveness of the intervention in both a police led environment (experiment 1) and a laboratory environment (experiment 2). The research team also compared the intervention to two control tasks.

The evaluation results suggested that participants' self-reported ability to spot visual changes was reduced in both the police led and laboratory experiments, but was not reduced after participation in the control tasks. Additionally, participants described the intervention positively.

The University of Warwick plan to conduct follow up studies in the future.

# Overall impact

Organisations across the UK have started to use the intervention.

- One council has used the intervention as part of their 'older driver' campaigns.
- One county council used the intervention in their road safety week. The images were played on a tablet in the centre of town as an activity to start discussions with pedestrians.
- One road safety partnership has used the intervention in secondary schools as part of their road safety programme. The schools have used the intervention both in assemblies and for classroom learning. The road safety partnership has also used the intervention at army barracks as part of their road safety campaigns.
- Dorset Police has used the intervention as part of their road safety education course. This course runs for people who have been caught engaging in behaviours such as speeding or using their mobile phones while driving.

# Learning

- The intervention can be used for a variety of purposes and audiences. It has already been used successfully as a classroom product in secondary schools, as part of road safety education

courses and as an interactive activity during road safety weeks.

- Due to ethical reasons, all data collected for the evaluation of the intervention was anonymous. Therefore, researchers have so far been unable to evaluate whether the intervention translates into more careful driving and fewer driving offences. However, users of the intervention have found it to be a short and effective demonstration that can be used in road safety education programmes to get drivers self-reflecting on their driving ability.
- Dorset Police has found the intervention useful as it brings the concept of 'visual attention' to life for drivers. Through the intervention, drivers are alerted to the possibility of filtering out relevant information by mistake or failing to pick up on relevant visual cues. For example, they may filter out a ball bouncing across the road which might suggest a child will follow.

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