



Evidence for
Excellence in
Education

Measuring the impact of Bikeability training



The National Foundation for Educational Research (NFER) was commissioned by The Bikeability Support Team at Steer Davies Gleave, with funding from the Department for Transport, to carry out **research to test the hypothesis that Bikeability training improves a child's ability to perceive and appropriately respond to on-road hazards faced by people who cycle.**

We explored this by means of an on-screen quiz devised to test knowledge and skills relating to hazard perception and responding appropriately to hazards.

The quiz told the story of three children's cycling journeys and included photographs and film clips showing different aspects of the children's journeys - for example, choosing where and when to start their ride, considering road position and priorities for different manoeuvres and completing the journey.

The research involved pupils who were in Year 5 in summer 2014 and tracked them as they moved into Year 6 in the autumn term.

A total of 668 children were involved in taking one or more on-screen quizzes and a questionnaire to find out about their attitudes towards cycling.

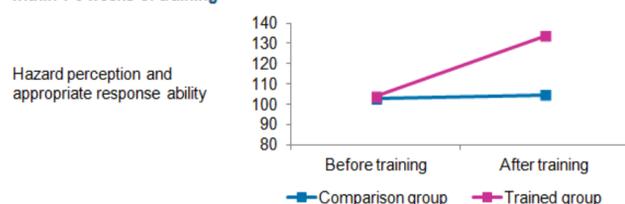
Participating schools and their pupils were either in the intervention or comparison group.



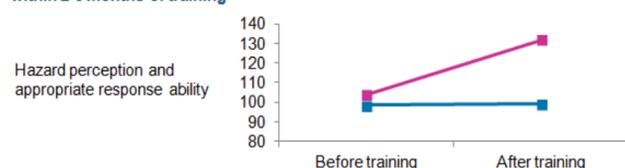
The quiz was presented on-screen allowing for inclusion of photographs, video clips, images and a variety of response formats.



Comparison of mean pupil ability scores at baseline before training (phase 1) and immediately after* training (phase 2)
*within 1-3 weeks of training



Comparison of mean pupil ability scores at baseline before training (phase 1) and at least two months* after training (phase 3)
*within 2-3 months of training



Schools in the intervention group had pupils who participated in Bikeability Level 2 training during the summer term (trained pupils). Pupils in the comparison group schools did not receive any training in the summer term, although they were expected to be given Level 2 training whilst in Year 6.

The research took place over three phases:

- Phase 1 – we gathered background information about the children's cycling experience and confidence and the children did an initial on-screen quiz assessment early in the summer term before any training took place.
- Phase 2 – children completed the on-screen quiz assessment 1-3 weeks after training took place, in the summer term.
- Phase 3 – children completed the on-screen quiz again at least two months after the training, in the autumn. The children also indicated their cycling experience and confidence in a questionnaire.

We converted the results of the quiz into a single measure of each child's ability to perceive and appropriately respond to hazards. Differences in these scores over time and comparing the two groups of children were analysed to assess the impact of the training.

Key findings

- Children who participated in Bikeability Level 2 training **scored significantly higher** on the quiz, after training, than children who had not received training.
- The effect of the Bikeability Level 2 training was **undiminished** when children re-took the quiz more than two months after training. This suggests that the association between training and increased hazard perception and appropriate response strategies was sustained.
- The size of the association between training and hazard perception, as demonstrated by the score achieved on the quiz, is **very large**, with an effect size of 1.6.

Further findings

- Children who participated in training reported **increased confidence** when cycling on the road compared to their initial level of confidence. This increase was statistically significant.

Presented by



Michael Frearson on behalf of
National Foundation for Educational Research

This study would not have been possible without the active participation of schools, pupils and Bikeability schemes. We would like to thank the all participants for their valuable contributions.