December 2022

An evaluation of the ADI Cycle Awareness Pilot

Final report

Ipsos UK

Contents

Executive Summary

The Approved Driver Instructor (ADI) Cycle Awareness Pilot project was funded under the Department of Transport's (DfT's) Cycling and Walking Infrastructure Strategy to raise awareness of why people cycle and how cyclists behave, and to help new drivers interact positively with cyclists. The pilot also aimed to test the effectiveness of practical cycle training for ADIs and online learning resources for ADIs and learner drivers in meeting these aims, across eight areas with high levels of cycling activity and cycle training instructors: Bristol, Cambridge, Exeter, Inner London, Manchester, Norwich, Oxford, and York.

Ipsos UK was commissioned in March 2020 to support the Bikeability Trust with the design and implementation of a randomised control trial (RCT) to evaluate the impact of the package of training materials on ADIs' attitudes towards and awareness of cyclists and cyclist behaviour. The main objectives of the study were to assess the impact of the learning modules on ADIs' attitudes towards and awareness of cyclists.

1.1.1 Intervention description

The pilot aims to raise awareness of how and why people cycle, and help new drivers interact positively with cyclists by improving the availability of cycle awareness learning resources for ADIs and learner drivers. The intervention involved a self-guided online learning course, developed by the Bikeability Trust, comprising four modules delivered sequentially. These consisted of a mixture of videos, downloadable factsheets and sample dialogues that can be shared with learner drivers, and interactive quizzes.

1.1.2 Method

An RCT was implemented to assess the impact of the learning materials. ADIs were recruited to the pilot between April 2021 and March 2022 by the Bikeability Trust with support from the Driver and Vehicle Standards Agency (DVSA), the Driving Instructors Association (DIA) and contracted learning providers. Participants were randomly allocated to a treatment group that was granted access to the learning materials, or a comparison group that was not granted access until the end of the pilot.

As part of the participant journey, both groups were asked to respond to two surveys: baseline and endline. The baseline survey was administered as part of registration process. The endline survey was administered 2 months after completion of the learning for the treatment group and 3 months after registration for the control group. The questionnaires contained approximately 20 questions and covered a number of areas including demographic data, preference in learning materials, attitudes towards cyclists, understanding of cyclists' interaction with other road users, impressions of the course, and future intentions regarding both driving and driving instruction. Treatment group participants were also asked to respond to an additional survey – the intervention survey – upon completing the learning. This sought to capture views on content and satisfaction with the course.

Regression analysis was carried out on the responses to the surveys to determine the level of impact, if any, the learning materials had on ADIs' attitudes, knowledge and awareness. Website data (such as test scores, length of time to complete) was used for descriptive analysis only.

1.1.3 Intervention survey findings

There are several findings from the intervention surveys related to processes and ADIs' views on the intervention (self-reported):

▪ **The DVSA were key to promoting the course**, compared to many recruitment channels that were tried and tested. These included social media posts, DIA emails, Bikeability Trust emails, emails from other related organisations, Motor Schools Association of Great Britain webinar, DIA webinar, DIA magazine adverts and news pieces.

▪ **ADIs who completed the course found the components useful,** especially *Sharing the road together and driver and cycle attitudes* (74%), *The National Standards for Cycling and Driving* (60%) and *Junctions* (60%). They also **responded most favourably to CGI clips and videos.**

▪ **The majority of participants (60%) reported that they were very satisfied with the content**, with a further 30% responding 'fairly satisfied'. Only 1% were very dissatisfied with the content of the course.

▪ **Not all recruited ADIs engaged with the learning materials.** Only 15% completed both the learning and the endline survey. The study did not involve engagement with people who did not complete the surveys and therefore it has not been possible to understand reasons behind this.

▪ **When asked if anything about the course could be improved, 34% responded 'Yes' with 39% responding 'No' and 27% did not know.** For those who responded 'Yes', the responses could be categorised into:

  − **Accessibility:** many respondents completed the learning on their phones or tablet devices and reported difficulty when watching the videos and completing the quizzes and surveys.

  − **Design:** suggestions to improve the design of the course, such as less written text and more videos, the size of the text used (larger text was suggested) and more Q&A.

  − **Content:** more content could be included in the learning, including more legal information, greater clarity on the highway code, more real-life clips to illustrate situations, dealing with large cycling groups, dealing with 'not so good' cyclists, and providing content which is more reflective of reality.

  − **Conversations:** more natural conversations would be more engaging. Trainer videos could also comment on some of the clips to create a more natural conversation, and to use less formal language to appeal to a younger generation.

  − **Design of quiz questions:** participants suggested that the quiz answers were not flexible and ambiguous. Some felt the answers were worded poorly which caused confusion. This led some participants to believe that not all answers were marked correctly.

  − **Time:** a shorter version would be more useful. A couple of respondents also mentioned that there was repetition, which added to the length.

▪ **Nearly all respondents felt they had benefitted in some way from participating in the course,** such as how they teach their learner drivers, their level of understanding of cyclists' behaviours or learning something new.

▪ **Nearly all (92%) respondents indicated that they would recommend the course to other ADIs.**

▪ **Awareness of the Bikeability Trust amongst ADIs has reportedly increased as a result of the course.** The percentage of participants reporting that they know either 'a great deal' or 'a fair amount' increased from 20% to 47% in the treatment group. Knowledge increased also among the control group, but to a lesser extent (from 19% to 25%).[1] A regression framework was used to assess whether the difference was statistically significant.

1.1.4 Impact results

Primary outcome analysis

The primary outcome for the study looked at ADI attitudes towards cyclists, and the extent to which the learning had an effect on a set out attitudinal statements over time. Of a set of 13 attitudinal statements about cyclists and motorists, only two statements saw a statistically significant effect (see below). This study cannot therefore conclude that the learning had an effect on all those attitudes which it tested. The two statements that saw a statistically significant effect were:

▪ *'Cyclists are a nuisance to other users'*, which was lower by 0.33 points for ADIs in the treatment group with respect to the control group.

▪ '*When accidents happen it is usually the fault of the cyclist'*, which was lower by 0.23 points in the treatment than the control group.[2]

Secondary outcomes analysis

Secondary outcomes were selected to accompany the impact analysis to help understand the extent to which the other outcomes foreseen in the logic model (see Chapter 1, Figure 1.1) have been achieved. Secondary outcomes were analysed descriptively by looking at the value of the relevant questions in the intervention and endline surveys for the treatment group. Table 1.1 below outlines the questions selected for analysis.

Findings from secondary outcome analysis showed:

▪ Positive changes in ADIs' perceptions of and behaviours towards cyclists occurring right after the intervention, but these effects tend to fall over time.

▪ A self-reported intention from the majority of ADIs to change their teaching practices as a result of completing the course. At the intervention stage, 89% said they would teach students differently about how to deal with cyclists safely, and 82% indicated their intention to increase the amount of teaching with each learner about cycle safety.

▪ More than half of ADIs (58% at intervention stage) felt more confident in teaching their students how to deal with cycle riders.

▪ A large proportion of ADIs (75% at intervention stage) believe the course will help them improve how they teach learner drivers and will make them a better driving instructor (87%).

Limitations

There are some limitations to the analysis contained in this report, of which readers should be aware.

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[1] These percentages were weighted using attrition weights.

[2] The latter result was only marginally statistically significant after applying the Bonferroni adjustment for multiple testing.

▪ **Impact of COVID-19.** The pandemic resulted in the postponement of both the intervention and the evaluation by 12 months in order to maximise the effectiveness of the learning and ability to measure outcomes. The intervention relaunch, however, coincided with ADIs' return to work and increased workloads.

▪ **Recruitment of ADIs was more difficult than anticipated**, largely due to the timing of the pilot launch and the return of ADIs to work after COVID-19. The final number of ADIs recruited to the trial was 2,339 (approximately 58% of the initial target of 4,000).

▪ **This resulted in small sample sizes for analysis**. This meant it was more difficult to detect statistically significant effects, and a larger sample size would have been needed to imply a causal relationship.

▪ **ADI recruitment was heavily reliant on targeted communications by the DVSA** and was the most effective channel of recruitment compared to other methods used. The majority of recruitment channels involved online promotional activity over which there was limited control.

▪ There were a small number of technical issues **relating to the implementation of the learning and surveys.** These included: unknown IDs and duplicated IDs (which reduced sample sizes), an imbalance in the number of participants within the Treatment and Control group at the endline survey stage (making the effect size larger), and some device compatibility issues preventing participants in taking part.

▪ **The technical infrastructure used to deliver the intervention, i.e. the online platform, did not fully support completion of the surveys within the customer journey**. The intervention survey was presented to participants separately after completion of the survey which meant that who did not complete the learning did not access the intervention survey, or even participants who had completed the learning may not have realised that there was an intervention survey to complete afterwards.

▪ **Only 15% of recruited ADIs completed the learning**. This made it difficult to understand the nature of ADIs' engagement with the learning materials. Reasons behind ADIs not completing the learning are not clear, but it does call into question the design of the course and the incentives to complete the learning package.

1 Introduction

The Approved Driver Instructor (ADI) Cycle Awareness Pilot project has been funded under the Department of Transport's (DfT's) Cycling and Walking Infrastructure Strategy. The pilot aimed to raise awareness of why people cycle and how cyclists behave, and to help new drivers interact positively with cyclists by improving the availability of cycle awareness learning resources for ADIs, with the assumption that attitudinal changes will translate into changes in behaviour. The pilot also aimed to test the effectiveness of practical cycle training for ADIs and online learning resources for ADIs and learner drivers in meeting these aims, across eight areas with high levels of cycling activity and cycle training instructors: Bristol, Cambridge, Exeter, Inner London, Manchester, Norwich, Oxford, and York. The rationale for the intervention has been outlined in Chapter 2.

Ipsos UK was commissioned in March 2020 to support the Bikeability Trust with the design and implementation of a randomised control trial (RCT) to evaluate the impact of the package on ADIs' attitudes, knowledge, and awareness towards cyclists. As a result of the COVID-19 pandemic and the suspension of driving lessons, the launch of the pilot was postponed from May 2020 to May 2021, and so the evaluation was also postponed in order to align with this. The practical training saw limited sign-up from ADIs, largely due to the effects of COVID-19, and eventually the decision was made by the Bikeability Trust to continue with the online learning course only. For this reason, the study does not consider the impact of the practical training course.

1.1 ADI Cycle Pilot Theory of Change

This section sets out the logic model for the ADI Cycle Awareness Pilot which determined the primary and secondary outcome measures for the evaluation. Primary outcomes measure the success of the intervention, as laid out in the Theory of Change. Secondary outcomes supplement the results of primary outcomes, by adding information that can be useful to help interpret the primary outcomes. It also describes the longer-term effects of the intervention, although it should be noted that the trial did not allow for measurement and attribution of the impacts referenced in the logic model. A comprehensive narrative of the inputs and activities, and how these are expected to be translated into immediate outputs, outcomes, and longer-term impacts is included in Appendix A.

1.1.1 Intervention rationale

Although cyclists account for less than 1% of all road traffic in the UK, cycle traffic has been growing since 1993.[3] There are also high-density hotspots in certain cities where the increase in cycling (and the proportion of cyclists to other road users) is much higher than the national average.[4] Although fatality rates (measured as fatalities per mile cycled) have declined since 2004[5], evidence from the National Travel Attitudes Survey suggests that cycling is perceived as risky, with around 60% of the British population agreeing or strongly agreeing that it is too dangerous for them to cycle on the roads.[6]

Prior to developing the ADI Cycle Awareness pilot, the Bikeability Trust carried out a small-scale survey of ADIs to gain a better understanding of their perceptions of cyclists and identify which cycle awareness learning resources ADIs would find most helpful for preparing new drivers to share the roads with cycle

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[3] https://www.cyclinguk.org/statistics

[4] https://www.cyclinguk.org/statistics

[5] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/834585/reported-road-casualties-annual-report-2018.pdf

[6] https://www.gov.uk/government/statistical-data-sets/national-travel-attitudes-study-ntas

riders. Most ADIs who responded to the survey did not cycle regularly and were unlikely to have received cycle training personally or professionally. Very few were aware of the UK National Standard for Cycle Training or the Bikeability Trust, which is currently offered to 50% of schools. Their interactions with cyclists were often limited to their own experiences as drivers and driving instructors.

Free text responses to open-ended questions in this survey revealed a range of views amongst the ADIs surveyed, including some negative views towards cyclists. The survey also suggested that ADIs perceived some learner drivers to hold negative views regarding cyclists and demonstrated limited understanding of the rules regarding their behaviour on the road. These included views that cyclists were unpredictable and do not abide by the rules of the road. Specific examples given (such as cycling far away from the kerb, not always using cycle lanes and riding two abreast) suggested that such views may stem from a lack of understanding of the behaviours advised in the National Standard for Cycle Training.[7]

A 2017 paper on cycling by the Royal Society for the Prevention of Accidents which reviewed the results of studies looking into different aspects of cycling safety also found some evidence of negative attitudes towards cyclists amongst motorists. The paper highlighted that no formal evaluations have been conducted into cycle awareness schemes to determine their effectiveness, but recommended training and education programmes as part of a package of measures designed to increase cycling safety and improve relationships between different road users.[8]

The Bikeability Trust survey showed an interest in training and resources promoting awareness and understanding of cyclists amongst ADIs. 77% of respondents from the (reduced) final analysis sample stated that they would welcome additional cycle awareness learning resources. When asked what resources would be most useful, responses were varied. In general, however, a mixture of practical training and online learning including video and computer generated clips, interactive quizzes and factsheets which can be shared with learner drivers, were preferred.

1.1.2 Intervention description

The ADI Cycle Awareness Pilot project is funded under DfT's Cycling and Walking Infrastructure Strategy. The pilot aims to raise awareness of how and why people cycle, and help new drivers interact positively with cyclists by improving the availability of cycle awareness learning resources for ADIs and learner drivers.

The ADI Cycle Awareness Pilot intervention included the following components:

- Content which makes up the online learning materials (including videos, presentations, quizzes etc.)

- Technical infrastructure (online platform to facilitate registration of users, access to the learning package, delivery of online learning materials and quizzes, the intervention and endline surveys)

The online learning course was self-guided and delivered through an online platform using Learndash software. The course consisted of four modules delivered sequentially, consisting of a mixture of videos, downloadable factsheets and sample dialogues that can be shared with learner drivers, and interactive quizzes. The content was designed to be engaging and interactive, in order to maximise completion

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[7] ADI Cycle Awareness Pilot: survey report appendix, Bikeability, January 2019
[8] https://www.rospa.com/rospaweb/docs/advice-services/road-safety/cyclists/cycling-policy-paper.pdf

rates and to deliver the longer-term attitudinal and behavioural changes described under outcomes and impacts below. Table 1.1 below provides an overview of the content of the online learning course.
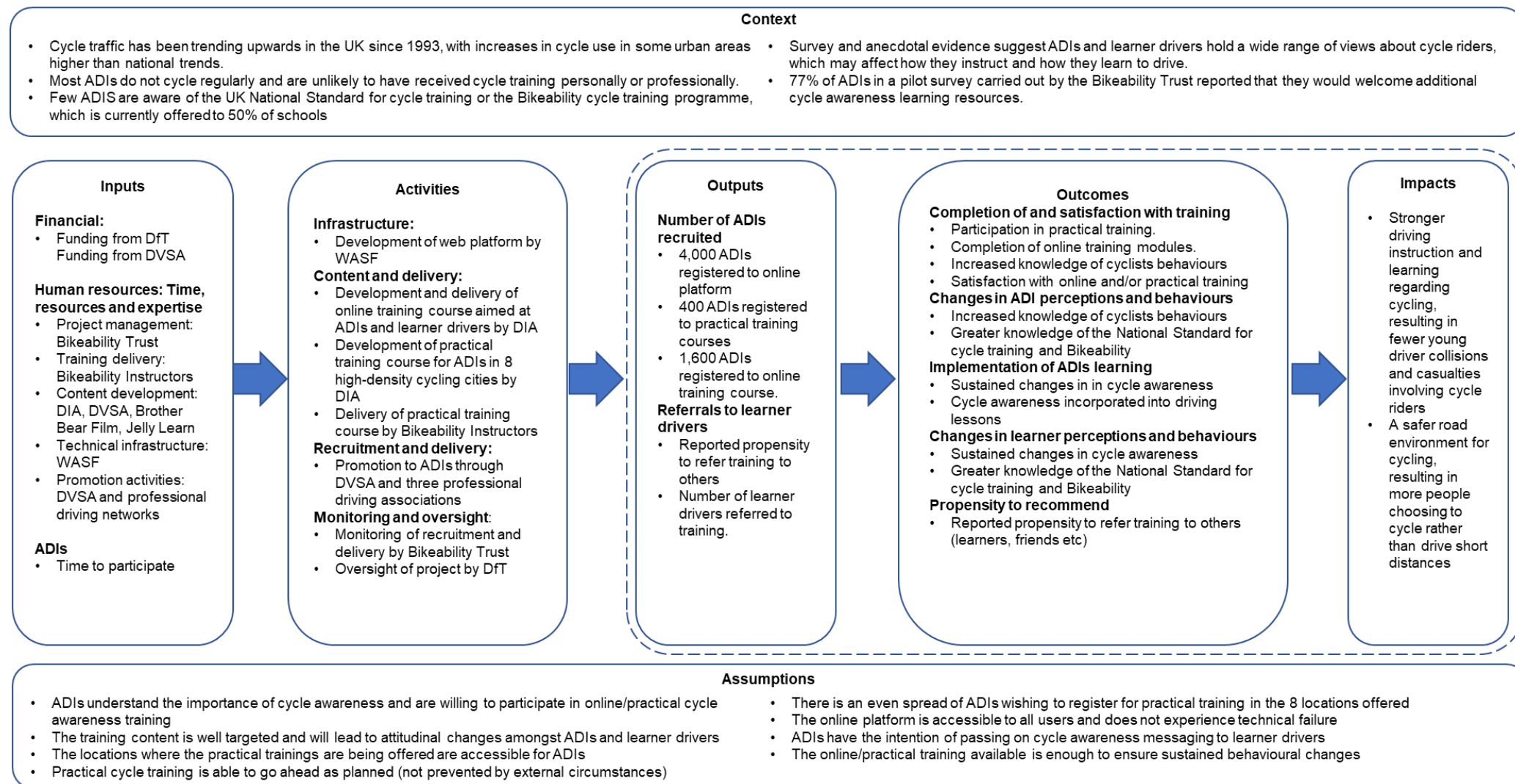
Table 1.1: Online learning module structure

	▪ **Topics**	**Quizzes**
Lesson 1: Sharing the road	▪ Riding and driving together ▪ Benefits of active travel ▪ Driving with cycle riders ▪ Driver and cycle training ▪ Driver and cycle rider conversation: sharing the road	1. Riding and driving together 2. Junctions 3. The car door 4. Sharing the road
Lesson 2: The law and Highway Code	▪ Cycling and the law ▪ PPE and riding side by side ▪ Vehicle checks ▪ Where is cycling permitted?	1. Cycling infrastructure 2. Cycle lanes 3. Riding two abreast 4. The law and the Highway Code
Lesson 3: Training and National Standards	▪ Cycling and driving national standards ▪ Similarities between the cycling and driving national standards ▪ Bikeability and learning to drive a car ▪ Conversation: training and the national standards	1. Passing parked vehicles and queueing traffic 2. Trained cycle rider 3. Crossroads 4. Training and the National Standards
Lesson 4: Driving with cycle riders	▪ Junctions ▪ Overtaking ▪ Communication ▪ Turning into side roads ▪ Conversation: driving with cycle riders	1. Communications at crossroads 2. Cycle rider turning right 3. Roundabout 4. Crossroads 5. Overtaking 6. Passing a cycle rider at a junction 7. Side roads 8. Sharing space at a junction with riders 9. Multi-lane junctions 10. Driving with cycle riders

Source: Bikeability Trust

The logic model for the intervention is set out in Figure 1.1: below. The narrative Theory of Change to accompany the logic model, which was developed as part of the planning stage, is outlined in Appendix A.

Figure 1.1: Logic model (May 2020)

Context

- Cycle traffic has been trending upwards in the UK since 1993, with increases in cycle use in some urban areas higher than national trends.
- Most ADIs do not cycle regularly and are unlikely to have received cycle training personally or professionally.
- Few ADIS are aware of the UK National Standard for cycle training or the Bikeability cycle training programme, which is currently offered to 50% of schools

- Survey and anecdotal evidence suggest ADIs and learner drivers hold a wide range of views about cycle riders, which may affect how they instruct and how they learn to drive.
- 77% of ADIs in a pilot survey carried out by the Bikeability Trust reported that they would welcome additional cycle awareness learning resources.

Inputs

Financial:
- Funding from DfT Funding from DVSA

Human resources: Time, resources and expertise
- Project management: Bikeability Trust
- Training delivery: Bikeability Instructors
- Content development: DIA, DVSA, Brother Bear Film, Jelly Learn
- Technical infrastructure: WASF
- Promotion activities: DVSA and professional driving networks

ADIs
- Time to participate

Activities

Infrastructure:
- Development of web platform by WASF

Content and delivery:
- Development and delivery of online training course aimed at ADIs and learner drivers by DIA
- Development of practical training course for ADIs in 8 high-density cycling cities by DIA
- Delivery of practical training course by Bikeability Instructors

Recruitment and delivery:
- Promotion to ADIs through DVSA and three professional driving associations

Monitoring and oversight:
- Monitoring of recruitment and delivery by Bikeability Trust
- Oversight of project by DfT

Outputs

Number of ADIs recruited
- 4,000 ADIs registered to online platform
- 400 ADIs registered to practical training courses
- 1,600 ADIs registered to online training course.

Referrals to learner drivers
- Reported propensity to refer training to others
- Number of learner drivers referred to training.

Outcomes

Completion of and satisfaction with training
- Participation in practical training.
- Completion of online training modules.
- Increased knowledge of cyclists behaviours
- Satisfaction with online and/or practical training

Changes in ADI perceptions and behaviours
- Increased knowledge of cyclists behaviours
- Greater knowledge of the National Standard for cycle training and Bikeability

Implementation of ADIs learning
- Sustained changes in in cycle awareness
- Cycle awareness incorporated into driving lessons

Changes in learner perceptions and behaviours
- Sustained changes in cycle awareness
- Greater knowledge of the National Standard for cycle training and Bikeability

Propensity to recommend
- Reported propensity to refer training to others (learners, friends etc)

Impacts

- Stronger driving instruction and learning regarding cycling, resulting in fewer young driver collisions and casualties involving cycle riders
- A safer road environment for cycling, resulting in more people choosing to cycle rather than drive short distances

Assumptions

- ADIs understand the importance of cycle awareness and are willing to participate in online/practical cycle awareness training
- The training content is well targeted and will lead to attitudinal changes amongst ADIs and learner drivers
- The locations where the practical trainings are being offered are accessible for ADIs
- Practical cycle training is able to go ahead as planned (not prevented by external circumstances)

- There is an even spread of ADIs wishing to register for practical training in the 8 locations offered
- The online platform is accessible to all users and does not experience technical failure
- ADIs have the intention of passing on cycle awareness messaging to learner drivers
- The online/practical training available is enough to ensure sustained behavioural changes

A web platform was developed and delivered by an external delivery partner in collaboration with the Bikeability Trust. All participants were directed to the platform to enrol in the trial, receive the learning, and partake in the surveys for data collection to monitor the effectiveness of the intervention. During enrolment, the platform served as a participant allocation and data collection tool.

1.2   Evaluation objectives

The objectives of the evaluation have been informed by pilot's Theory of Change set out in Appendix A of this report, which was co-developed with the Bikeability Trust. The aims of the study are to assess the impact of the learning modules on:

- ADI professional practice

- ADI and learner driver attitudes and awareness

The timeframe and design of the intervention did not allow for measurement of behavioural change; therefore the primary research objective was to understand the impact of the learning package on the attitudes of participating ADIs and learners towards cyclists. A set of primary and secondary aims and objectives were agreed at the outset (see Appendix A) to answer the following evaluation questions.

- Does the Bikeability cycle awareness learning package improve cycle awareness and attitudes amongst ADIs and learner drivers?

- Are ADIs incorporating cycle awareness into driving lessons as a result of taking part in the learning?

- Are the learning materials satisfactory amongst ADIs and learner drivers?[9]

- Would ADIs recommend the learning to peers?

- Has the pilot study and training course increased the awareness of the National Standard for Cycle Training and the Bikeability Trust amongst ADIs and learner drivers?

1.3   Structure of this report

This report is structured as follows:

- **Chapter 2** sets out the methodology underpinning this report

- **Chapter 3** describes the study's challenges and limitations.

- **Chapter 4** sets out findings related to the intervention and its processes.

- **Chapter 5** presents the results of the impact analysis for the primary outcomes and descriptive analysis for the secondary outcomes.

- **Chapter 6** provides the final conclusions from the evaluation and lessons learned for policy makers, analysts, and other stakeholders.

The report is supported by three appendices:

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[9] A total of 33 learner drivers registered for the trial, but none completed both the intervention and endline surveys. It has therefore not been possible to conduct descriptive analysis for the learner driver group.

- Programme theory of change and outcomes framework

- Survey questionnaires

- A technical annex detailing the analytical approach taken for the impact evaluation.

- Programme theory of change and outcomes framework

- Survey questionnaires

2 Methodology

An RCT was implemented to assess the impact of the learning materials. ADIs were recruited to the pilot and then either randomly allocated to a treatment group that was granted access to the learning materials, or a comparison group that was not granted access until the end of the pilot. Regression analysis was carried out to determine the level of impact, if any, the learning materials had on ADIs' attitudes, knowledge, and awareness.

2.1.1 Eligibility Criteria

ADIs registered with the Driving and Vehicle Standards Agency (DVSA) were eligible to participate in the trial. Their learner drivers were also granted access to an online cycle awareness learning course which they could access by using their instructor's username. At the time of planning, there were 40,000 ADIs registered with the DVSA. All of these individuals were invited to participate in the trial (see Section 6.1.2).

The original design of the intervention included practical training and online learning. The practical training was due to be offered in the following locations: Bristol, Cambridge, Exeter, Inner London, Manchester, Norwich, Oxford & York. There were 400 places available for the practical training and were offered on a first-come, first-served basis. The practical training saw limited sign-up from ADIs, largely due to the effects of COVID-19, and eventually the decision was made by the Bikeability Trust to continue with the online learning course only. For this reason, the study does not consider the impact of the practical training course.

2.1.2 Recruitment

Recruitment activity was led by the Bikeability Trust with support from the DVSA, the Driving Instructors Association (DIA) and contracted learning providers. The recruitment window for the trial was between April 2021 and March 2022. The learning course was promoted to ADIs using the DVSA register and other dissemination channels including:

- Emails (DVSA, DIA, Bikeability Trust, related organisations)

- Social media posts (Facebook and Twitter)

- Webinars

- Magazine adverts

- News pieces (DIA)

These materials directed participants to the Cycle Savvy website, where they were then guided through the enrolment process before being allocated to the treatment or control group. The treatment group was then offered the option to sign up for their preferred course(s). Three follow-up emails were sent to remind participants of the opportunity to sign up to the pilot and to complete the intervention and endline surveys (discussed below).

2.1.3 Enrolment

Participants enrolled for the trial using the Cycle Savvy website. During enrolment, and before being given access to the learning offer, participants were required to fill in a registration form including the

necessary consents, specific attributes (such as gender and location) and a baseline survey. Following enrolment, members of the treatment group were given access to the learning offer. Members of the control group participants were informed that they will be given access to the materials following a waiting period.

2.1.4 Allocation

All participants who were recruited to the study were randomly allocated into the treatment and control groups following completion of the baseline survey, for the purposes of evaluating the intervention and delivery of the intervention and endline surveys. The first participant to register was randomly allocated to either the treatment or control group, and subsequent participants were allocated to treatment and control group following an odd-even pattern.

2.1.5 Data collection

Once in the trial, participants in the treatment group were given access to the course, following which they were asked to complete an intervention survey. The purpose of this survey was to capture views on content and satisfaction with the course. Website data (such as test scores, length of time to complete) were collected for descriptive analysis. The results of this were not used in the statistical analysis.

Two months after completing the learning course, treatment participants were asked to complete an endline survey. This followed the same format as the baseline survey in order to understand and quantify changes to ADIs' attitudes and awareness towards cyclists and cycle behaviour. The control group were asked to complete the endline survey three months after they had signed up to the trial, after which they were able to register for the online learning.

The participant journey has been set out graphically in Figure 2.1: below.

Figure 2.1: Participant journey
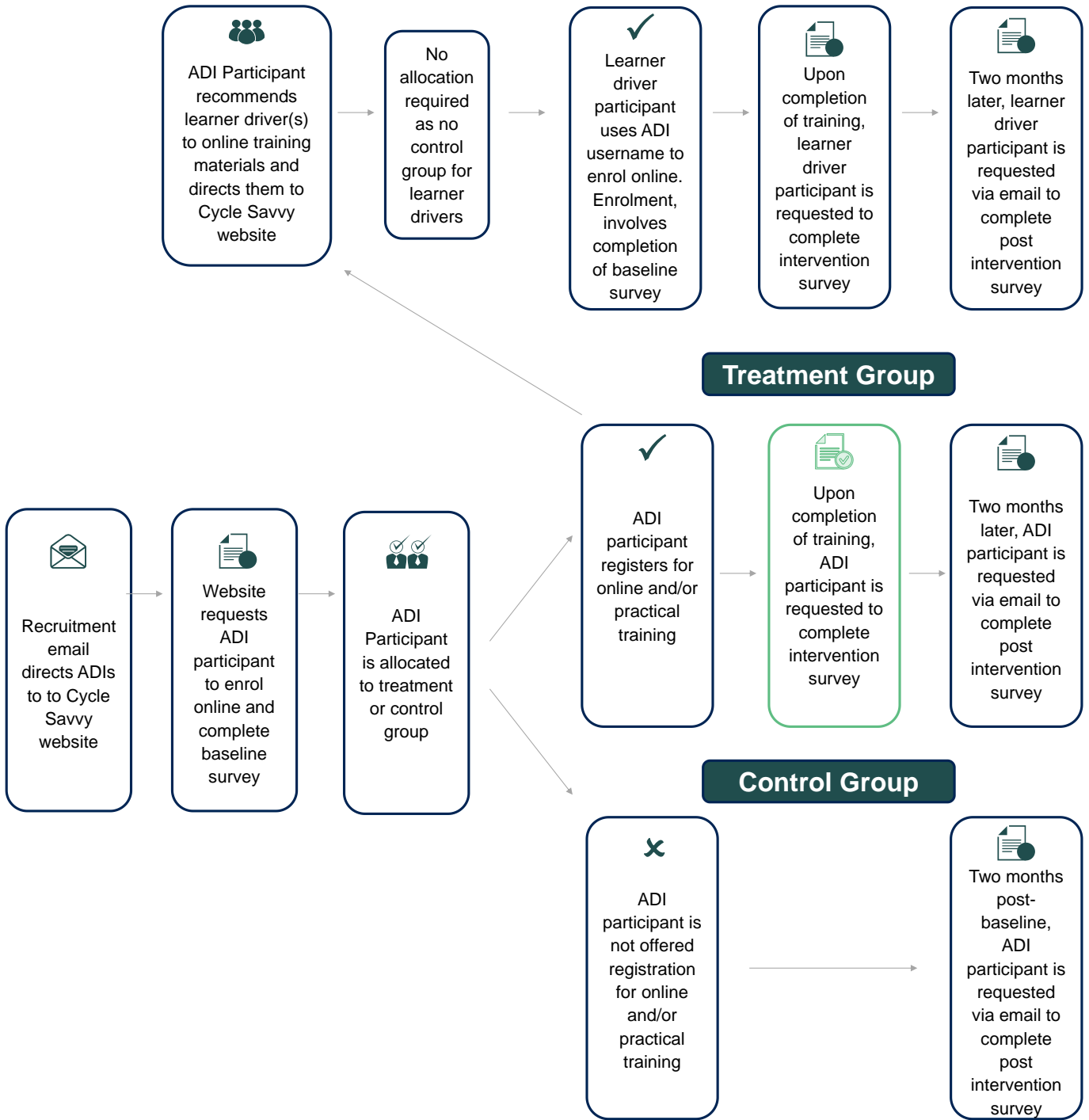
2.1.6 Analysis

The impact analysis assessed the effect of the learning course on 13 attitudinal statements using regression analysis. These analyses compared changes in attitudes before and after learning across the treatment and comparison groups across a three-month period. Appendix C details the analytical approach taken for the impact evaluation.

2.1.7 Limitations of this study

There are six main limitations to the analysis contained in the report which readers should be aware of:

▪ **Impact of Covid-19.** The start of the COVID-19 pandemic coincided with the planned launch of the pilot in March 2020, proceeded by the evaluation in May 2020. As a result, driving lessons were suspended and it was agreed that the pilot and the evaluation should be postponed by 12 months in order to maximise the effectiveness of the learning and ability to measure outcomes. In this time it was expected that the return to 'business as usual' would encourage sign up to both the practical and online learning. In May 2021 however, the uptake of online learning was hampered by the fact that this timing coincided with ADIs' return to work, which saw a backlog of learners and workloads. In addition, the practical training saw limited sign-up from ADIs, and eventually the decision was made by the Bikeability Trust to continue with the online learning course only. For this reason, the evaluation does not consider the impact of the practical training course

▪ **Recruitment of ADIs was more difficult than anticipated**, largely due to the timing of the pilot launch and the return of ADIs to work after COVID-19. The recruitment window was extended from September 2021 to March 2022 to allow more time for ADIs to be recruited. However, the final number of ADIs recruited to the trial was 2,339 (approximately 58% of the initial target of 4,000).

▪ **Research with learner drivers has not been possible due to low uptake and high attrition.** A total of 33 learner drivers registered for the trial, but none completed the intervention or endline survey. It has therefore not been possible to include learner driver findings into the descriptive analysis as originally planned.

▪ Due to the timing of the study (which only observed three months of data) **it was not possible to analyse long-term changes in behaviour**. Instead the study focuses on short term changes in attitudes and self-reported intentions to change behaviour as a proxy for behaviour change

▪ There were also a small number of technical issues **relating to the implementation of the learning and surveys.** These include:

  − Unknown IDs: there were 33 unknown IDs (10 in the treatment group, 23 in the control group) in the endline survey (4% of the 866 original responses received for the endline survey) and 4 unknown IDs in the intervention survey (or 2% of the 235 original responses received for the intervention survey). This may have been due to an issue with the technical infrastructure; for example, using a different email address to complete the subsequent two surveys. Unknown IDs prevented linkages between baseline and endline surveys, therefore the cases were removed from the analysis which reduced the sample size.

  − Duplicated IDs: there were 42 repeated IDs in the intervention survey, and 1758 in the endline survey (19 in the treatment group, 156 in the control group). In these cases, the first response or completed survey was used for the analysis. As a result of removing duplicated IDs, sample size was reduced by 18% in the intervention survey, and by 20% in the endline survey. It is assumed that respondents may have completed the surveys more than once as a result of receiving reminder emails.

  − An imbalance in the number of participants in the treatment and control groups at the endline stage (71% in the control group and 29% in the treatment group). A possible reason for this may be due to technical infrastructure – e.g. the ability to complete the survey without completing the learning, or no distinct button to press to confirm learning completion. This imbalance makes the effect size larger and decreases the effect detectable with the available sample.

− Some users reported mobile phone compatibility issues, in particular with Apple devices. Support staff were unable to resolve this issue, which meant these participants could not be part of the trial.

3 Study challenges and limitations

A number of challenges to the study have been identified and should be considered alongside the results. These findings are largely process-related and have been collated through ongoing steering group meetings and ADIs' responses to the intervention survey. Such findings shed light on contextual factors and challenges to the study which provide an important backdrop to the impact evaluation results.

▪ Recruitment of ADIs was more difficult than anticipated, largely due to the timing of the pilot launch and the return of ADIs to work after COVID-19. Recruitment for the pilot was originally planned for May 2020. However, due to the COVID-19 pandemic and the suspension of driving lessons in Spring 2020, the study was delayed by 12 months to maximise the effectiveness of the learning. It was hoped that this delay would allow ADIs to be able to attend the practical training and online learning during a period of 'business as usual' and give them time to incorporate elements of the course within their teaching. When the study was restarted in May 2021, the uptake of online learning was hampered by the fact that this timing coincided with ADIs' return to work. This led to a widely reported backlog of learners. The closure of the recruitment window was extended from September 2021 to March 2022 to allow more time for ADIs to be recruited. However, the final number of ADIs recruited to the trial was 2,339 – approximately 58% of the initial target of 4,000.

▪ ADI recruitment was heavily reliant on targeted communications by the DVSA, which was a more effective channel of recruitment compared with other methods used. The majority of recruitment channels involved online promotional activity over which there was limited control.

▪ Of the total number of ADIs recruited to the trial, only 15% completed the learning (determined by the number of ADIs who completed the endline survey). This presented a challenge to obtaining a clear understanding of the nature of ADIs' engagement with the learning material. Reasons behind ADIs not completing the learning are not clear, but it does call into question the design of the course and the incentives to complete the learning package.

▪ The technical infrastructure used to deliver the intervention – the online platform – did not fully support completion of the surveys throughout customer journey. The baseline survey was built into the registration form, which encouraged 100% completion at the baseline. The intervention survey was presented to participants separately after completion of the online learning. This meant that participants who did not complete the learning could not access the intervention survey, and even participants who had completed the learning may not have been prompted to complete the intervention survey.

▪ Only 15% of the treatment group and 38% of the control group completed the endline survey, which provided small sample sizes for analysis. This has two main consequences:

 − It is more difficult to detect statistically significant effects if sample sizes are small. The original power calculations showed that with 2,000 participants at the endline point would have detected an effect of around +/- 4%. The analysis showed that changes were in general much smaller than this percentage, and therefore a larger sample size would have been needed to imply a causal relationship between these changes and the course.

 − The results may suffer from attrition bias. Attrition bias may have occurred if the participants who completed the endline survey differed characteristically to those who did not complete the

survey. For example, if only the participants who were satisfied with the course decided to respond to the survey, the results of the analysis would risk being biased towards showing positive results. Although attrition weights have been applied to the baseline-endline comparisons to mitigate this issue, this procedure cannot account for unobservable sources of bias, hence this should be noted when interpreting the regression results.

4 Intervention survey findings

This chapter presents the findings of the intervention survey that participants received after completing the online learning.

4.1 Recruitment

The figures below present an overview of some characteristics of the participants recruited into the trial at the baseline. The majority of participants were between 45 and 64 years old and male. More than half of the participants reported that they had not cycled within the last month. These characteristics are very similar at baseline for the treatment and control group, indicating that randomisation was successful.

Figure 4.1: Participants profile by age group and treatment arm
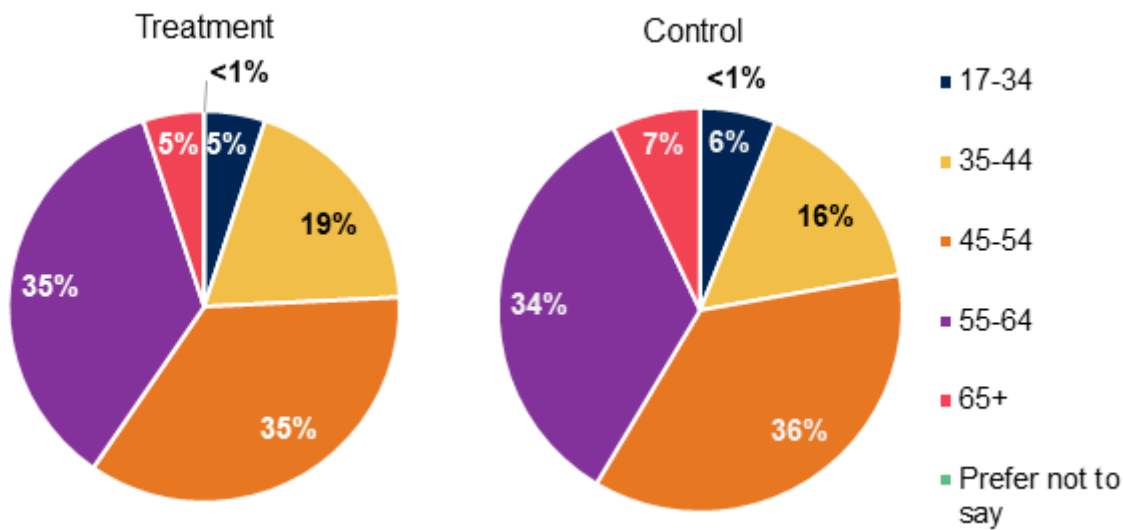
Figure 4.2: Participants profile by sex and treatment arm
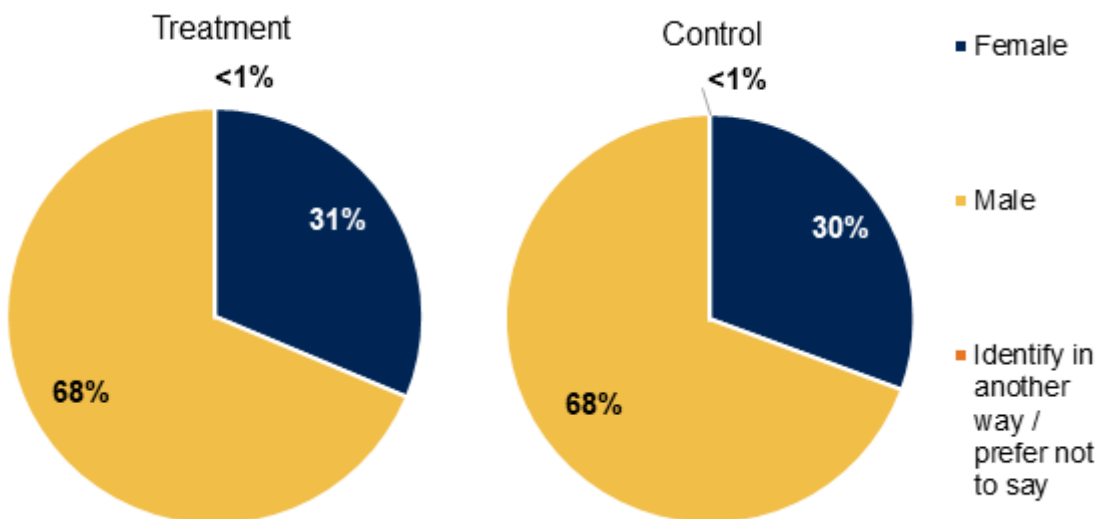
**Figure 4.3: Participants profile by frequency of cycling and treatment arm**
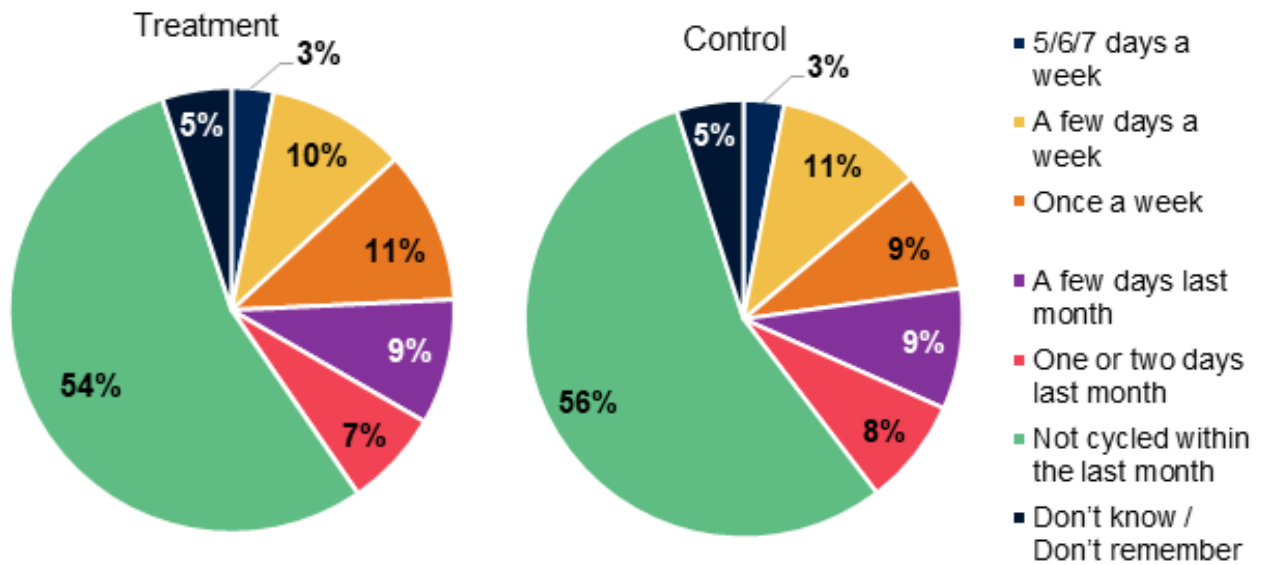
From a process perspective, many recruitment channels were tried and tested, but it is clear that **the DVSA were key to promoting the course.** The Bikeability Trust recorded all promotional activity which they undertook to promote the course and recruit ADIs to the trial. This is set out in Table 4.1 below.

Table 4.1: Promotional activity led by the Bikeability Trust

Promotional activity	Reach
Emails to all DVSA members	Approx. 40,000
DVSA direct email	37,155 recipients. Open rate 59% (21,659), unique click throughs to website 4% (1,615)
Social media posts through the DIA	15,000 across Facebook & Twitter. 10,000 impressions, 300 engagements, 124 clicks
DIA emails	25,000 reached
Facebook posts through the Bikeability Trust	2600 reached, 292 engaged
Twitter posts through the Bikeability Trust	7,043 reached, 156 engaged
Emails to Bikeability Instructors (by the Bikeability Trust)	1,513 reached, 2.3% click-through (35)
Motor Schools Association of Great Britain webinar	At least 70 reached
DIA webinar	210 YouTube subscribers + 800 reached through Facebook live stream
DIA magazine adverts	8,600 readers
DIA driver trainer news piece	8,000 subscribers
Emails from other related organisations, e.g. Honest Truth, Intelligent Instructor, First Car	461 reached

DVSA emails were more successful at recruiting participants than other channels, as demonstrated in Figure 4.4 below, where each email sent is denoted by the red line.

Figure 4.4: Recruitment levels over time against DVSA emails
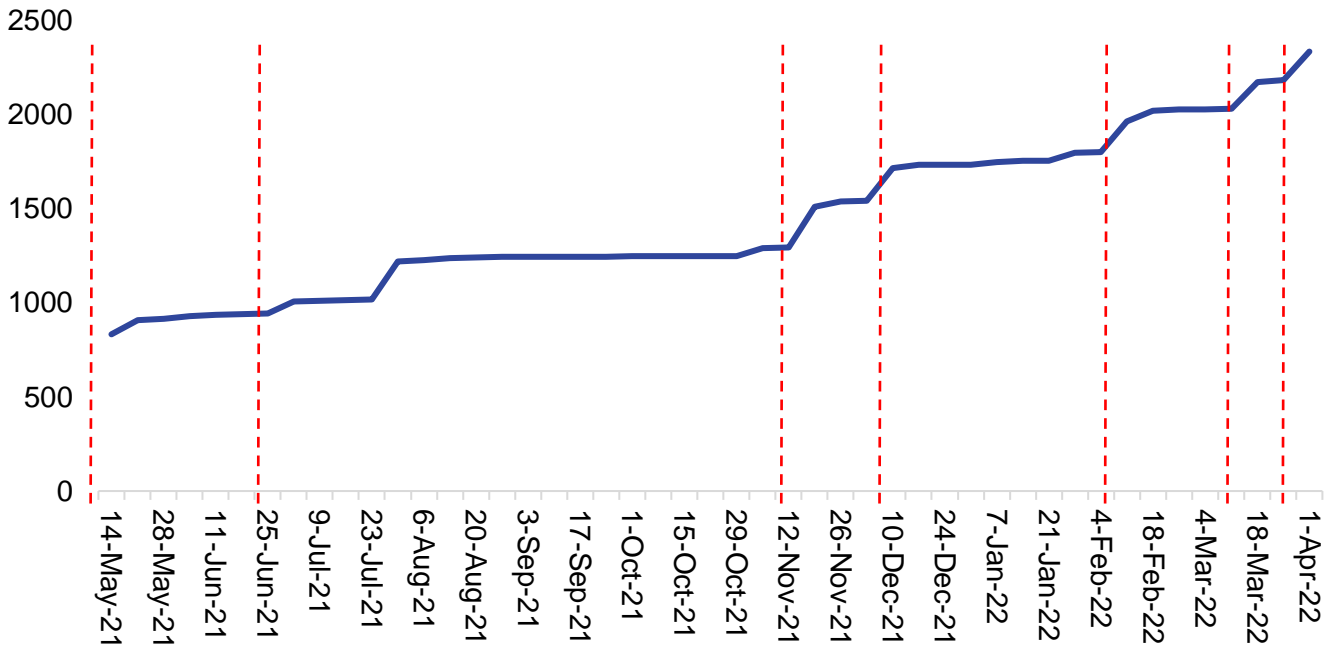
Source: Ipsos UK

Although DVSA emails were the most successful form of recruitment, there were anecdotal reports from the Bikeability Trust that the number of emails DVSA could send was limited due to competing priorities. This was true also for other organisations, such as driving schools. Although it would have been desirable to have greater engagement for assistance in recruitment, it should be noted that the trial was undertaken in a challenging period (both during and after COVID-19 periods) and several organisations were still able to support in some way despite this. The Bikeability Trust also suggest that ADIs believed there were too many communications advertising the course (some because they were in the control group and could not access the learning, and some because they had done it, but believed the new adverts were relating to a new course or update and then tried to register again).

4.2 Engagement with the learning

ADIs' engagement with learning materials was difficult to measure due to low course completion rates. Of the total number of ADIs recruited, only 15% completed the course[10] and therefore the findings are not representative for the intervention as a whole. The study did not involve engagement with people who did not complete the surveys and therefore it has not been possible to understand reasons behind this. Table 4.2 below outlines how attrition rates compare across treatment arms, with the control group retaining more participants across the three-month period than the treatment group. Attrition was also more concentrated amongst participants aged over 55.

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[10] This percentage is assumed based on the number of ADIs who completed the endline survey.

Table 4.2: Participant numbers and attrition rates by treatment arm and study stage

	Treatment	Attrition	Control	Attrition
Baseline	1,169		1,170	
Intervention	186	84%		
Endline	179	85%	450	62%

Of those who completed the course, average total points scored and time spent taking each quiz varied across the four modules. Table 4.3 below shows the average total points scored for each quiz, which ranged from 54% to 87%, and average time spent taking each quiz. When asked which components of the course were most useful, *Sharing the road together and driver and cycle attitudes* scored the highest (74%), followed closely by *The National Standards for Cycling and Driving* (60%) and *Junctions* (60%). Participants were also asked which elements of the delivery and presentation of the course (CGI clips, videos, quizzes and conversations) were most engaging. Both **CGI clips and videos were most popular amongst participants**, with conversations scoring the lowest.
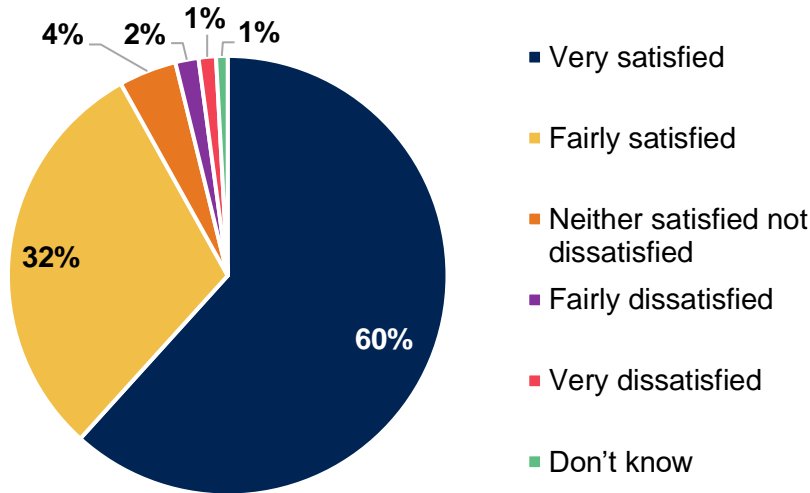
Table 4.3: Average total points and time spent across quizzes

	Quizzes	Average total points scored	Average time spent (mins)
Lesson 1: Sharing the road	1. Riding and driving together	84%	4:58
	2. Junctions	64%	5:25
	3. The car door	86%	4:36
	4. Sharing the road	82%	3:18
Lesson 2: The law and Highway Code	1. Cycling infrastructure	63%	4:19
	2. Cycle lanes	85%	3:26
	3. Riding two abreast	79%	4:28
	4. The law and the Highway Code	86%	2:21
Lesson 3: Training and National Standards	1. Passing parked vehicles and queueing traffic	82%	3:49
	2. Trained cycle rider	74%	6:16
	3. Crossroads	86%	4:12
	4. Training and the National Standards	85%	3:31
Lesson 4: Driving with cycle riders	1. Communications at crossroads	89%	3:03
	2. Cycle rider turning right	88%	5:07
	3. Roundabout	79%	3:31
	4. Crossroads	60%	7:57
	5. Overtaking	84%	2:49
	6 Passing a cycle rider at a junction	87%	2:46
	7 Side roads	87%	3:18
	8 Multi-lane junctions	77%	3:08
	9 Sharing space at a junction with riders	90%	3:20
	10. Driving with cycle riders	82%	2:07

4.3   ADI self-reported outcomes

The majority of participants (60%) reported that they were very satisfied with the content, with a further 30% responding 'fairly satisfied'. Only 1% were very dissatisfied with the content of the course, possible reasons for this are discussed below. Figure 4.5 below shows the levels of satisfaction amongst participants with the content of the course.
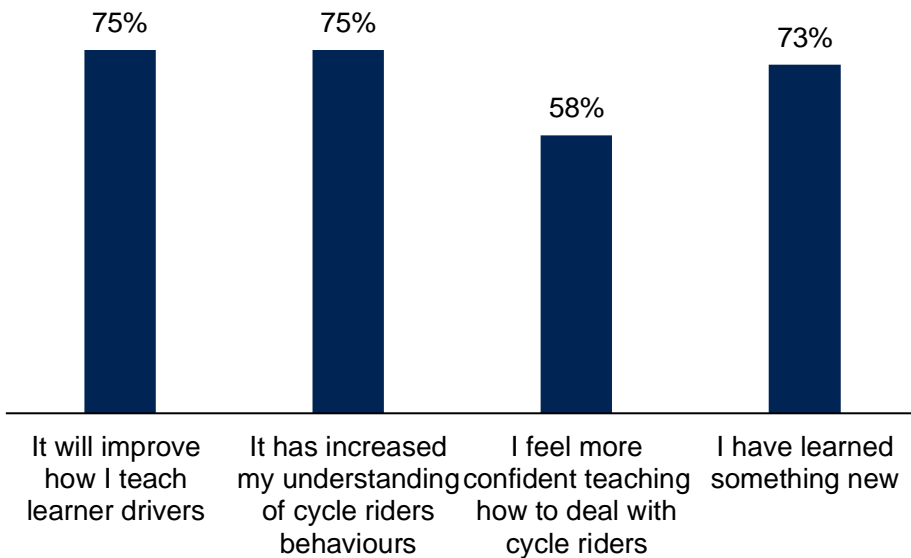
Figure 4.5: Participant course satisfaction

Pie chart legend:
- Very satisfied
- Fairly satisfied
- Neither satisfied not dissatisfied
- Fairly dissatisfied
- Very dissatisfied
- Don't know

Values: 4%, 2%, 1%, 1%, 32%, 60%

Source: Ipsos UK analysis

Nearly all respondents felt they had benefitted in some way from participating in the course.
Figure 4.6below shows that ADIs believed they would take some learning away from the course, including how they teach their learner drivers, their level of understanding of cyclists' behaviours and learning something new.

Figure 4.6: Self-reported outcomes for ADIs as a result of the course

75%	75%	58%	73%
It will improve how I teach learner drivers	It has increased my understanding of cycle riders behaviours	I feel more confident teaching how to deal with cycle riders	I have learned something new

Source: Ipsos UK analysis

Nearly all (92%) respondents indicated that they would recommend the course to other ADIs. When asked for reasons why, these included:

- *'It made me more aware of things I took for granted'*

- *'The knowledge gained in here is very good'*

- *'To help them understand the correct methods used by cyclists'*

▪ *'It's always useful to share information, knowledge and experiences hopefully to make the roads a safer place for us all'*

▪ *'Definitely helped to dispel some of the myths'*

▪ *'Very useful to learn about cyclists' behaviour and road position choices'*

▪ *'It is important for all driver trainers to be as aware of other road user feelings and thoughts to make our learners more accepting of them'*

▪ *'All road users should know more about those they share the road with'*

▪ *'The course raises the knowledge levels of non-cyclists and those with little interest in cycling'*

▪ *'Lots of good information that any driver (learner, experienced or instructor) can benefit from'*

When asked if anything about the course could be improved, 34% responded 'Yes' with 39% responding 'No'. 27% did not know. For those who responded 'Yes', the responses could be categorised into the following groups:

▪ **Accessibility:** many respondents completed the learning on their phones or tablet devices and reported difficulty when watching the videos and completing the quizzes and surveys. Others commented that the learning should be made more widely available.

▪ **Design:** there were some suggestions to improve the design of the course, such as less written text and more videos, the size of the text used (larger text was suggested) and more Q&A.

▪ **Content:** some respondents suggested more content be included in the course. Examples included: more legal information, greater clarity on the highway code, more real-life clips to illustrate situations, dealing with large cycling groups, dealing with 'not so good' cyclists, and providing content which is more reflective of reality to highlight other road users (it was felt that the course was 'one-sided').

▪ **Conversations:** there were mixed views on the recorded conversations between cyclists and trainers, with some participants mentioning that they felt staged and more natural conversations would be more engaging. There were also some suggestions on the trainer videos, such as having them comment on some of the clips to create a more natural conversation, and to use less formal language to appeal to a younger generation.

▪ **Construct of quiz questions:** there were a number of responses from participants which suggested that the quiz answers were not flexible. One respondent mentioned that they found 'some of the quiz answers a bit ambiguous in that they were deemed wrong but had a bit of sense to them'. This was echoed amongst other participants, who also mentioned that some of the answers were worded poorly which caused confusion. This led some participants to believe that not all answers were marked correctly.

▪ **Time:** a number of participants flagged the amount time needed to complete the course was significant and that a shorter version would be more useful. A couple of respondents also mentioned that there was repetition, which added to the length.

Awareness of the Bikeability Trust amongst ADIs appears to have increased as a result of the course. The learning seems to have significantly improved participants' knowledge of the Bikeability Trust. At the descriptive level, the percentage of participants reporting that they know either 'a great deal' or 'a fair amount' increased from 20% to 47% in the treatment group. Knowledge increased also among the control group but to a lesser extent (from 19% to 25%).[11] A regression framework was used to assess whether the difference was statistically significant. On average knowledge of the Bikeability Trust showed a modest increase – i.e. by 0.41 points on a 1-4 knowledge scale for the treatment group compared with the control group (where 1 is 'nothing at all' and 4 is 'a great deal'). The estimated difference was highly statistically significant (at 1% level).

Table 4.4: *How much, if anything, do you know about the Bikeability Trust?* **Comparison of treatment and control group at baseline and endline**

	Treatment group baseline	Treatment group endline	Control group baseline	Control group endline
Nothing at all	39%	9%	40%	26%
Not very much	41%	43%	42%	49%
A fair amount	19%	41%	16%	21%
A great deal	2%	6%	3%	4%
Observations	**179**	**179**	**450**	**450**

Source: Ipsos UK from ADI baseline and endline surveys. The results were weighted using attrition weights.

Table 4.5: *How much, if anything, do you know about the Bikeability Trust?* **Linear regression results**

	Coefficient	Standard Error
Treatment	0.413***	0.07

*Source: Ipsos UK from ADI baseline and endline surveys. The estimated coefficients indicate the estimated difference in the change from baseline to endline surveys of each attitudinal score between treatment and control group. *** indicates that the reported coefficient is statistically significant at 1 % level. All models include a constant and controls for baseline outcome values. The regressions were weighted using attrition weights.*

A number of suggestions for improvements to the course were put forward by some ADIs (34%), including improving the accessibility and design of the course, suggestions for more or different content, changing the style of recorded conversations, changing the construction of responses for some quiz questions, and the length of the course itself.

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[11] These percentages were weighted using attrition weights.

5 Impact evaluation findings

This chapter sets out the results of the RCT analysis on the primary outcomes (i.e. those that describe the success of the intervention), namely attitudes towards cyclists among ADIs. The chapter also presents a descriptive analysis of the secondary outcomes to add further explanation to the primary outcome results.

5.1 Trial design

The trial design was a pipeline RCT with participants allocated to treatment and control groups from a randomised start point. The trial tested the effectiveness of the Bikeability Trust's package of learning materials by measuring and comparing perceptions and attitudes towards cyclists amongst ADIs over a three-month period and exploring the behavioural intentions of ADIs. In this case, the 'treatment' was the provision of the online learning. The control group was made up of ADIs who registered for the pilot but did not receive access to the learning package until after the end of the pilot.

5.1.1 Data collection

The data collection method for the trial was a series of three surveys administered at different points during the course of the trial. The surveys were designed by Ipsos and administered using an online platform. Table 5.1 below sets out the delivery point of each survey for participants. The surveys contained approximately 20 questions covering areas including demographic data, preference in learning materials, attitudes towards cyclists, understanding of cyclists' behaviour on the road, impressions of the course, and future intentions regarding driving instruction. Copies of the surveys can be found in Appendix B.

Table 5.1: Overview of surveys and delivery methods

	1. Baseline Survey	2. Intervention Survey	3. Endline Survey
Treatment group (online learning)	Delivered as part of the registration process	Delivered online immediately after completion of the final learning module	Delivered via email two months after completion of the intervention survey
Control group	Delivered as part of the registration process	n/a	Delivered via email three months after completion of the baseline survey, i.e. three months after the treatment group had received the intervention

5.1.2 Sample size

The initial pool for recruitment was estimated to be 40,000 – the current number of ADIs registered with the DVSA. Assuming a conversion rate of 10%, and accounting for up to 50% attrition over the course of

the trial, a sample size of 2,000 in the treatment and control group respectively was set to ensure a minimum detectable effect size of between 4.4% and 6.3%.

Challenges in recruitment (documented in Chapter 2) meant that the trial eventually recruited 2,339 participants (1,169 in the treatment group, and 1,170 in the control group). This represented a response rate of 6%. The customer journey, and technical infrastructure limitations also documented in Chapter 2, supported a low attrition rate at the baseline, i.e. the completion of the first survey was a requisite for the registration process. The following two surveys, however, saw response rates drop dramatically in both the treatment and control groups. As a result, there were:

- 629 participants for comparison between the treatment and control groups between the baseline and endline surveys.[12]

- 102 participants for pre-post comparisons between intervention and endline surveys amongst the treatment group.

Table 5.2 below outlines the sample sizes by treatment arm and survey wave throughout the trial. It is noticeable that response rates for the endline surveys were higher in the control group than in the treatment group. This is most probably because the control group were not allowed to participate in the learning without completing the survey. With these sample sizes, the minimum detectable effect size was calculated at 12%, meaning that in order to detect an impact we would need to see at least a +/-12% change in the outcome of interest between the baseline and endline survey (at a 5% significance level).

Table 5.2: Sample sizes by treatment arm and survey stage

	Total recruited participants	Treatment group	Control group
Baseline	2,339	1,169	1,170
Intervention	186	186	n/a: no intervention survey administered to no control group
Endline	629	179	450

Source: Ipsos UK from ADI surveys

5.2   Primary outcome: impacts on attitudes

There is some limited statistical evidence to suggest that attitudes towards cyclists changed positively among ADIs as a result of the course

Attitudes towards cyclists were measured by a survey question which required respondents to agree or disagree with 13 statements about cyclists and motorists (1 = strongly disagree, 5 = strongly agree). Although there were directional changes in the attitudinal statements over time, not all results were

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[12] The number of observations might be lower for some of the comparisons due to non-response to some questions.

statistically significant and therefore impact on attitudes cannot be attributed to the learning course in these cases. A statistically significant effect of the learning was found for only two statements:

- *'Cyclists are a nuisance to other users'*, which was lower by 0.33 points for ADIs in the treatment group with respect to the control group.

- '*When accidents happen it is usually the fault of the cyclist'*, which was lower by 0.23 points in the treatment than the control group.[13]

Error! Reference source not found.3, below, shows the regression results, which can be interpreted as the impact of the learning, as measured by the difference between treatment and control groups (while controlling for attitudes prior to the course). It shows that for most of the attitudes measured there is no conclusive evidence that the learning has had an effect.

Table 5.3: Attitudes towards cyclists – Linear regression results

To what extent, if at all, do you agree or disagree with each of the following statements about the online learning course you have completed?	Coefficient	Standard error	Observations
A. Most cyclists adhere to the rules	0.06	0.09	629
B. I understand why cyclists may behave differently	0.03	0.08	629
C. Learner drivers need to take extra care when overtaking cyclists	-0.01	0.07	607
D. Cyclists are unpredictable	0.02	0.09	605
E. There are too many cyclists	-0.10	0.10	605
F. It should be compulsory for all cyclists to pass a cycling proficiency test before being allowed to use public roads	0.03	0.12	606
G. Cyclists are a nuisance to other road users	-0.33***	0.10	604
H. Motorists should take more responsibility than cyclists to ensure both parties are safe when using public roads	-0.02	0.10	606
I. When accidents happen between motorists and cyclists, it is usually the fault of the cyclist	-0.23^	0.09	529
J. When accidents happen between motorists and cyclists, it is usually the fault of the motorist	-0.02	0.09	526
K. New drivers are more likely than experienced drivers to be a danger to cyclists	-0.02	0.11	525
L. Motorists should always have right of way over cyclists when using public roads	-0.16	0.10	524
M. It should be compulsory for learner drivers to undertake a cycling awareness course before they can take their driving test	0.16	0.12	526

Source: Ipsos UK from ADI baseline and endline surveys. The estimated coefficients indicate the estimated difference in the change from baseline to endline surveys of each attitudinal score between treatment and control group. ^ Indicates that the

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[13] The latter result was only marginally statistically significant after applying the Bonferroni adjustment for multiple testing.

result is marginally significant (i.e., significant at 10%). *** indicates that the reported coefficient is statistically significant at 1 % level. All models include a constant and controls for baseline outcome values. The regressions were weighted using attrition weights.

The analysis of the other attitudinal statements did not yield any statistically significant results. It was therefore only possible to conduct descriptive analysis on these statements, i.e. to analyse trends in the data.

Table 5.4, below, shows the changes in the direction of attitudes across three groups of statements. In nearly all cases, attitudinal scores decreased. When looking at the changes in attitudinal score for each statement across the treatment group, all scores decreased between the baseline and endline, with the exception of two statements (B and C) which showed no change. Similarly for the control group, all scores decreased between the baseline and endline surveys, with the exception of three statements (B, I and L) which saw no change.

Table 5.4: Attitudinal scores by statements

To what extent, if at all, do you agree or disagree with each of the following statements about the online learning course you have completed Average of a 1 (strongly disagree) to 5 (strongly agree) scale.	Treated Baseline	Treated Endline	Change	Control Baseline	Control Endline	Change
A. Most cyclists adhere to the rules	3.2	3.1	-	3.1	3.0	-
B. I understand why cyclists may behave differently	4.0	4.0	-	4.0	4.0	-
C. Learner drivers need to take extra care when overtaking cyclists	4.6	4.6	-	4.7	4.6	-
D. Cyclists are unpredictable	4.2	4.0	-	4.2	4.0	-
E. There are too many cyclists	2.3	2.1	-	2.2	2.1	-
F. It should be compulsory for all cyclists to pass a cycling proficiency test	4.1	4.0	-	4.0	3.9	-
G. Cyclists are a nuisance to other road users	2.3	1.9	-	2.3	2.2	-
H. Motorists should take more responsibility than cyclists	3.8	3.6	-	3.7	3.6	-
I. When accidents happen between motorists and cyclists, it is usually the fault of the cyclist	2.6	2.3	-	2.5	2.5	-
J. When accidents happen between motorists and cyclists, it is usually the fault of the motorist	3.0	2.9	-	3.0	2.9	-
K. New drivers are more likely than experienced drivers to be a danger to cyclists	3.2	3.0	-	3.2	3.0	-

|						
L. Motorists should always have right of way over cyclists when using public roads	2.2	1.9	-	2.0	2.0	-
M. It should be compulsory for learner drivers to undertake a cycling awareness course	3.2	3.1	-	3.1	2.9	-

5.3 Secondary outcomes: perceptions and behavioural intentions

Secondary outcomes were selected to accompany the impact analysis to help understand the extent to which the other outcomes foreseen in the logic model have been achieved. Secondary outcomes were analysed descriptively by looking at the value of the relevant questions in both the intervention and endline surveys for the treatment group. As descriptive analysis looks at trends and does not involve measuring impact through comparisons to a control group, causal evidence cannot be determined and therefore the results are less robust. In addition, all results in this section are based on self-reported evidence collated via the surveys, which presents possible self-reporting bias. As such, findings should be interpreted with caution. It cannot be concluded with certainty that changes in secondary outcomes are a direct result of the learning package.

5.3.1 Effect of the learning course on ADI perceptions of, and behavioural intentions towards, cyclists

There is some evidence that positive changes in ADIs' perceptions of and intended behaviours towards cyclists occurred right after the intervention, but these effects tend to fall over time.

The first secondary outcome analysed sustained changes in ADIs' perceptions towards cyclists, which is directly linked to the primary outcome as it explores the effects that the course had on participants' perceptions and behaviours towards cyclists. Three in four respondents to the intervention survey reported that the course had increased their understanding of cycle-riders' behaviour. This percentage remained unchanged in the endline survey. In addition, a very high percentage of respondents to the intervention survey reported that they felt that the course had increased their awareness of cyclists and their understanding of cyclists' behaviour. However, as shown in Figure 5.1:below, the picture emerging from the endline survey is slightly less positive, showing that the effect of the course has faded three months after the course. This could be due to participants recalling the content of the course less well and hence losing some of the learning gained soon after completing the learning course.

Figure 5.1: *To what extent, if at all, do you agree with each of the following statements about the online learning course you have completed?*
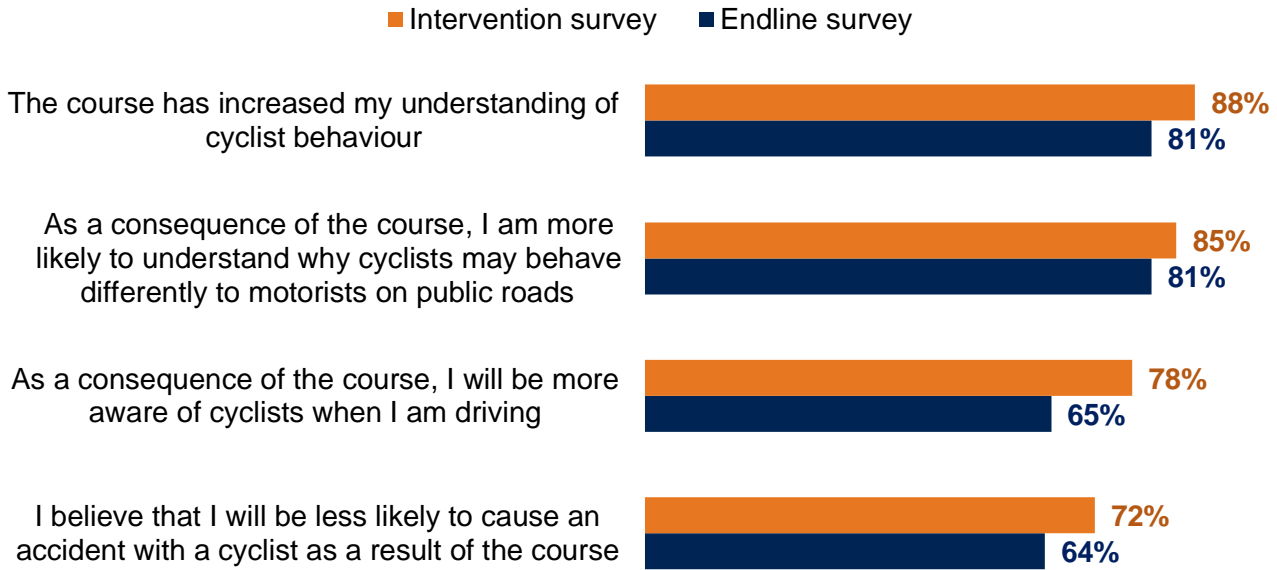
Source: Ipsos UK from the ADI intervention and endline surveys. N = 102 participants who completed both surveys. The green bars and the data label indicate the percentage of respondents who tend to agree or strongly agree with each statement in the intervention survey. The blue bars represent the values of the same percentages in the endline survey.

There is some evidence of ADIs intending to change their teaching practices as a result of completing the course. The surveys did not explicitly ask ADIs whether they had changed their teaching practices as a result of the learning. However, they collected information on ADIs' intentions to change their teaching practices as a result of the course. Most ADIs also indicated that they intend to change the way they teach their students how to deal with cyclists and increase the amount of time they spend on the subject in their lessons (see Figure 5.2 below).

Figure 5.2: *Would you say that you are more or less likely to do the following within the next two months, or has it not made any difference to you?* **Percentage of respondents who indicate that they are 'much more likely' or 'a little more likely'.**
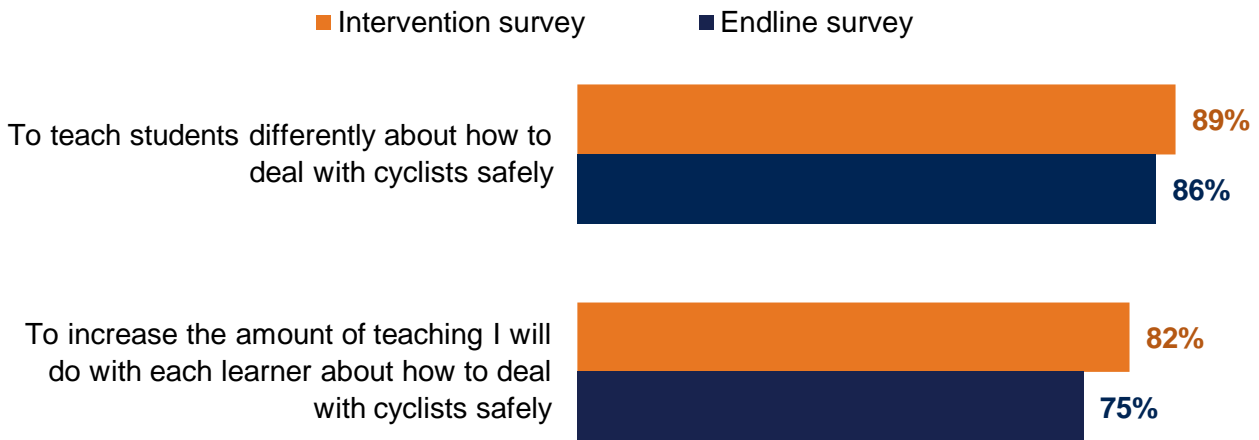
Source: Ipsos UK from the ADI intervention and endline surveys. N = 102 participants who completed both surveys

The results of the surveys also indicate that most ADIs felt that the course had made them confident to teach learner drivers how to deal with cyclists and that, in general, the course had made them better driving instructors (see Figures 5.3 and 5.4 below).

Figure 5.3: *Now that you have completed the course, which of the following things, if anything, do you think will happen as a result of the learning?* **Percentage of respondents who indicate one or both of the two options.**
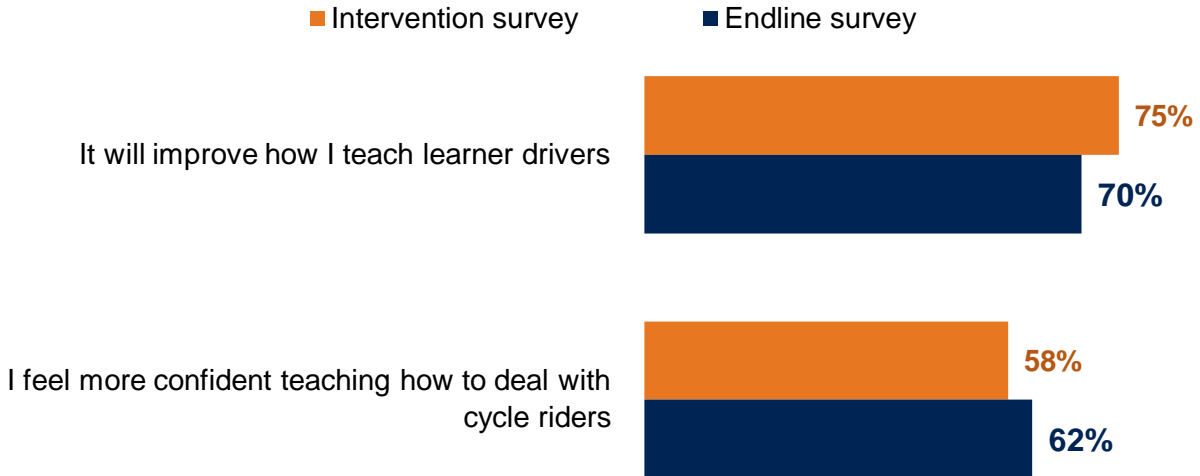
Source: Ipsos UK from the ADI intervention and endline surveys. N = 102 participants who completed both surveys.

Figure 5.4: *To what extent, if at all, do you agree or disagree with each of the following statements about the online learning (and practical training) course you have completed?* **Percentages of respondents who tended to 'agree' or 'strongly agree'**
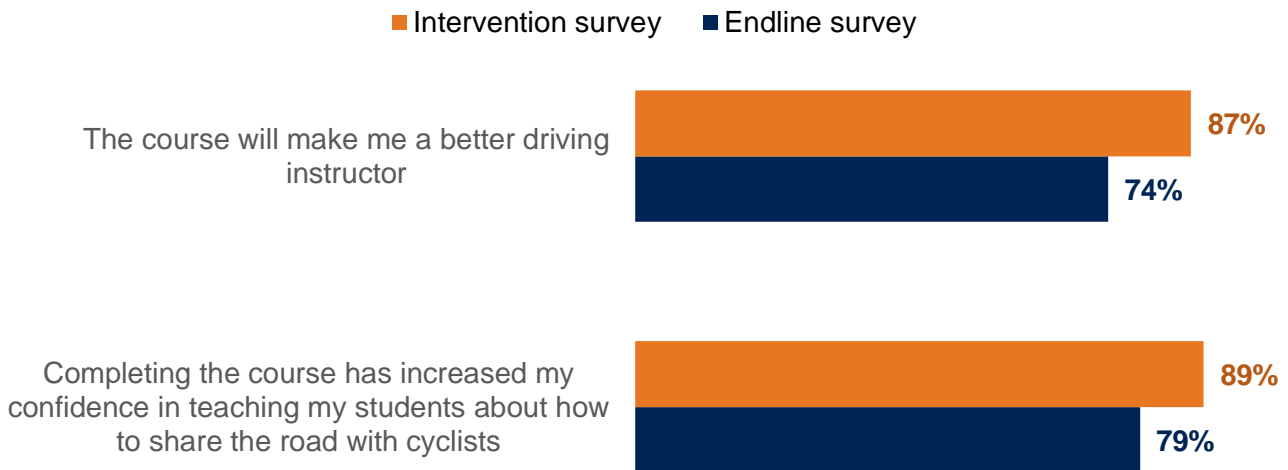
Source: Ipsos UK from the ADI intervention and endline surveys. N = 102 participants who completed both surveys. The green bars and the data label indicate the percentage of respondents who tend to agree or strongly agree with each statement in the intervention survey. The blue bars represent the values of the same percentages in the endline survey.

6 Conclusions

This study took place during a challenging time following a period of legal restrictions on driving lessons as a result of COVID-19, and subsequently coincided with ADIs' return to work. This presented a challenge to the recruitment and retainment of participants, which limited sample sizes and the scope of analysis. The extent to which the evaluation questions can be answered is summarised below.

- **There is limited evidence to support the hypothesis that the course had a positive effect on attitudes of ADIs towards cyclists.** The statistical results show that:

  - There was a small reduction in ADIs' belief that cyclists are a nuisance to other users.

  - There was a similarly small decline in ADIs' belief that cyclists are usually at fault when accidents happen.

  - All other attitudinal statements showed some marginal movement across both the treatment and control groups but none of these were statistically significant.

- **Self-reported feedback suggests that ADIs plan to incorporate cycle awareness into driving lessons as a result of taking part in the learning.** ADIs were confident that they would change their practices to teach their students about cyclists as a result of the course. Measurement of the same intention two months after ADIs completed the online learnings were slightly less positive but qualitatively similar, indicating that the early effects of the course might have declined, or that respondents recall the content of the course less well over time.

- **The majority of ADIs (60%) were very satisfied with the content of the learning course.** An additional 30% were satisfied with the learning course. Participants flagged that the computer generated clips and videos were particularly engaging components of the course.

- **88% of ADIs felt they had a better understanding of cyclists' behaviour as a result of attending the learning course.** This proportion was largely sustained over time (81%). The course also raised awareness of cyclists amongst ADIs (78%).

- **92% of ADIs would recommend the learning to peers.** The self-reported views of ADIs were mostly positive. After the course, 89% said that they would teach cyclist safety differently (falling marginally to 86% three months later). Similarly, 82% reported that they would increase the amount they taught about cyclist safety (later dropping to 75%). Key reasons for recommending the course included: the fact that it contained useful information about all road user behaviours, it helped to dispel certain myths, and that sharing knowledge would lead to safer roads for all users.

- **There are lessons to be learned for designing and implementing future learning courses,** including regarding accessibility (many participants used their phones or tablets to complete the course), the flexibility of question responses, the appropriate amount of time required to complete the course, and how well the content reflects road users' reality.

- **The learning course has increased the awareness of the National Standard for Cycle Training and the Bikeability Trust amongst ADIs.** The learning significantly improved participants' knowledge of the Bikeability Trust, with treatment group participants knowing 'nothing at all' about the Trust decreasing from 39% to 9%, and from 40% to 26% for the control group.

Our standards and accreditations

Ipsos' standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a 'right first time' approach throughout our organisation.

ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos was the first company in the world to gain this accreditation.

Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos endorses and supports the core MRS brand values of professionalism, research excellence and business effectiveness, and commits to comply with the MRS Code of Conduct throughout the organisation. We were the first company to sign up to the requirements and self-regulation of the MRS Code. More than 350 companies have followed our lead.

ISO 9001

This is the international general company standard with a focus on continual improvement through quality management systems. In 1994, we became one of the early adopters of the ISO 9001 business standard.

ISO 27001

This is the international standard for information security, designed to ensure the selection of adequate and proportionate security controls. Ipsos was the first research company in the UK to be awarded this in August 2008.

The UK General Data Protection Regulation (GDPR) and the UK Data Protection Act (DPA) 2018

Ipsos is required to comply with the UK GDPR and the UK DPA. It covers the processing of personal data and the protection of privacy.

HMG Cyber Essentials

This is a government-backed scheme and a key deliverable of the UK's National Cyber Security Programme. Ipsos was assessment-validated for Cyber Essentials certification in 2016. Cyber Essentials defines a set of controls which, when properly implemented, provide organisations with basic protection from the most prevalent forms of threat coming from the internet.

Fair Data

Ipsos is signed up as a 'Fair Data' company, agreeing to adhere to 10 core principles. The principles support and complement other standards such as ISOs, and the requirements of Data Protection legislation.

For more information

About Ipsos Public Affairs

Ipsos Public Affairs works closely with national governments, local public services and the not-for-profit sector. Its c.200 research staff focus on public service and policy issues. Each has expertise in a particular part of the public sector, ensuring we have a detailed understanding of specific sectors and policy challenges. Combined with our methods and communications expertise, this helps ensure that our research makes a difference for decision makers and communities.

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