



SHUSU
Sustainable Housing &
Urban Studies Unit



'Seeing it from a cyclist's point of view is totally different.'

Understanding the impact of cycling
awareness training for HGV drivers

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Making cycling
viable, safer
and better



With a head office in Manchester and two further offices in Liverpool and Birmingham - BikeRight! are at the forefront of cycling developments both locally and nationally, advising on several committees and associations including the All Party Parliamentary Cycling Group and the Association of Bikeability Schemes. They train over 20,000 individuals a year.

Transport for Greater Manchester oversees transport and travel across Greater Manchester, delivering investment, owning and managing the Metrolink network, building, maintaining and staffing bus stations and interchanges, managing the road network, developing cycling infrastructure and promoting sustainable transport.

Services offered by BikeRight! include:

- Cycle training to levels 1,2 and 3 of the National Cycle Training Standards
- Cycle instructor training courses
- Safe Urban Driving courses
- Emergency Services pedal cycle training
- Bicycle maintenance courses
- Professional bicycle mechanic training
- Cycling consultancy and advocacy

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Contents

Executive Summary	1
1. Introduction	2
2. Context	3
3. The Safe Urban Driving course	5
4. Methodology	7
5. Findings	9
5.1 Introduction	9
5.2 Experiences of sharing the road	9
5.3 Reasons for participation	9
5.4 Reactions to the course	10
5.5 Attitudes towards cycling, cyclists and cycle infrastructure	12
5.6 Driver behaviour	13
5.7 Maintaining the learning	15
6. Survey of drivers	16
6.1 Introduction	16
6.2 Summary	16
6.3 Responses	16
7. Conclusions	23
7.1 Overview	23
7.2 General acceptance of course	23
7.3 Impacts of the course	23
8. Recommendations	25



Executive Summary

Cycle training organisation BikeRight! delivers a Safe Urban Driving course aimed at professional drivers. With concern about safety on the road being an oft-cited reason for low take-up of cycling, and with incidents involving an HGV and a cyclist disproportionately likely to result in a cyclist fatality, changing driver behaviour, alongside other safety measures, is an important factor in encouraging cycling and reducing risk.

The investigation comprises a pilot study of qualitative research aiming to evaluate and understand the ways in which the course influences the attitudes and behaviour of drivers, and to trial an approach to researching the impact of such courses. It comprises six semi-structured interviews with HGV drivers who had participated in the Safe Urban Driving course, an interview with a course coordinator, and participant observation of a one-day Safe Urban Driving course. An Internet-based survey of previous course participants received nine responses and added further information about participants' reactions to the course, including learning points and changes in driving practice.

The pilot study suggests a range of impacts of the course, which include:

- a positive experience for drivers, and one that stands out from other courses they had attended in having a practical element;
- challenging assumptions about who cycles and why cyclists make the manoeuvres they do;
- boosting positive associations with cycling, including prompting participants to consider starting cycling again;
- enabling participants to understand and recall specific terms and concepts, including primary and secondary position and pinch points;
- awareness of needing to leave space for cyclists to make manoeuvres and to have patience around them;
- understanding that cyclists do not always have to use cycle infrastructure and a recognition that it can be problematic to do so; and
- reported changes in driver behaviour resulting in taking extra care around cyclists and giving them space and time to make manoeuvres.

Nevertheless, there was some scepticism among some of the drivers about elements of the course and some negativity towards cycling. It is likely that challenging preconceptions will continue to be an important part of driver training.

Whilst further research will be required to assess the prevalence, strength and longevity of such impacts on drivers, this pilot study suggests that the Safe Urban Driving course is influencing both driver attitudes and behaviour.

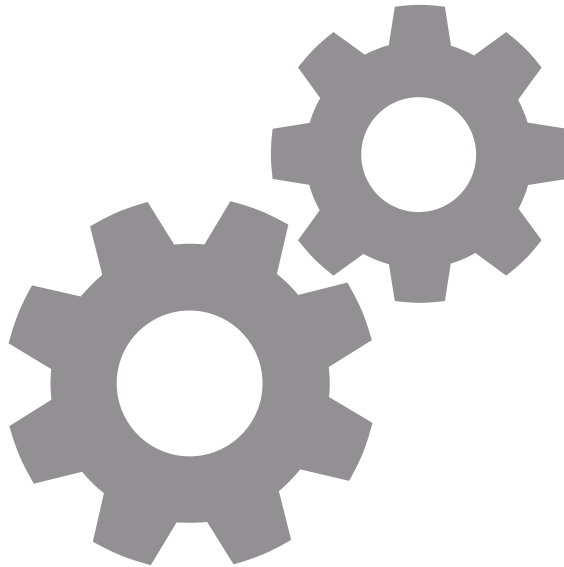
1. Introduction



Cycle training organisation BikeRight! delivers a Safe Urban Driving course aimed at professional drivers, including anyone who drives as part of their job. This research comprises a pilot study of qualitative research aiming to evaluate and understand the ways in which the course influences the attitudes and behaviour of drivers, and to trial an approach to researching the impact of such courses.

This report documents this research and its implications for future delivery of cycle awareness training for drivers. It begins by outlining current research on this issue, the nature of the Safe Urban Driving course, and the approach taken in this study. The findings are then presented, including the reasons for taking part in the course, reactions to the course, and its impact in terms both of the drivers' understanding of, and empathy towards, cycling and cyclists and of their driving practice. Finally, the themes arising are brought together as a set of conclusions that include future directions for this research.

2. Context



Safety concerns are among the most commonly cited reasons for not cycling. In a survey for ROSPA, over half of respondents expressed concern about 'the safety of road cycling' and 'drivers treating them badly' (ROSPA, 2015, p. 2). The British Social Attitudes Survey found that nearly two-thirds of respondents 'strongly agreed' (28%) or 'agreed' (36%) with the statement 'It is too dangerous for me to cycle on the roads' (NatCen Social Research, 2015). One of the findings of a study of attitudes towards and perceptions of cycle training was that it is important to people cycling that other road users are responsible around them and aware of what they learn in cycle training (Sherriff 2014).

Larger vehicles are perceived to put cyclists in a vulnerable position, and the statistics suggest that the danger of fatalities is disproportionate to their prevalence on the road. In 2013 HGVs comprised 5% of traffic in Great Britain and were involved in 2% of incidents that resulted in a cycle casualty; this figure increases to 23% when only incidents resulting in a cycle fatality are taken into account (Department for Transport, 2013). This implies that although HGVs may be involved in a minority of incidents, these are more likely to be fatal. Government transport statistics indicate that in 2015 lorry traffic saw the largest year-on-year increase since the 1980s, an increase of 4% on 2014 or 17 billion miles travelled (Department for Transport, 2016). They also indicate that in 2014 LGVs and HGVs

were the vehicle types for which 'failed to look properly' was most likely to be a contributory factor in reported accidents (Department for Transport, 2014).

The range of measures available to policy-makers in seeking to reduce the number of cyclist fatalities fall largely into three categories: improvements to street design and the physical environment, changes in vehicle technology such as sensors and mirrors with reduced blind spots, and training for drivers and other road users. These are not unrelated: improvements in street design and vehicle technology can often be seen as reducing the potential for driver error, and training may be needed to cope with new infrastructure and regulations. The RTITB, the regulatory body for workplace transport training, has recently argued that driver training is an essential component of this mix: 'We want to challenge the popular view that technology and legislation is the answer to all cyclist related accidents,' argued Managing Director Laura Nelson, adding that 'We need to remember that driver behaviour is key' (Pink, 2017).

A recent view of construction logistics and cyclist safety (Delmonte, Manning, Helman, & Basacik, 2012, p. 12) found that 'construction traffic appears likely to be over-represented in collisions with cyclists' and noted that issues such as tight delivery timeslots can contribute to driver pressure and that, in construction industry driving in particular, there is 'great potential for driver error and high driver workload', suggesting multiple changes to reduce this. The recommended measures include raising awareness of risk in the construction industry. The pressures faced by drivers of large vehicles are well established and were remarked upon by McCorry and Murray (1993): 'drivers must cope with narrowing delivery time windows, an increasing amount of paperwork, higher customer service demands, congestion and continually changing transport laws'.



3. The Safe Urban Driving course



The Safe Urban Driving (SUD) course is described by the Fleet Operators Recognition Scheme (FORS) as '*essential training for all commercial drivers operating HGVs and Public Service Vehicles... regularly in the urban environment and where there are high volumes of vulnerable road users, such as cyclists and pedestrians*' (Fleet Operator Recognition Scheme, 2016). The course is accredited for the Driver Certificate of Professional Competence (Driver CPC), for which lorry, bus and coach drivers must do 35 hours of training every 5 years. SUD meets the requirements of three standards: Work Related Road Risk (WRRR), FORS, and Construction Logistics and Cyclist Safety (CLOCS). CLOCS has a growing list of 'champions' (Construction Logistics and Community Safety, 2016), which includes Crossrail, Costain and Saint Gobain Building Distribution, and the SUD element of CLOCS is therefore becoming increasingly recognised as a requirement for haulage organisations to work on major projects with these organisations. Crossrail, for example, has trained over 9000 drivers and was the first project to mandate that HGVs must have additional safety equipment and driver training to protect cyclists and pedestrians (Crossrail, 2016). Transport for Greater Manchester are reportedly planning to introduce a requirement for the

CLOCS standard in their own procurement and tender procedures (Pink, 2016).

As of November 2016, BikeRight! had delivered 107 one-day Safe Urban Driving courses to 1060 participants from over 70 organisations via funding support from Transport for Greater Manchester. BikeRight! has also delivered over 100 courses for other companies or transport authorities.

SUD is delivered in two parts: a classroom-based theory module and a practical cycling module, where drivers experience cycling on the road. The course aims to make drivers aware of the risks of the road in relation to vulnerable road users and able to assess emergency situations to help avoid accidents. The course also gives participants practical experience of cycling on the road accompanied by qualified National Standards cycling instructors. It is intended that trainees are able to define who vulnerable road users are when assessing risk and be aware of the risks to cyclists and how to assess a situation to reduce risk.

In particular, the course includes:

- Identifying vulnerable road users when in an urban environment
- Understanding cycling
- Situation exercises: recognising hazards and incidents and how to avoid them
- Mirrors and blind spots
- Highway Code rules
- An introduction to active travel and practical cycling
- Reflection to increase safe urban driving
- Cycling to National Standards (Levels 1, 2 and 3).

BikeRight! is a Joint Approvals Unit for Periodic Training (JAUPT)-approved training centre. The course can contribute towards necessary training for drivers who are required by EU Directive 2003/59/EC to undertake Driver CPC. The course provides knowledge and awareness through practical experience of cycling on the roads taught by BikeRight! qualified National Standards cycling instructors.

As SUD becomes increasingly important to the industry, it is important to understand and evaluate its impact upon driving practice and road safety. One study of the implementation of driver training, carried out by Network West Midlands (Kennedy, 2016) and published in March 2016, found that feedback collected from course participants was 'overwhelmingly positive' in terms of enjoyment and perceived usefulness and found anecdotal evidence that bus driver training was already having an impact on bus/cyclist interactions. It also found that organisations were continuing to support and fund places on the training following their initial participation. There has, however, been little in-depth research on the effectiveness of driver training in general, and some have suggested that it makes little contribution to crash reduction (Small, Bailey, Lydon, & Davern, 2013). It is within this context that we must seek to understand the role of the impact of cycle awareness training for drivers.

4. Methodology



The research consisted of a set of six semi-structured qualitative interviews with HGV drivers who had participated in the Safe Urban Driving course and participant observation of a one-day Safe Urban Driving course.

In terms of interviewee recruitment, participants were asked to express an interest in taking part and were then contacted by the researcher to arrange an interview. This was administered through a sign-up sheet at the end of the one-day courses.

Both of these stages relied on the drivers volunteering to take part in their own time. Take-up was lower than envisaged in terms both of drivers expressing an interest and then agreeing at a later stage to take part in the interview. The envisaged 10 to 15 interviews were therefore not achieved, and practical time limitations of the research meant that fieldwork was halted after six interviews with drivers and one with a course leader. Interviewees were participating in the interviews in their own time, rather than being asked to do it as part of their job, and some had only a short amount of time to talk or forced the end of the interview.

This has implications for the robustness of the data and the strength of the findings that can be inferred. Nevertheless, the study was not designed to be statistically significant but rather, as a piece of qualitative research, to identify themes arising from the accounts

of the participants that aid understanding of the ways in which the course had an impact upon them. As it stands, the research has achieved this and acted as a pilot study for future research on the impact of cycle awareness training for professional drivers.

It should also be noted that the interviewees were entirely self-selecting: the small number of potential participants meant that it was not possible to recruit a sample from a wider population and therefore to seek a spread of demographics and to take into account other factors such as current levels of cycling.

The six interviewees had been driving HGVs for between 17 and 50 years, and only one of them was not currently driving an HGV as part of their job – they were supervising others. All drove in the UK only.

The interviews included questions on the interviewees' experience of driving and cycling, their reactions to the different elements of the course, what they recalled and what was new information to them, if their views on cycling and cyclists had changed, what they did differently now when driving, and what, if any, challenges they had faced in trying to implement what they learned on the course. Interviewees were also asked about potential follow-up courses or activities that could help to ensure that learning and good practice could continue. The interviews were carried out over the phone and were recorded and transcribed with the

interviewees' consent. The transcripts are stored and reported anonymously such that none of the interview quotes are associated with any individual driver.

The one-day participant observation was valuable in helping the researcher understand the purpose of the course and see at first hand the reactions of the drivers. Where the field notes are drawn on in this document, this is referred to as the 'observed session'. The role of the researcher in the course was overt in the sense that they declared their role as an observer rather than attempting to be an undercover professional driver.

In order to increase the number of drivers involved in the research, a web-based survey was developed to supplement the interview data and potentially recruit further interviewees. This included questions on driver demographics and driving and cycling experience, overall reactions to the course, and, more specifically, what participants had learned and what they now did differently. Participants were recruited from BikeRight!'s own database of participants and offered an incentive (a free prize draw) to take part. Invitation emails were sent to just over 150 contacts, comprising businesses and individual drivers. In many cases, BikeRight! does not have email addresses for the SUD driver training course participants, since many companies book places on the SUD courses centrally via a training manager. Nine participants took part, again highlighting the difficulty of recruiting drivers to take part voluntarily.

5. Findings



5.1 Introduction

This section presents and discusses findings arising from the interviews and participant observation. Where possible, it uses direct interview quotes to substantiate points. It draws broad themes from the interviews that aid understanding of the impact of the course on driver attitude and behaviour.

5.2 Experiences of sharing the road

It is useful to understand the level of cycling experience of the participants. The interviewees had some experience of cycling. Only one had never cycled at any point in their life, and one other said they did not currently cycle. One had been involved with road racing when he was younger, and the remaining three said they cycled mainly for leisure and expressed a high degree of confidence in their ability to cycle in traffic.

Those who said they cycled felt that this gave them some empathy with other road users. Similarly, experience of riding a motorcycle meant that *'I know what it's like when somebody pulls out in front of you or tries to cut you up'*. Having experience of cycling helped them to feel 'street-wise': *'I've been cycling... so basically fairly confident and street-wise regarding other traffic.'*

All had experience of sharing roads, as a driver, with cyclists, and this tended to give them a sense of issues that can occur: *'...being a professional driver for all those years, you do tend to see what can happen. Seeing quite a few accidents over the years with bikes, you can say yourself, well, that vehicle shouldn't have done that, but even that cyclists shouldn't have done that'*.

5.3 Reasons for participation

Rather than volunteering for the training, the interviewees had been asked or obliged by their employers to attend the course. This appeared to reflect recognition by the companies of the increasing importance of cycle awareness training in the expectations of Government and clients:

Well, we had to go on it as part of our training for E4 certification and also it counts towards our CPC as well, I believe.

So we were doing a certification... for the Central London Cycle Awareness and it was encouraged that we took this course as a group, all drivers, so they were all aware. Then when we got the full certification all drivers had sat the course by that point. So it helped us get passed as a company, along with a lot of other stuff like cameras and lesser indication zone controls. So it helped us to get our pass certificate.

There was evidence of clients starting to ask for drivers to have had this training – *'Some of the clients that we work for, they actually require that we've got that, so that was one reason they put it on'; 'So now it's sneaking its way up towards Manchester, which is another reason. We haven't been asked for it specifically but some of our suppliers have encouraged us to get it' (1)* – and an indication that interest in cycling and cycle safety at management level may be a factor in companies being 'early adopters': *'Well, the reason, obviously, is one of our head bosses is a keen cyclist so he's pushing this cyclist lark.'*

These decisions were not necessarily popular with drivers, and one driver recounted an incident in which the manager had to insist that it was taken seriously by a colleague who was told: *'It's your opinion at the end of the day but we've been told you've got to do this course, the government's said this CPC's got to happen so we're abiding by the law basically.'*

One interviewee reported that one of his company's drivers had been suspended after refusing to go on the course, which indicates at least that the company was taking it seriously. The course observation provided examples of drivers displaying a lack of enthusiasm for the course, and a course leader explained that drivers often question the purpose of the course and why they had been obliged to take it. At the observed session, one of the participants said he was going to organise a union to get *'this sort of thing'* stopped. This indicates that an element of 'winning over' the drivers and convincing them of its value is likely to continue to be an important part of the course.

5.4 Reactions to the course

General

At the observed session, it is reasonable to say that drivers expressed some scepticism about the value of the course at the very start. Despite this, the interviewees were generally positive about the course. None of the interviewees stated or gave the impression that they felt it was a waste of their time, although it is of course possible that the sample was self-selecting, with those sympathetic to cycling more likely to volunteer to be interviewed. The mix of theoretical and practical

elements was well received, and one driver felt it was *'probably the best course I've ever been on, to be honest'*. Similarly, this driver was very positive: *'...it was an enjoyable course. The instructors were really good. They knew what they were talking about'*.

A course leader spoke honestly about the extent of scepticism and negativity sometimes experienced at the start of the course, but also reflected that it was not uncommon to see a change in the perspectives of the participants towards the course and cycling:

But, by the end of the course I've got another very, very common comments, towards the end of the afternoon, which are two, which are: 'You know what, I'm going to get my bike out this weekend' and/or 'I'm going to get myself a bike.'

The practical session on bikes in the afternoon was viewed positively by the interviewees. Some interviewees reported being a little anxious about it, many not having cycled for years or decades, but generally found they were able to overcome this.

It seems that it provided something of a change from other courses:

Yes, I think if it was classroom-based I think it'd be a little bit too boring. It split the day up for us, and especially if it was a seven-hour course, like on cars. To be sat in a classroom all day for a load of trucker drivers, I don't think it'd appeal to them at all.

Whilst this may not relate to the substantive educational element of the training, the interviews suggest that making the course a bit different and hands-on helped to make it a positive and memorable occasion and to bring about positive associations with cycling. There were references to it being fun and different from comparable courses they attend as part of their work. One of the interviewees visited the velodrome in Manchester's National Cycling Centre, and this can be viewed in a similar light: whilst it had little relevance to on-road utility cycling, it helped to make the course fun and stand out from other courses they had attended.

Theoretical part

The theoretical part of the course took place in a training room at BikeRight! and was delivered using PowerPoint, video material and handouts, with a combination of plenary and small-group discussion. When asked about what they recalled about the course and what had had an impact on them, interviewees mostly referred to the practical part. It was, however, possible to explore this further in the interview and to find that they could recall, and were influenced by, aspects of the theoretical part.

Whilst one interviewee was quite dismissive of the morning – *'make you aware of bicycles, that's all. That's all it is, really'* – interviewees did recall and refer to some of the more theoretical points that were covered in the morning, some following prompts from the interviewer and some unprompted. These included being aware of cyclists around you: *'mostly turning corners, turning left and bicycles riding up the left-hand side of you'*, learning about particular terminology: *'I never knew what a pinch point was before'*, and several references to primary and secondary position, including demonstrating what they were and why they were useful.

During the observed session, there were a range of views expressed during the theory session in the morning, some of which involved the drivers arguing against some of what the trainer was putting across. Although they recognised, for example, that there were multiple benefits from cycling for the individual's health and finances and in reducing congestion, they appeared less convinced by arguments that increases in cycling could benefit the economy as a whole. The course leader also challenged the views of the participants on who cycles, with some very dismissive of the idea that cycling is open to all, referring instead to *'hippies, tramps and fitness freaks'*. This indicates, then, that the starting point for some drivers may be a relatively simplistic view of cycling and people who cycle, and emphasises that this starting point may be one of scepticism, with the implication that part of the role of the course is challenging this.

To one interviewee this was a refresher rather than new learning: *'all that sort of stuff was pointed out, and I think it's stuff I probably knew, but, as I say, over the year you put to the back of your mind, but it refreshes it'*. To others, even those who cycled, many elements were new: *'I can't remember specifically but there were a lot of points, where your primary position and your secondary position were and where to place yourself when you make a turn or you're cycling up to some traffic lights or whatever. So there was stuff like that that's all new to us because you've never – you just grab your bike and just ride'*. In this respect, the material was relevant to them for cycling as well as driving.

One particular example of something that had an impact upon the trainees was a video showing cyclists in the blind spot of a lorry about to turn left at a T-junction. This evidently made a powerful case to this interviewee: *'... You couldn't see any of them. We went mad... That was something, and I do show other people that when they're talking about it. I'll go on*

YouTube and get the whole thing. Say, "See this," sometimes what you wouldn't think... "How can you not see any of them?"'

In the course, the relationship with all road users was explored, and in the observed session there was a discussion about the ways in which all road users could come into contact with HGV drivers in different ways. This was intended to put cycling into context. However, one of the interviewees had viewed this negatively. The course leader had shown railings close to the edge of a pavement and argued that this could be a 'cycle trap', whilst not mentioning that the primary purpose of the railings was to protect pedestrians – *'they were saying, oh we need to do away with these railings. Yes, it might make it safer for the cyclist, but it certainly wouldn't make it safer for the children... they didn't take into enough consideration other road users'*.

Practical part

'We went to a local park to get used to the bikes and had a ride around on that, and after a few minutes we all thought we were Bradley Wiggins, but it was quite good having a ride around the park, and the instructors got together and gave us a few pointers and what not, and then we actually did a few circuits of the park doing what they asked us to do'.

In a very general sense, the practical part of the session, in which the trainees went outside and received an abbreviated version of National Standards cycle training, was very positively received. It broke up the day and meant that the course was different to courses they attended more often. This reinforces the sense that the 'fun' element of the course was valuable in helping the trainees be receptive to the ideas presented.

As discussed in subsequent sections, there was a sense that the practical part of the course helped to make real the theoretical content of the first part of the day: *'We were a bit not taking it on board at first until in the afternoon when we went out. We had a different view of things a bit later on'*.

For participants who had not been on a bike for a longer period of time, cycling was a different experience: *'Well, considering it was nearly 50 years since I'd been on a bike it was getting used to being on a bike again, but one thing I did notice, that the bikes were a lot lighter and a lot faster than when I can remember.'*

5.5 Attitudes towards cycling, cyclists and cycle infrastructure

The interviews provide evidence that the course influenced the ways that the drivers thought about cyclists and cycling. The accounts indicate a degree of sensitivity towards the experiences of cyclists and a willingness to modify driving behaviour for their safety.

This notwithstanding, there remained some negativity around the behaviour of cyclists:

You just have dickheads that just don't give a sh*t about who else is on the road but themselves, and they think they can ride where the f*ck they want when they want, and however they want. Then, if there's an accident, they think they're always in the right... They think there's nobody on the road but them.

One reaction that demonstrated increased, or perhaps renewed, interest in cycling was when interviewees said they were interested in buying a bike following the course: *'but I did actually at the time think to myself, I've got to get a bike and get back out on it. I enjoyed it. It was good. You're out in the fresh air.'* Another was thinking of buying a bike for the *'health and fitness benefits'*.

This reaction was not universal, however, and one interviewee said he *'just [couldn't] understand why people want to put their lives at risk when [there are] bad drivers on the road' and did not see cycling as an attractive option: 'I know you can take a nice chilled-out ride home and things like that, but it's been at work all day. If it's pissing it down with rain, I've got half an hour's bloody bike ride now'.*

One issue that was discussed on the course that appeared to resonate with the interviewees was the quality and use of cycling infrastructure. At the observed session, one of the key messages communicated by the trainer was that use of cycle infrastructure by cyclists is not compulsory and that there are situations where a cyclist may be safer or more visible in the carriageway. Some quotes from the interviews evidence the extent to which this was taken on board by the participants.

This interviewee reflected that he noticed the view of his course group on this issue change over the day: *'when we started off that was our view... They should be using these segregated lanes that may be off the road and we were like all in agreement with that. Now at the end of the day we weren't, we were totally – changed our views about that.'* As another interviewee stated, this seemed to come from an understanding that cycle lanes are not necessarily the best place to cycle:

You're right there next to traffic, and, like I say, they run over the manholes, drain holes, potholes, all sorts. It's normally where all the rubbish on the road gathers anyway, so I can't see how that's the safest option for anybody really, especially a cyclist. All you need to do is get a flat tyre or something like that going down there and it's going to maybe put you off your bike.

This person continued: *'I actually think to just put another white stripe down the side of the road is not a very good idea at all in some circumstance because they just narrow the width of the road. I don't think they do cyclists or motorists any use whatsoever... I think they just make them more vulnerable.'*

Another important message of the course was that not all cycling infrastructure was equal: some may be high-quality, but others may put cyclists in dangerous positions. One interviewee reflected on cycle lanes he had seen that he considered to be poor design and saw to be inconvenient for cyclists, and another felt that cycle lanes may not be the best options for cyclists:

The lane to work is actually just on one side of the road... and then at each junction you've got to come off and get back on again, so if you're using it to commute it probably would be quite inconvenient really. If you're lit up right, you've got hi-vis and the lights and stuff, there's no reason if you're positioned correctly [unclear] people wouldn't be aware of where you are'.

Interviewees were not, however, completely in agreement on this, with some taking the view that cyclists should use the lanes when available. This driver, for example, commented that where there are good-quality off-road lanes, cyclists should be using them:

Now, to me the ones off-road are the important ones and the ones that I feel they should be using for their safety. If the councils have gone to large expense to put them there to try and keep them separated from other traffic, I feel it's not doing the cyclist fraternity any good if they ignore using them.

Another became quite angry at the suggestion that cyclists do not have to use cycle lanes. In the interview, the researcher asked him several times if there were circumstances under which it would be reasonable for cyclists not to use the lane, and he responded in the negative:

(Interviewer): But do you think there would be reasonable reasons why they wouldn't be using a cycle lane?
No, there's no reason at all whatsoever. Why did they put the cycle lanes in?.

There is evidence, then, that the course helped to increase the interest of the participants in cycling in a general sense, although this was not universal across the six interviewees. The reactions to discussions on cycle infrastructure are interesting. Given that one of the main

messages of the course was that cyclists do not have to use cycle infrastructure and can cycle in the carriageway, it is positive that some interviewees were aware of this and showed an understanding of when it might be more appropriate for a cyclist to be in the carriageway. This indicates some understanding of, and tolerance towards, the type of manoeuvres that cyclists are advised to use under the National Standards for Cycle Training. The lack of agreement on this amongst the interviewees, however, indicates that it cannot be assumed that all trainees will leave the course with this attitude.

5.6 Driver behaviour

Empathy, vulnerability and care

'To be honest with you, it just makes me more aware of, when I'm on a bicycle myself, of using the road, and when I'm off the bicycle, making me more aware of the bicycle, the person on the bicycle.'

The interviews suggest that the course helped to increase the drivers' awareness of the vulnerability of cyclists on the road. It should be noted that all changes in driving behaviour were self-reported, and there is a risk of bias in the sense that the interviewees may have reported what they thought they should be doing or overestimated the extent to which they had changed their driving.

The importance of being sensitive to other road users was mentioned by several interviewees, implying a level of empathy and appreciation of cyclists' vulnerability. In several cases they attributed this directly to the course:

It made me aware of cyclists whenever I'm driving myself, and making me aware, when I'm on a cycle, be aware of the vehicles, make yourself known, and make it easier for the other road users.

Like I say, because of our work, we're pretty much aware of stuff like that anyway. You just have a different view of cyclists. They're more vulnerable than maybe we thought before'.

This interviewee described being more aware of how cyclists behave and react on the road:

Well, as I say it's made me more aware of cyclists and how they react, how they behave and how I react and behave to them as well. I was pretty aware of them before, but there's a lot of things come in to help with driving aids and stuff to help cyclists. It's good to have a course where you can see things from somebody else's viewpoint rather than just your viewpoint.

To this interviewee, however, this was couched in a negative voice, highlighting the need to look out for cyclists because of a perception that they are likely to

behave erratically:

It made me more aware of watching for bicycles, and watching out for – because you know yourself, there's dickheads on the road, and they just think they can go anywhere with a bicycle... I [am] more aware of them, yes, a lot more, because, like I said to you, it's just the situation as it is, they have very little consideration for their own lives.

This interviewee gave an example of an experience during the practical part of the course when he became more aware of his vulnerability on a bike, and implied that it changed his viewpoint:

Basically, there was two of the group nearly got knocked off when we were out on the road, and we were all being sensible, all in a group, all had hi-vis on and stuff like that, and he was like, can you see? We're in a group of ten cyclists all with hi-vis on, and this guy just completely shot right through the middle of us to make a left turn. So a different view of things altogether then.

Similarly, at the observed session participants were responsive when the leader drew their attention to safety issues associated with sharing space with the Metrolink tram tracks and from the risk of vehicle doors being opened in their paths.

In terms of action and impact upon driving practice, one of the implications of this increased awareness and sense of cyclists' vulnerability was a general level of caution when driving:

It's made me more aware and made me be a bit more apprehensive when I come up to junctions... if I'm stopped at lights, and you'll be surprised how many people still try and come up, and I think, what are you doing? Yes, but that's going to really affect me turning left then.

Yes, because, like I say, I used to ride a bike and since going on the course I'm more aware of cyclists on the road and what they might do and what they might not do. It focuses your attention. So you're a lot more careful around people on the road.

Similarly, this interviewee reported being more aware and 'extra careful':

...it makes you more aware of a cyclist coming up the passenger side of you, and maybe you're turning left. It just made me more aware of being extra careful with them.

This interviewee expressed some empathy, showing that he understood that cyclists need to hold up other traffic when making manoeuvres: *'I can understand why drivers do get frustrated with cyclists but it was quite necessary in my eyes, so if they're behind you they'll just have to wait'* (5).

The interviews, then, provide some evidence that the drivers had awareness of the vulnerability of cyclists

and some empathy for their experiences on the road. They also suggest that attending the course had been a factor in developing this. Drivers also implied that this had influenced their driving, and described taking care around cyclists in a general sense. The next section looks at some more specific examples of changes in practice.

Giving space, hanging back, slowing down

Interviewees gave more specific examples of modifying driving practices as a result of this increased awareness of the vulnerability of cyclists. However, some claimed to already be very aware of cyclists when driving: 'I am quite aware anyway, so it's not really improved anything that I'm not already good at'; 'I like to feel that I've always given people plenty of room'.

Another argued that drivers of wide vehicles tend to be more aware of passing distances in any case:

Yes, just being a bit more aware. Because of the nature of our job, being in the heavy haulage side of thing, you're a bit more aware anyway of traffic [unclear] and other road users because sometimes we could be as wide as 14 foot wide. So to tackle junctions and overtake parked cars or overtake cyclists you're a little bit more aware than the average truck driver. It's a little bit different for us.

One example of a practical change in driving practice is giving cyclists more space when passing or driving near to them. In this example, the driver directly referred to material from the course, evidencing an understanding that people ride in groups for safety rather than purposely slowing down other traffic and stating that he now gave them more room:

I'm a lot more aware of some of the things that they're doing that maybe I wasn't before, because you get a lot of people riding in groups, and, as was pointed out on the actual course, the reason for them riding in that group and maybe bunched up together is not to inconvenience the likes of car drivers, lorry drivers, whatever, it's for their own safety. So, I put them in my mind and I give them a lot wider berth now as well.

This interviewee referred to a specific example of the pinch points, which he reportedly learned about for the first time on the course. This had caused him to 'hang back' and, he implied, to have more patience with traffic:

... I used to give them a bit more room or give them a bit extra more room, but, like I said, I'm hanging back a bit more now, whereas before I'd go for it but I never knew about the pinch point, but now I know about the pinch point I don't. I'll have a look at the state of the road, like I say, if it is a traffic jam and what not there's no point, he'll come up with you in 10 minutes. Whoosh, back again, you overtake him and then he's back again, back again, so I'll just stay behind him, go at his pace. If it's a traffic jam, so what?

Similarly, this interviewee described allowing more room when overtaking and demonstrated an understanding of primary position:

Like I say, I've never driven a bike but seeing it from a cyclist's point of view is totally different than what view I had before. 'Get out the way, get out the way,' but now I know why you're doing that... I always do give up space and what not, but, like I understand now why he's pulling out, 'Why's he pulling out there?' Because it's a junction and he doesn't want me to overtake him, giving himself a bit more room in case anyone does pull out, so I think about it more now.

In this example the interviewee referred to learning that cyclists are likely to be going faster than he expected and this will allow more time to get past:

It highlighted certain things, and, like I said before, the fact that bikes are a lot quicker now than they were, so yes, possibly I most probably would hang back more, think well, at the speed that the bikes go now it's only going to be a couple of seconds and then, rather than overtake him, I'd wait until he's gone past the junction.

Finally, this interviewee gave an example of the course influencing the way he cycled. This is not a core purpose of the course, which focuses on drivers, but is certainly not a negative outcome and helps to improve standards of cycling:

Yes, because it made you aware of what you should do when you approach junctions. I wasn't aware. I am quite streetwise and I'm confident on a cycle, but it actually taught you how to approach roundabouts, how to approach a junction, how to pass parked cars basically. It helped my knowledge. It improved my cycling, to be honest.

In summary, the interviews provide some evidence that the interviewed drivers had changed their behaviour as a result of the course. This was manifested principally in giving more space to cyclists when passing them, hanging back when not safe to overtake, and slowing down at junctions. In describing this practice, interviewees mentioned specific ideas and concepts referred to in the course, which indicates that these were influential in shaping their practice. In particular, these were pinch points, road positioning, cycling two or more abreast, and appreciating that cyclists are often going faster than drivers expect.

5.7 Maintaining the learning

Something that the interviews sought to gain an understanding of was the need and potential for ongoing learning around cycling awareness. This related in part to what the interviewee perceived might work and be relevant to them and in part to what might fit into and complement their existing training regime. Views on this were mixed, but there was a general sense that ongoing training would be useful.

The importance of the practical session was emphasised, both as the element that made this course different from other courses and as a training tool that helped to make real some of the more theoretical material in the course:

Classroom work is good, but you can only go so far in a classroom. To actually get out there and do something is a lot better and it gives you that confidence that you can go out there and do it if you have to do it.

One interviewee felt that future attendance on a similar course would need to be justified by updated or new material rather than pure repetition:

If it was exactly the same we wouldn't be interested in it, but if it was like an upgraded version of it or a bit more in-depth, right you've already done part one, this is our version of part two now, a little bit more in-depth or different scenarios, that might be [of interest].

A particular example of an opportunity for refreshing the training was the 'toolbox' talk. These are opportunities in the workplace to speak about current issues, in this case for around 20 minutes. The interviewee implied that cycling awareness issues could be accommodated as part of these.

Others emphasised the importance of ongoing learning, saying that drivers should always be learning as technology and road conditions develop, and another commenting that cycling issues are often mentioned as part of their CPD courses. This driver emphasised the importance of ongoing learning in a changing context:

I don't know whether any tests have been done, but I feel as a professional driver that you're always learning. If anybody says, oh, I've done it all, I know it all, they don't. Because vehicles change. The speed of vehicles now is a lot greater than it was when I first started. Lorries are a lot faster than they were when I was first driving. You're driving now with lorries with 500 horsepower, where when I first started you had 150.

These accounts demonstrate that interviewee views on continual learning opportunities varied. Interviewees emphasised the importance of the hands-on, practical element of the course, whilst recognising that there are other approaches that could help to keep these ideas fresh in their minds.

6. Survey of drivers



6.1 Introduction

This section summarises the findings of the Internet-based survey carried out as part of this study. With nine respondents, it should be understood as a pilot.

Closed questions are presented as charts showing the frequency of answers. Open qualitative questions are presented as a series of answers. Where similar answers can be grouped, a frequency is provided. Some answers are paraphrased; where it is important to give the exact wording, this is indicated using quotation marks.

Reflections on the findings are given in Section 6.4.

6.2 Summary

The low response rate of the survey means that analysis of the responses can only be indicative. The responses indicate that many respondents felt that the course contained elements that were new to them, and they were able to identify specific aspects that were new. These included on-road positioning, which was prominent in the responses, and also specific elements such as defensive cycling and UK statistics. Taken overall, the responses indicate a positive impact on understanding why people cycle, why they make the manoeuvres they do, and the challenges they face.

The practical element of the course was well received,

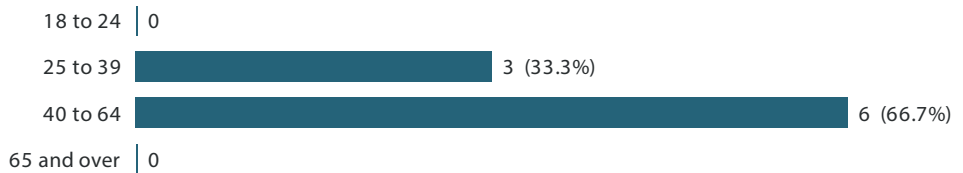
although it should be noted that a minority answered that they felt 'uncomfortable' with this part of the course. Through this part of the course, participants said they had learned about vulnerability, positioning and the limitations of cycle infrastructure, and it is implied that they experienced some negativity from other road users.

All respondents said they were more aware of the road position of people cycling on the roads, and a slight majority said that something had changed about the way they drive following the course. In comments to this question, respondents mentioned giving cyclists more space and time, generally watching out for cyclists, and stopping outside cycle boxes at traffic signals. One said they no longer experienced frustration when seeing cyclists manoeuvre on the road, since they understood now that they do this for their own safety.

6.3 Responses

This section provides a summary of the sample's demographics and experience of cycling and driving (questions 1-9) followed by answers relating to the impact of the course (questions 10-16).

Question 1 – Which age group applies to you?

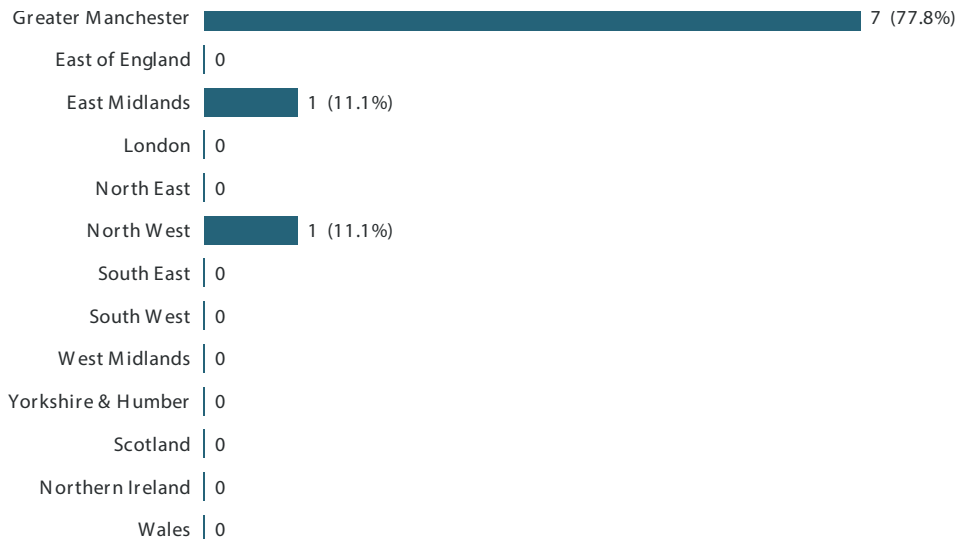


Question 2 – Are you?



The gender distribution is unsurprising. BikeRight! reported that approximately one per cent of SUD course participants have been female, and research suggests that driving occupations are dominated by male workers (Skelton & Winters, 2014).

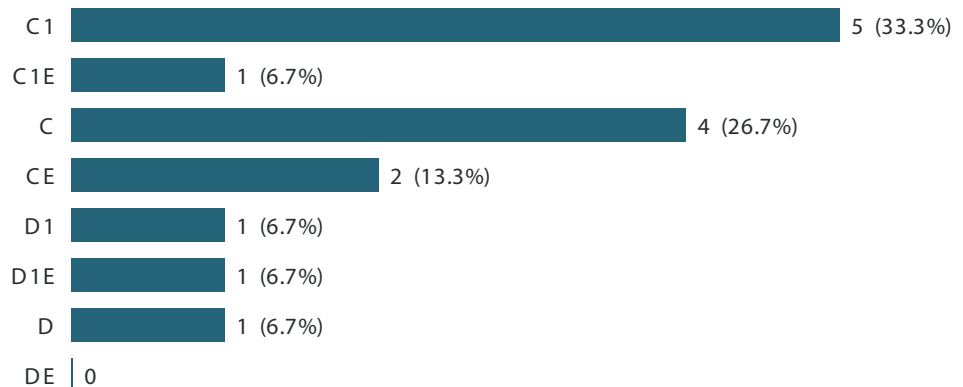
Question 3 – Where are you based?



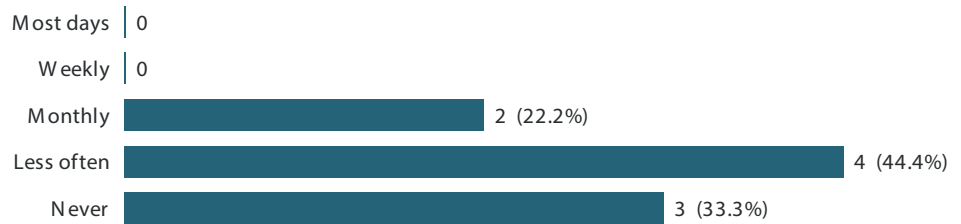
Question 4 – How long have you been a professional driver? (Please give number of years.)

Answers ranged from 4 to 32 years.

Question 5 – What categories of vehicle(s) do you drive? (Please select all that apply.) See <https://www.gov.uk/driving-licence-categories> for more information.



Question 6 – Approximately how often have you cycled (for any purpose) in the last 12 months?



Online survey participants reported cycling less often than the interview participants. The latest BikeRight! analysis of SUD course participants reported that 68.6% cycled 'never/not often'.

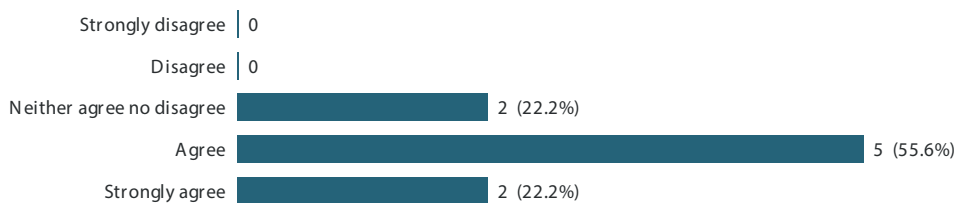
If 'never', approximately what year did you last cycle?

The answers provided were 1978, 1990 and 2014, indicating substantial variation.

Question 7 – When did you attend the Safe Urban Driving course? Please provide month and year. (If you are unsure, please estimate.)

The participants had attended the course in October 2016, November 2016 (3), and December 2016.

Question 8 – To what extent would you agree that the information in the course was new to you?



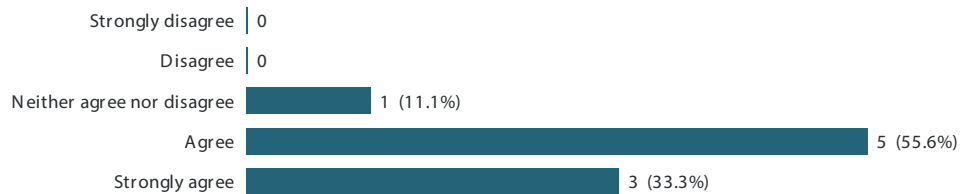
Question 9 – Which, if any, issues mentioned in the theory part of the course were new to you? Please list up to three.

Participants listed the following elements that they considered to be new to them:

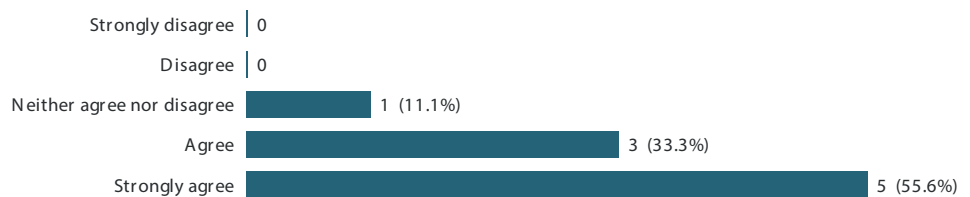
- Video footage of near misses
- Positioning of cyclists on the road/reasons for cyclists' positions on the road (3)
- Defensive cycling
- Your vision when scanning
- Infrastructure changes
- Cycling in London traffic
- 'The UK stats from 1936 to present day'
- Level of training/education have not had/not required to have
- How other [countries] are developing safe junctions

Question 10 – To what extent do you agree with the following statements?

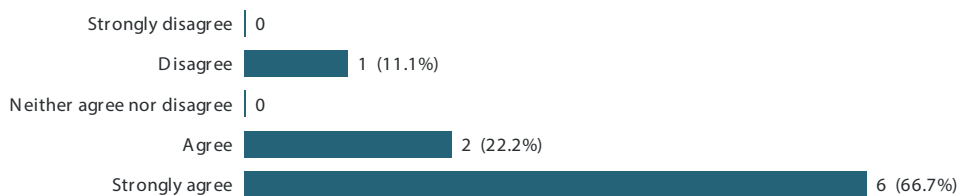
a) Following the course, I have a better understanding of why some people cycle.



b) Following the course, I have a better understanding of why people make certain manoeuvres when cycling in traffic.



c) Following the course, I have a better understanding of the challenges that people face when cycling.



d) Following the course, I have a better understanding of my responsibilities towards other road users.



e) Following the course, I have a better understanding of what types of cycling infrastructure are most helpful for facilitating safe cycling.



This set of responses is encouraging, since it suggests that respondents felt they had a better understanding of why people cycle, the challenges they face and the reasons for their manoeuvres, as well as an acceptance of their own responsibilities towards other road users.

Question 11 – Please name (up to) three things you learned from the theory session.

Respondents listed the following learning points:

- Limited utility of cycle lanes to cyclists in some places
- Reasons why cyclists do certain things
- Reasons why cyclists make sudden changes in direction
- Mindset/mentality of cyclists (2)
- Cyclist positioning on road (2)
- 'Treat cyclists with more respect'
- Infrastructure: good and bad examples
- More needs to be done to keep cyclists safe
- Scenarios of 'correct driving positions'
- Where to take more care
- 'All drivers need a better understanding of other road users' needs'

Question 13 – Please name (up to) three things you learned from the practical cycling session.

Respondents listed the following learning points:

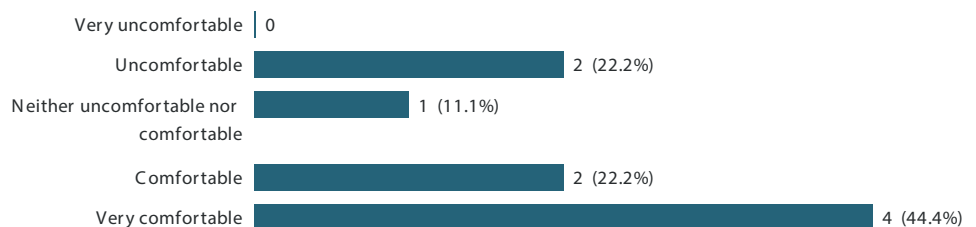
- Position cyclists need on the road
- Primary and secondary position
- How unfit I was
- Vulnerability of cyclist
- Cycling lanes [can be] good and bad
- Watching for sudden movement from cyclists
- How to manoeuvre safely and correctly on a bike
- Aggressive attitude of other road users towards you
- Passing junctions
- Use of cycle lanes
- How to approach junctions safely
- Your bike size and set-up for full control
- Do's and don'ts when riding

Additionally, one respondent expressed a view about filtering:

However, I still disagree with 'Lane Filtering'; it appears to me if all users followed the rules of the road and did not see a small gap as an opportunity to overtake or undertake then the roads would be safer for everyone. The key is patience for motorists, pedestrians and cyclists alike.

This is a personal opinion, as the National Standard for Cycle Training Level 3 allows cyclists the choice of waiting in queuing traffic or passing on the left or right. It may indicate that this was not explained clearly to this driver as part of the course.

Question 12 – How did you feel about taking part in the practical cycling session?



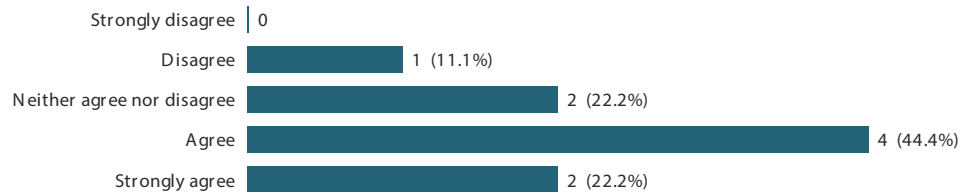
Question 14 – As a result of attending the Safe Urban Driving course, to what extent would you agree with the following statements?



a) I have noticed more people cycling on the roads.



b) I am more aware of the road positioning of people cycling on the roads.



c) My view of on-road cycling has changed.

These two questions indicate a positive shift, in that respondents were more aware of road positioning, which is something that was covered in the course, and that the course has had some influence on their view of cycling.

Any other comments?

Respondents evidenced some positive attitudes towards cycling:

- 'My views of cyclists has changed; before this course I just thought many were being ignorant on the roads.'
- 'I understand better; however, as primarily a motorist, I still think road users should follow the same rules.'
- 'I am watching more for cyclists.'

One respondent added this comment, implying that there may have been too much 'anti-cyclist' feeling in the course: 'I feel that the course allows drivers of larger vehicles to express their dislike of cyclists without comeback. I feel a point missed is in the stats 1936 to 2016 shows better driving standards saves life, the driver can make a big difference.'

Question 15 – Have you changed anything about the way you drive as a result of attending the course?

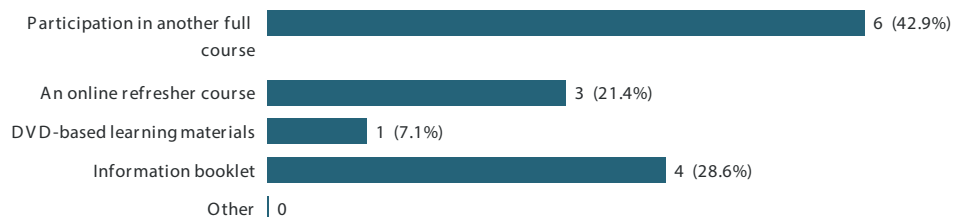


Around half of the nine respondents said that they had to some extent changed their driving practice.

If you have, please give up to three examples:

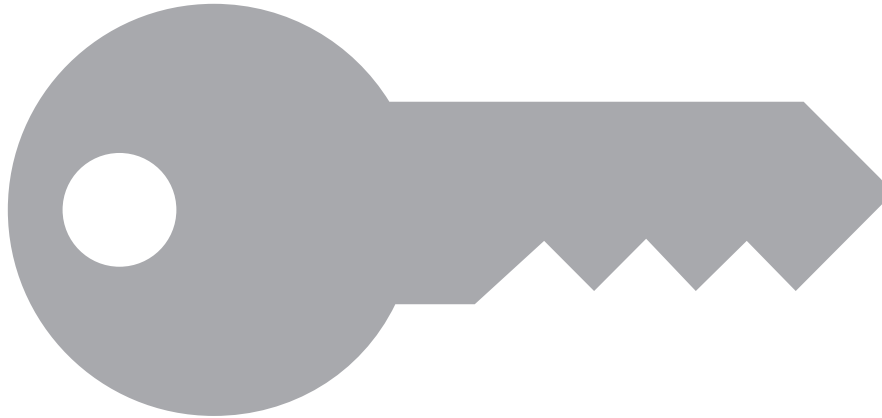
- Give cyclists more space and time
- Give cyclists more room (3)
- More aware of cyclists' positioning
- Watching more for cyclists
- Stopping outside the cycle boxes at traffic lights
- 'Pointing out these same issues to my children so they can learn.'
- 'Not get frustrated by some cyclists' manoeuvres which in the past I established as being selfish, but now I see as being self-protective.'

Question 16 – Which of the following follow-up activities and resources would be useful for you to ensure that the lessons from the course are retained as part of your professional practice? (Respondents could select more than one.)



Whilst the small sample size should be noted, these results are encouraging in terms of interest in repeat attendance of the course. BikeRight! has noted that participants have been known to opt to attend a second time when their employer gives them a range of courses to select from.

7. Conclusions



7.1 Overview

This study of cycle awareness training for professional drivers in the form of the Safe Urban Driving course delivered by BikeRight! is informed by six driver interviews, one course leader interview, and a day of participant observation on the course itself.

7.2 General acceptance of course

The course has been well received by the participants, and this is verified in BikeRight!'s own evaluation through participant feedback forms. In the interviews, the practical session, in which the participants are taken out on bikes and given some basic cycle training, was remarked upon, particularly for the way it differentiated the course from other CPD training they had participated in. This clearly had value in terms of helping the participants to experience the roads on a bike, bringing to life some of the issues raised in the more theoretical parts of the course, and making the course fun. This latter element should not be underestimated, as part of the task of the course is to instil a more positive attitude towards cycling.

7.3 Impacts of the course

The interviews indicate that the course has been able to influence the way the drivers perceive cycling and cyclists, and the Internet-based survey provides further evidence in support of this. Part of the value of the course appears to be in challenging perceptions of cycling, including who cycles and why people cycling behave as they do.

There is evidence, according to the drivers' own reports in the interviews and the Internet-based survey, that the course has had an impact upon driving practices, both in a very general sense of taking extra care around cyclists and in the form of some specific examples such as giving more room when passing, hanging back, and more accurately anticipating speed. There is also a suggestion that drivers' views on cycling infrastructure have been affected, with some expressing an understanding that not all infrastructure is suitable for use at all times and in all situations. In some cases, interviewees were able to recount specific concepts that had been taught in the course, such as pinch points, road positioning, riding in groups, and judging the speed of cyclists.

Even in this relatively small sample, however, there remained negative attitudes towards cyclists, such as claiming that they are irresponsible on the road and that they should use cycle lanes. This indicates that the course has not been able to challenge all negativity

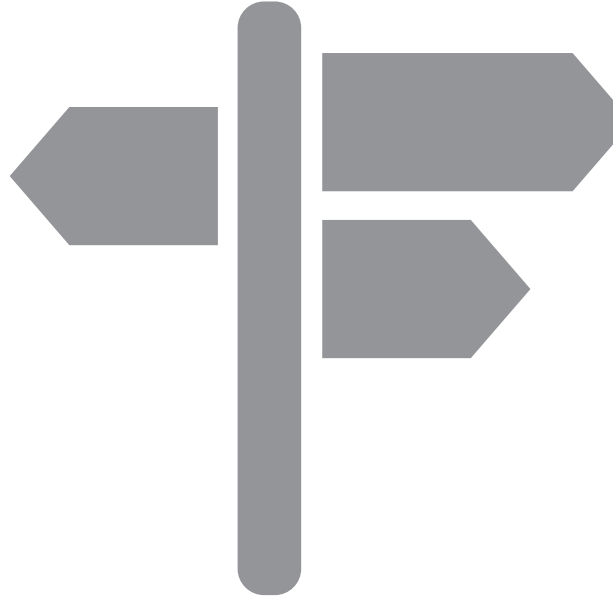
towards cyclists. There is of course no evidence that such attitudes correspond to poor or dangerous driving, and it is unlikely that any course could overcome all negative attitudes towards cycling in one day. Methodological considerations

It is important to note and bear in mind the methodological limitations of the study, which stem primarily from the difficulties in recruiting interviewees. Whilst this pilot study provides useful insights into the likely impact on drivers, further research should seek to secure a larger, more robust and more diverse sample in order to be able to make claims about the impact of the course on drivers as a whole. Not only was there a relatively small sample, but it was not possible to be selective in order to recruit a sample that ranged across characteristics such as driving experience and levels of cycling. In BikeRight!'s own participant data, 69% of participants say they never cycle, whereas three of the six interviewees said they were currently confident cyclists and one was involved in road racing in the past. There is a risk that the sample was therefore disproportionately sympathetic to cycling and cyclists, and that the evidence of the receptivity of the interviewees to the vulnerability of cyclists and to changing driving behaviour may be exaggerated when compared with the general population of drivers. Further research would be able to verify this concern, but it is worth noting that both

the participant observation and the interview with the course leader also identified a change in attitude by the end of the one-day course, particularly following the time outside cycling on the road.

In taking forward this research and to generate a more robust evidence base, it would be beneficial to have close involvement of employers so that they can assist in coordinating interviews, allocate work time for the interviews to take place, and enable the researcher to shape the sample rather than being limited to those prepared to give up their free time. Having time allocated out of their shift would allow more in-depth interviews and help to increase participation. A larger sample would allow the themes identified in this pilot study to be more rigorously tested to understand to what extent these can be seen to be representative of drivers. It may also be instructive to interview or otherwise seek information from drivers soon after their course participation and at subsequent intervals, such as 3 months, 6 months, and one year, to learn more about how their driving has changed over that period. If resources allow, there are opportunities to bring in further longitudinal research such as a rolling participant survey, participant diaries, company incident records and vehicle tracking, which could help to overcome the potential bias of retrospective self-reporting.

8. Recommendations



- The Safe Urban Driving course should continue to be funded and delivered in the light of evidence that it is having a positive impact upon drivers' attitudes towards cycling and, in turn, their behaviour on the road.
- In promotion, the practical on-road cycling element of the course should be emphasised for its ability to bring to life the theoretical elements of the course, aid empathy of the experiences of cyclists, and, importantly, provide a fun and attractive element of the course.
- Possible options for follow-up and refresher activities should be further investigated to ensure that the learning from the course endures and improved driving becomes embedded in practice.
- A more substantial longitudinal study should be carried out in liaison with participating businesses to enable more systematic sampling and recruitment of participants and allow in-depth and comprehensive exploration of the impact of the course. This type of partnership approach could be facilitated by Transport for Greater Manchester and could yield richer results.

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