

2018

Investigating the impact of the Cycling Proficiency Scheme in schools in Northern Ireland, 2018

This statistical brief was commissioned by Safe and Sustainable Travel Division, Promotion and Outreach Branch, DfI. This paper considers any changes in the attitudes of children towards road safety issues associated with cycling following the completion of the Cycling Proficiency Scheme at school.

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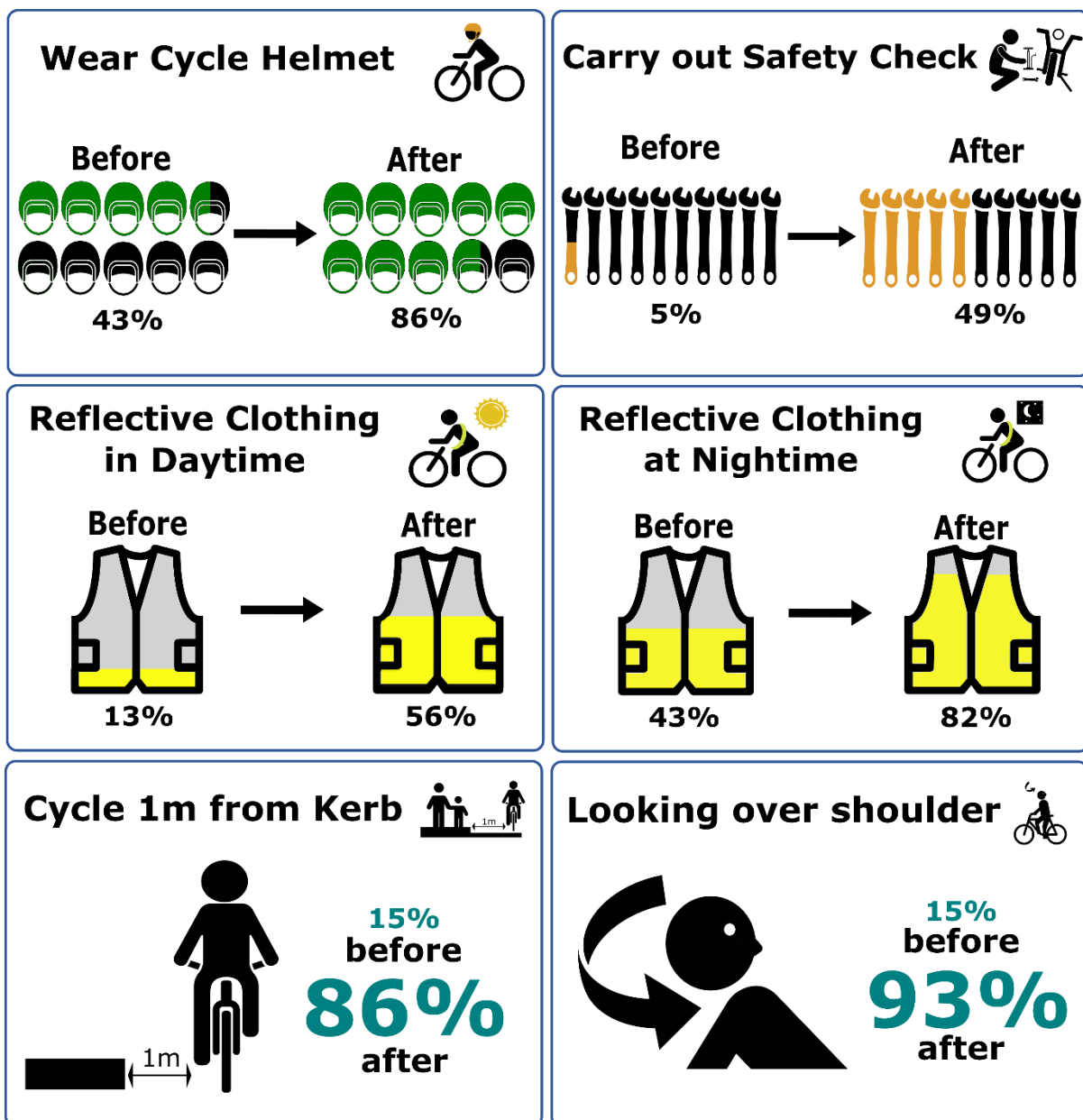


Infographics

Pupils were asked six questions about their cycling behaviours before and after they completed the Cycling Proficiency Scheme (CPS). The questions were:

- Do you wear your cycle helmet every time you ride your bicycle?
- Do you carry out a safety check on your bicycle each time before you ride it?
- Do you wear something reflective and bright when riding your bike in the daytime?
- Do you wear something reflective and bright when riding your bike at night?
- When cycling do you keep about a metre away from the kerb / road side verge?
- When cycling do you look over your shoulder before signalling or moving?

The proportions who said 'yes' before and after CPS are presented in the Infographics below:

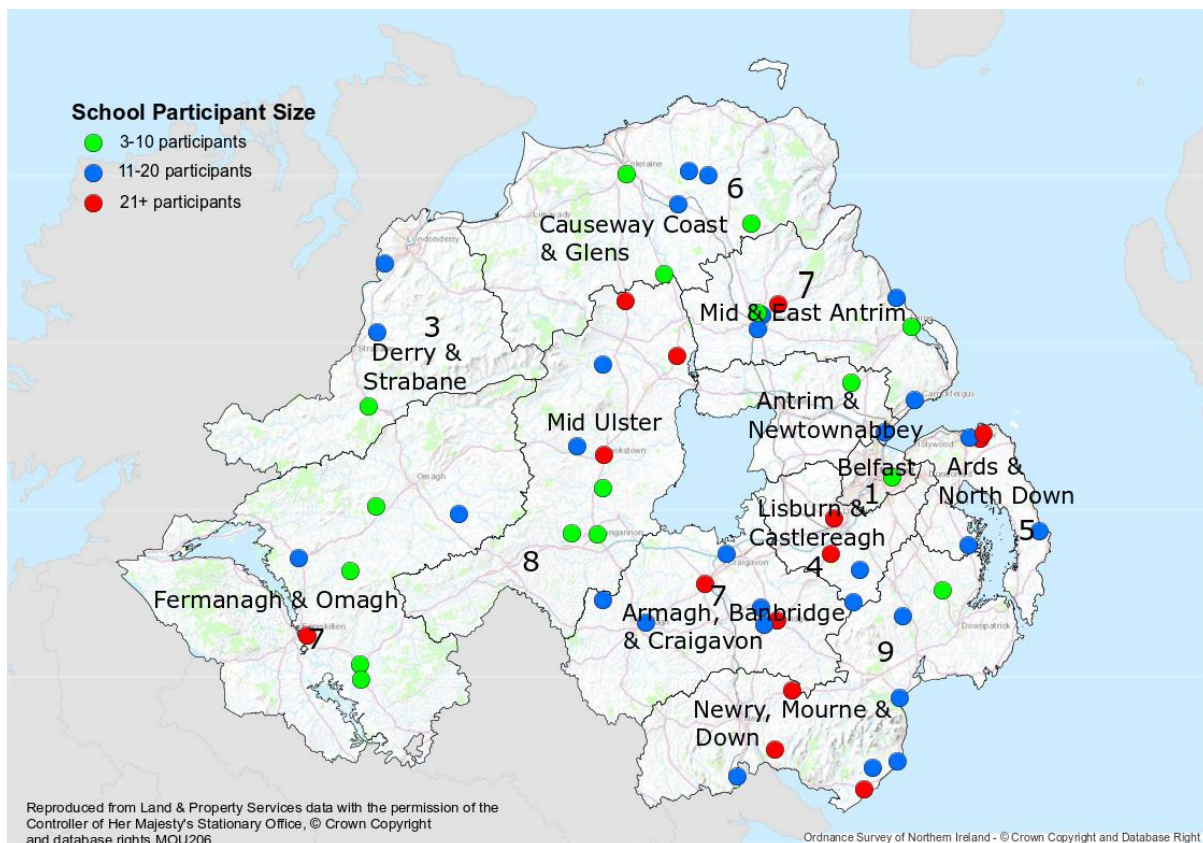


For the fourth consecutive year a survey of school children who took part in the CPS in Northern Ireland was carried out to consider the attitudes of the children towards various aspects of road safety before and after completion of the scheme.

Participating schools

In 2018, 456 schools in Northern Ireland carried out the Cycling Proficiency Scheme; however, due to delays, only 270 participating schools were available for this analysis. Approximately two-fifths (110) of participating schools were sampled for this survey, and of these, 59 schools responded. See Survey Methodology on page 14 for more information. Figure 1 maps the location of the schools that completed and returned the cycling proficiency survey. It is clear there is a good geographic spread throughout Northern Ireland with no areas particularly under or over represented.

Figure 1: Map of Northern Ireland plotting the participating Cycle Proficiency schools, 2018



The majority of schools who participated in the survey were located in a rural area (59%), while the remaining 41% were in urban areas (35 and 24 schools, respectively). Newry, Mourne and Down had the most schools taking part by District with 9. Almost half the proportion of schools (49% or 29 schools) had 11-20 participants in the scheme while 16 schools (27%) had 3-10 participants and the remaining 14 had 21 or more participants (24%). See Figure 2 overleaf.

Figure 2: Breakdown of Schools that participated in the CPS in 2018

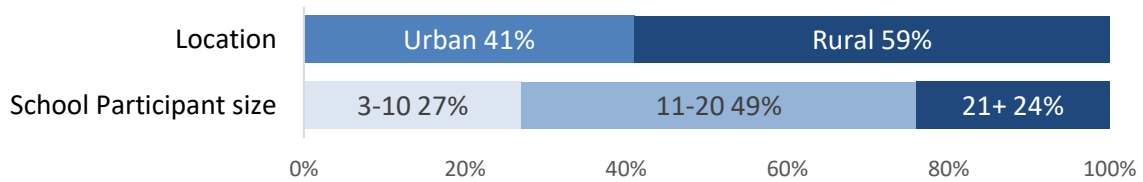
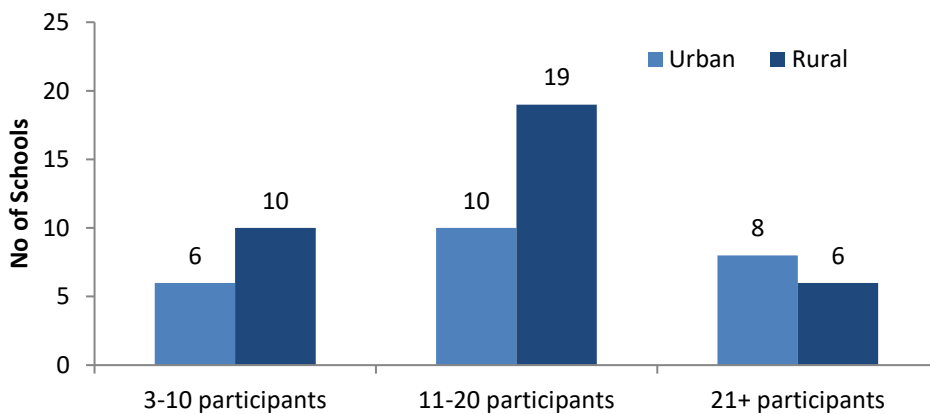


Figure 3 shows the breakdown by participant size across urban and rural schools. Rural schools had a greater representation than urban schools in two of the three participant group sizes, with approximately two thirds of schools taking part in CPS in both the '3-10' and '11-20' participant groups being located in rural areas. Most schools with 21 or more participants were from urban areas (eight out of 14); however, there were a greater number of urban schools in the 11-20 participants category (ten).

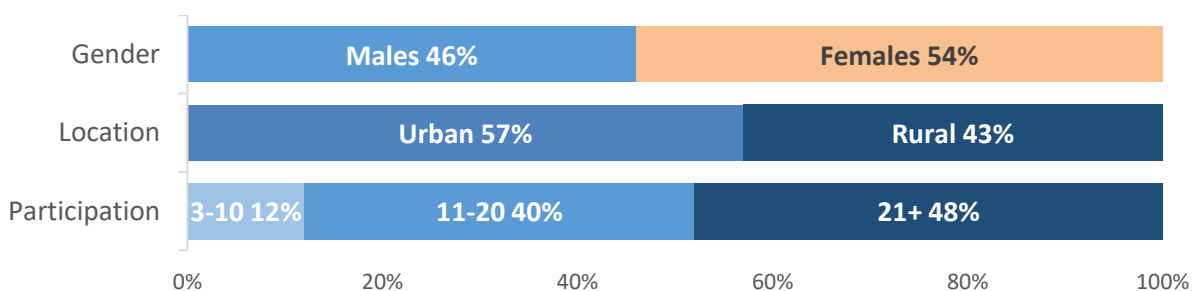
Figure 3: Schools who completed the CPS survey by participant size and urban/rural location, 2018



Participating pupils

There were 477 boys (46%) and 556 girls (54%) who completed the survey comprising a total of 1,033 pupils from the 59 schools (down by 133 pupils from 2017; a decrease of 11%). Almost two thirds (57%) of these pupils were from a school in a rural area and 43% from an urban area school; while schools with 21 or more participants accounted for 48% of the total, those with 11-20 participants accounted for 40% and schools with 3-10 participants made up the final 12%. See breakdown below:

Figure 4: Breakdown of pupils who responded to the survey

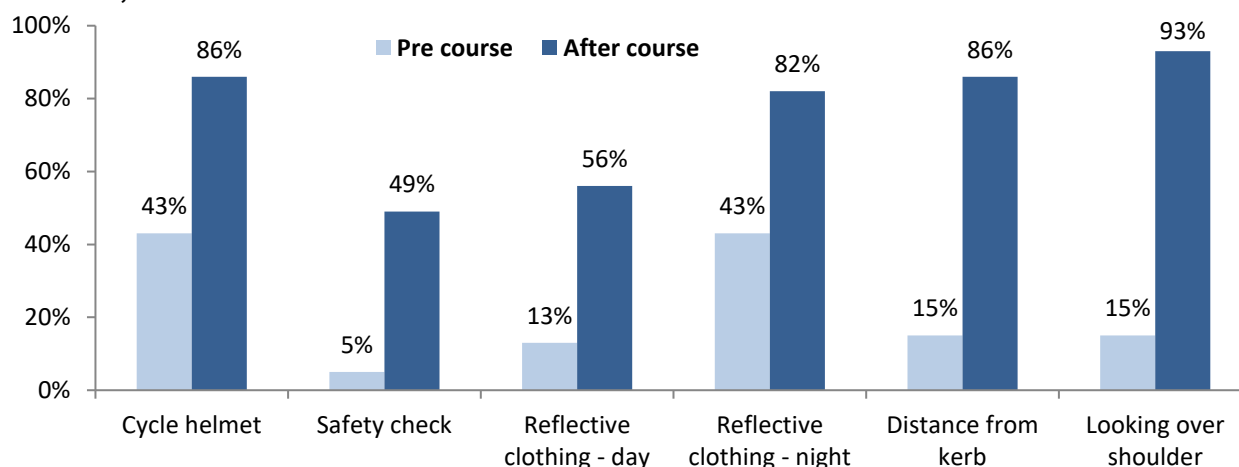


Findings

The Cycling Proficiency Scheme aims to promote safe cycling behaviours among children. The training seems to have been very effective – **97% of pupils said their knowledge of cycling safety had increased as a result of completing the CPS training**, and this proportion remains unchanged from last year. Further to this, the children reported a positive shift in all six safe cycling behaviours on completion of the course. Figure 5 below illustrates a clear increase in the proportions of pupils who answered ‘yes’ to each of the questions after completing the CPS.



Figure 5: Proportion of pupils who answered ‘yes’ to each question before and after the CPS, 2018



Key Points

- Only 43% of pupils reported wearing a cycle helmet before the course, this doubled on completion of the scheme to 86%.
- In four of the cycling behaviours, more than 80% of pupils indicated that they carry them out post-training; the safety procedures of pupils riding their bicycle a metre away from the kerb and looking over their shoulder before signalling or moving both increased by over 70 percentage points from pre-course.
- Despite having both the lowest pre-course and post-course scores with 5% and 49% respectively, the discipline of carrying out a safety check showed the greatest increase following CPS, with almost nine times as many pupils than before training indicating that they now observed this procedure before cycling.
- Girls and urban school children were more likely to practise some of these behaviours than boys and rural school children, both prior and after completion of the CPS.
- Schools with 21 or more participants also reported that they were more likely to use some of the procedures taught in the course, particularly when compared to schools with 11 to 20 participants.

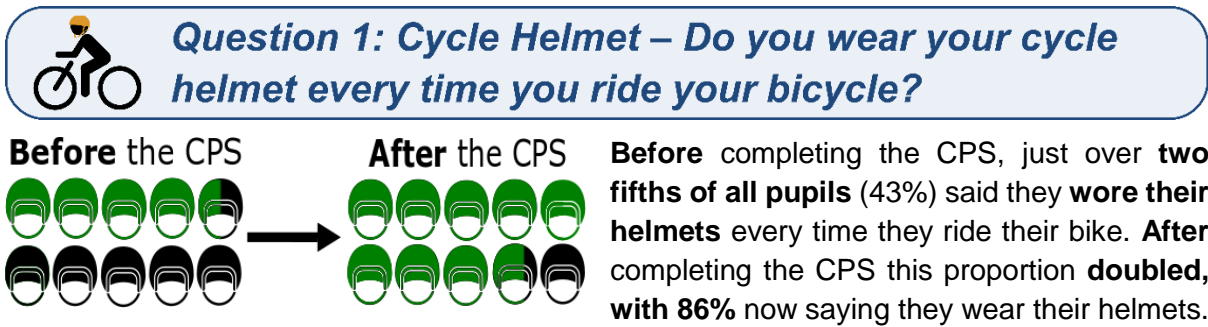


Figure 6 : Proportion of pupils who said they wore a cycle helmet, by gender

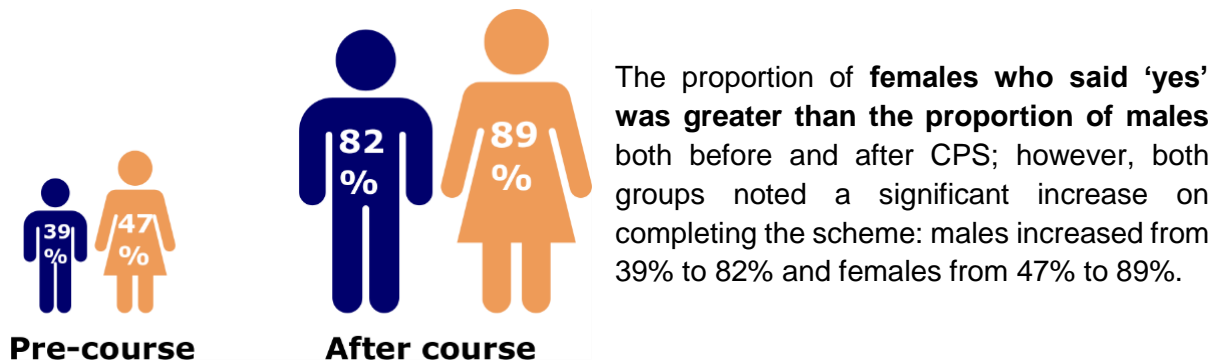


Figure 7: Proportion of pupils who said they wore a cycle helmet, by location

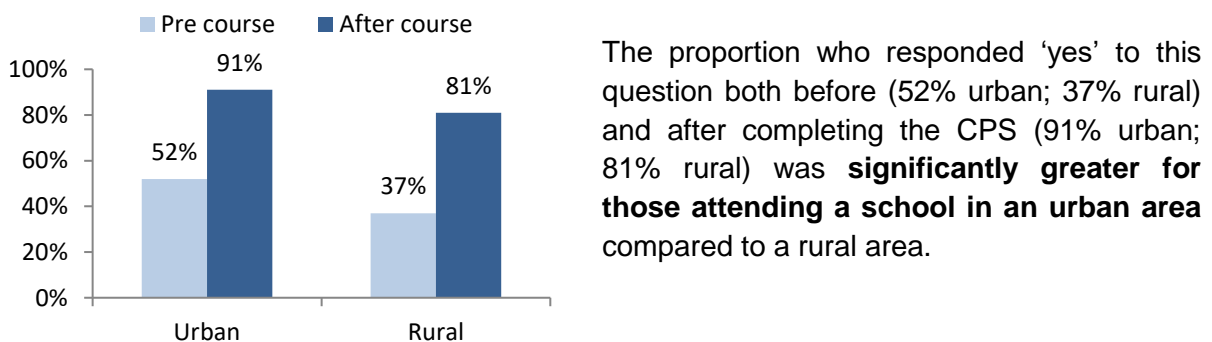
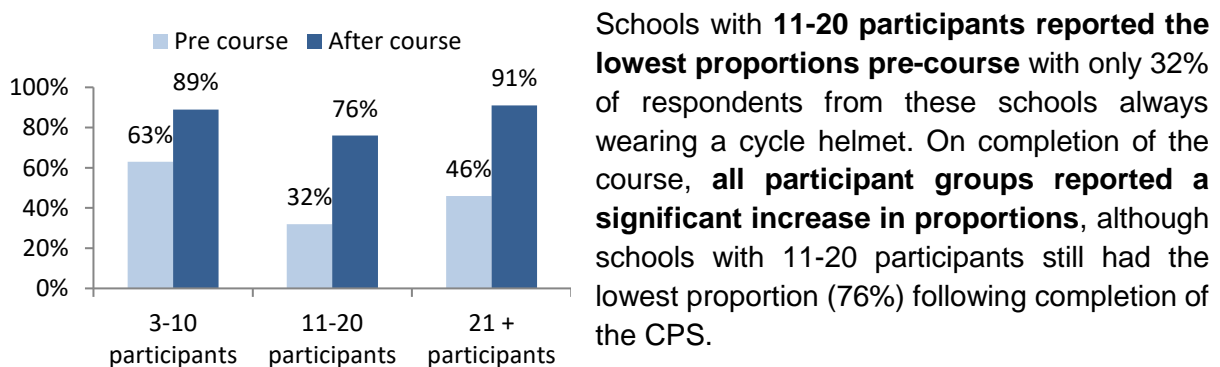


Figure 8: Proportion of pupils who said they wore a cycle helmet, by the number of CPS participants in the school





Question 2: Safety Check – Do you carry out a safety check on your bicycle each time before you use it?

Before the CPS

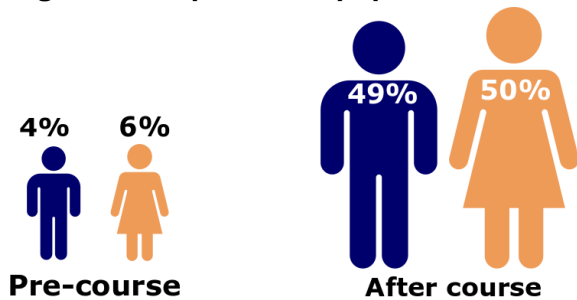


After the CPS



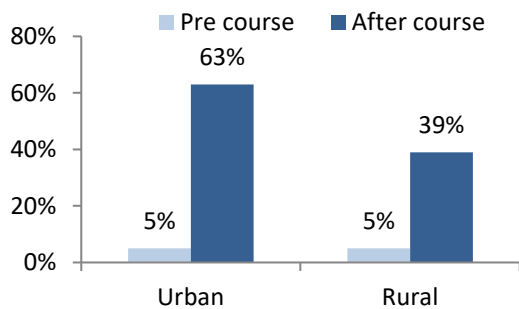
Prior to completing the CPS, only **one in twenty** (5%) responded 'yes' to carrying out a safety check on their bicycle before using it, the lowest proportionately since this study began. This **increased to almost half** (49%) upon completion of the scheme.

Figure 9: Proportion of pupils who said they carried out a safety check, by gender



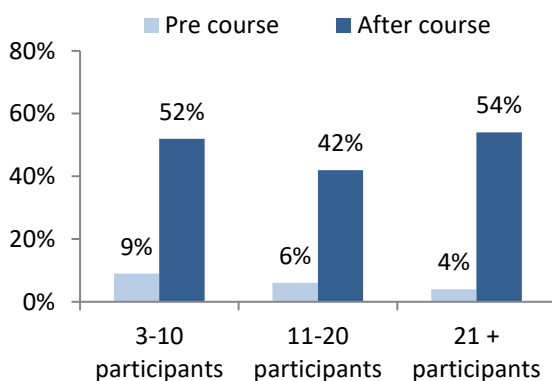
There was **no difference between the two sexes in this question**. The proportion who responded 'yes' was very low for both males (4%) and females (6%) before completing the CPS; these increased to 49% and 50%, respectively, following training.

Figure 10: Proportion of pupils who said they carried out a safety check, by location



While there was no difference in the proportion of pupils who responded 'yes' from urban or rural schools pre training, those who reported they would carry out a safety check post CPS was **significantly greater for those attending a school in an urban area (63%)** compared with those attending a school in a rural area (39%).

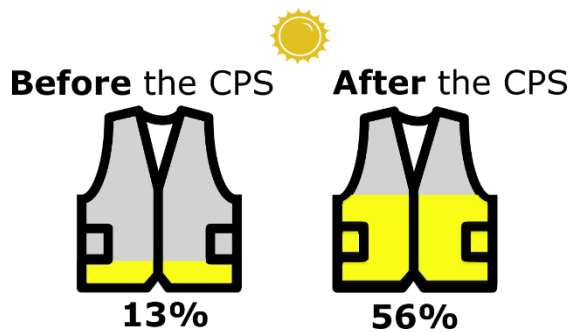
Figure 11: Proportion of pupils who said they carried out a safety check, by the number of CPS participants in the school



Schools with 21 or more pupils who took part in the scheme reported a lower proportion of those who carried out a safety check pre course in comparison with schools which had 3-10 participants. Following the completion of CPS, it was **schools with 11-20 participants which reported the fewest** number of pupils who answered 'yes' in comparison to those schools with both 3-10 participants or 21 or more participants.

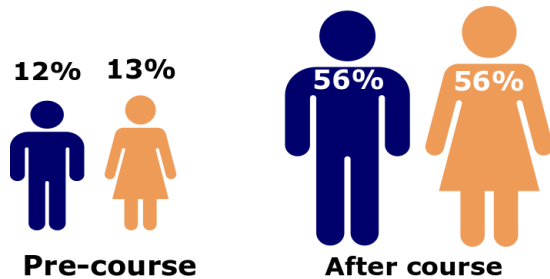


Question 3: Reflective Clothing – Do you wear something reflective and bright when riding your bike in the daytime?



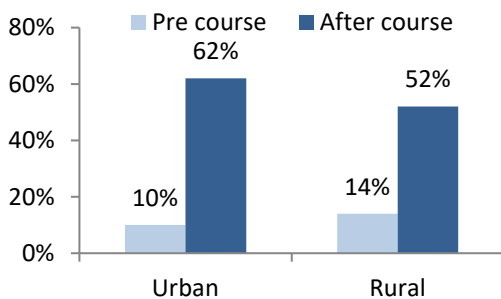
Before completing the CPS, **only 13% of pupils responded 'yes'** to wearing something reflective while riding their bike in the daytime. This increased to **56% on completion of the scheme.**

Figure 12: Proportion of pupils who said they wore reflective clothing during the daytime, by gender



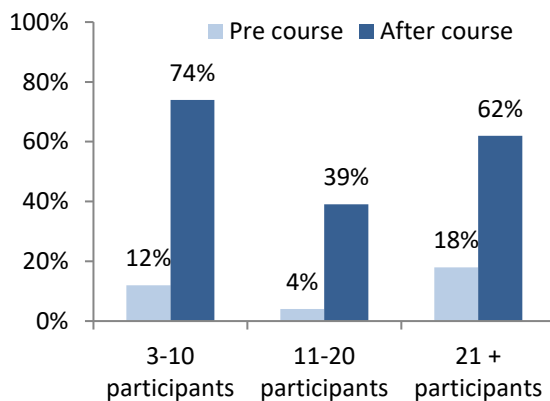
There was no difference to report between the responses of boys and girls both pre- and post-CPS training concerning the wearing of reflective clothing during daylight hours.

Figure 13: Proportion of pupils who said they wore reflective clothing during the daytime, by location



Urban and rural schools reported similar findings before completion of the scheme. However, following CPS and in contrast to last year, **pupils at urban schools reported a higher rate** of wearing bright and reflective clothing during the daytime compared to rural schools.

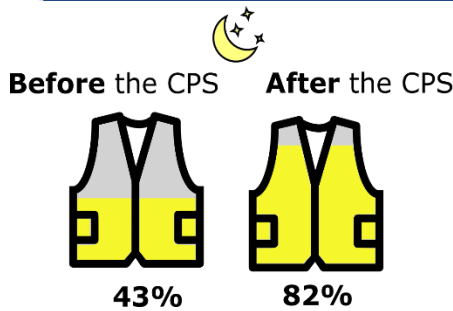
Figure 14: Proportion of pupils who said they wore reflective clothing during the daytime, by the number of CPS participants in the school



Schools with **11-20 participants reported fewer pupils both pre- and post-course** wearing reflective clothing during the day than the other school groups. In contrast, **schools with 3-10 participants reported a significantly higher post-test score** with 74% indicating they now wore reflective clothing during the day, almost double the 39% reported by schools with 11-20 participants following training.

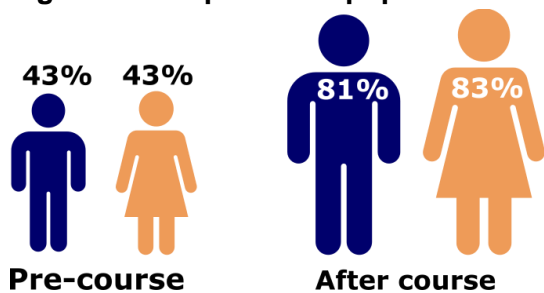


Question 4: Reflective Clothing – Do you wear something reflective and bright when riding your bike at night?



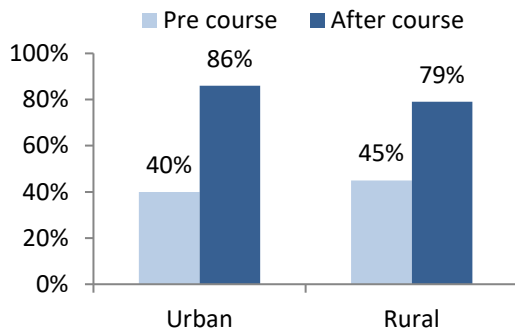
More pupils wore bright and reflective gear at night time compared to during the day. **Before training, 43% of pupils** reported they always wore something bright when cycling at night. This proportion almost doubled **after CPS to 82%**.

Figure 15: Proportion of pupils who said they wore reflective clothing at night by gender



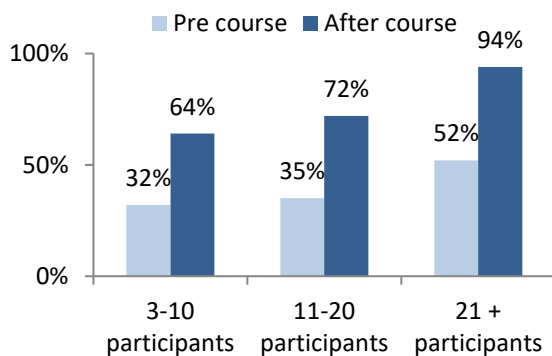
There was **no difference to report between the responses of boys and girls** both pre- and post-CPS training concerning the wearing of reflective clothing during nighttime hours.

Figure 16: Proportion of pupils who said they wore reflective clothing at night, by location



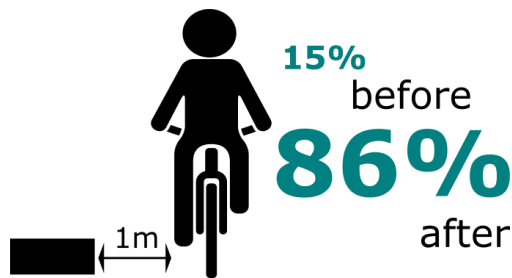
There was **no difference** in the results between urban and rural schools prior to CPS. However, following completion of the training, **pupils at urban schools reported a higher rate (86%)** of wearing bright and reflective clothing at night compared to rural schools (79%).

Figure 17: Proportion of pupils who said they wore reflective clothing at night, by the number of CPS participants in the school



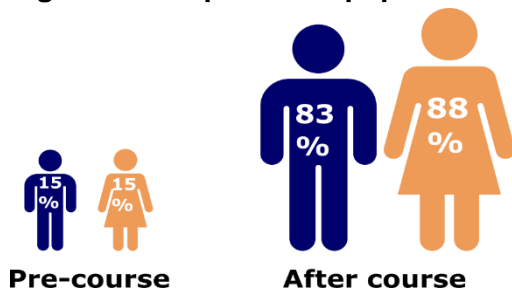
Schools with **21 or more participants reported a significantly higher pre- and post-course score** than schools with fewer pupils taking part in the Cycling Proficiency Scheme.

Question 5: Distance from Kerb – when cycling do you keep about a metre away from the kerb/road side verge?



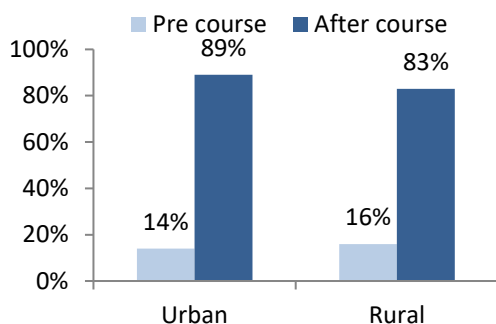
There was a significant increase in the proportion of children who responded 'yes' to this question after the CPS training. **Before training, 15% of pupils reported always keeping away from the kerb when cycling which increased to 86% following the CPS.**

Figure 18: Proportion of pupils who said they kept a metre away from the kerb by gender



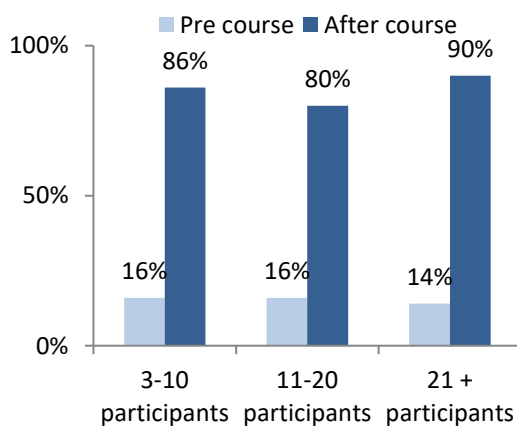
There were **no significant differences to report pre-training** between genders. However, **following the CPS scheme, girls indicated that they were more likely than boys to cycle a metre away from the kerb.**

Figure 19: Proportion of pupils who said they kept a metre away from the kerb, by location



As with gender, there were **no significant differences to report pre-training** between urban and rural schools. **Following CPS, pupils from schools in an urban area were more likely to cycle a metre away from the kerb than those from a rural school.**

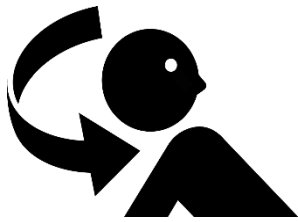
Figure 20: Proportion of pupils who said they kept a metre away from the kerb, by the number of CPS participants in the school



There were **no differences prior to CPS training** between the proportion of pupils who responded 'yes' to cycling a metre away from the verge/kerb by participant size of school. **Post-training, however, pupils from a school with 21 or more participants (90%) reported a greater proportion of pupils who indicated that they observed this discipline than schools with 11-20 participants (80%).**



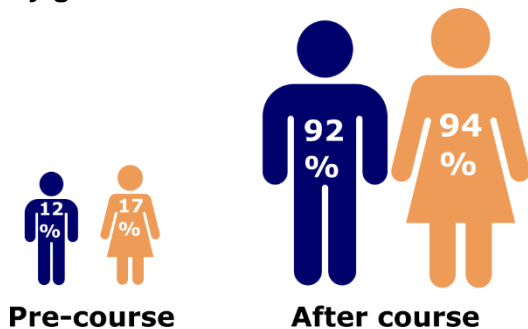
Question 6: Looking over shoulder – When cycling do you look over your shoulder before signalling or moving?



15%
before
93%
after

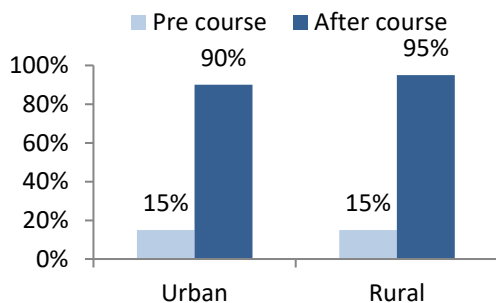
The CPS appears to have had a very positive impact on this particular procedure, with the proportion **increasing from 15% before completing the CPS to 93% after.**

Figure 21: Proportion of pupils who said they looked over their shoulder before moving, by gender



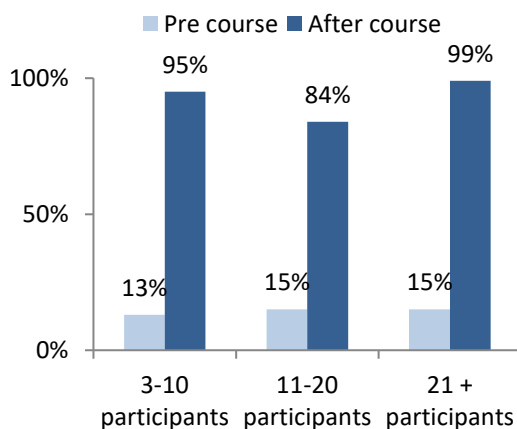
Girls indicated that they were more likely than boys to look over their shoulder prior to CPS. However, there were **no significant differences** to report between the genders **post-training** regarding pupils looking over their shoulder before moving.

Figure 22: Proportion of pupils who said they who said they looked over their shoulder before moving, by location



Before training, there was no difference between pupils from schools in urban or rural locations (both 15%) concerning looking over their shoulder before moving. **Following training, however, pupils from rural schools were more likely** to observe this procedure in comparison with urban schools. This was the only discipline to have a higher post test score in 2018 for rural schools.







Figure 23: Proportion of who said they looked over their shoulder before moving by the number of CPS participants in the school



There was **no difference to report** between participant size groups **prior to CPS training.** However, post Scheme, **those with 21 or more participants were most likely** to look over their shoulder before moving, with 99% of pupils from these larger groups indicating that they would do so.





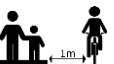

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Tables: Pupil responses for each Cycling Proficiency Scheme question before and after training by school participant size, gender and urban/rural school area

	Q1 Helmet Usage 				Q2 Safety Equipment 				Q3 Reflective Clothing – day time 				Q4 Reflective Clothing – night time 				Q5 Distance from kerb 				Q6 Looking over shoulder 							
	Total				Total				Total				Total				Total				Total							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	449	43	885	86	53	5	511	49	131	13	581	56	446	43	847	82	155	15	887	86	153	15	962	93				
No	260	25	46	4	881	85	164	16	648	63	174	17	332	32	98	9	667	65	46	4	607	59	27	3				
Sometimes	324	31	99	10	92	9	353	34	244	24	265	26	248	24	83	8	200	19	95	9	260	25	40	4				
Missing	0	0	3	0	7	1	5	0	10	1	13	1	7	1	5	0	11	1	5	0	13	1	4	0				
Total	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100	1033	100				
	3-10 participants				3-10 participants				3-10 participants				3-10 participants				3-10 participants				3-10 participants							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	99	63	141	89	14	9	82	52	19	12	117	74	51	32	101	64	26	16	136	86	21	13	150	95				
No	26	16	0	0	138	87	9	6	96	61	14	9	94	59	39	25	90	57	0	0	95	60	0	0				
Sometimes	33	21	17	11	6	4	67	42	43	27	25	16	8	5	15	9	38	24	19	12	38	24	6	4				
Missing	0	0	0	0	0	0	0	0	0	0	2	1	5	3	3	2	4	3	3	2	4	3	2	1				
Total	158	100	158	100	158	100	158	100	158	100	158	100	158	100	158	100	158	100	158	100	158	100	158	100				
	11-20 participants				11-20 participants				11-20 participants				11-20 participants				11-20 participants				11-20 participants							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	111	32	265	76	20	6	146	42	15	4	137	39	123	35	253	72	56	16	279	80	53	15	293	84				
No	123	35	39	11	288	82	113	32	272	78	112	32	146	42	41	12	235	67	45	13	203	58	26	7				
Sometimes	116	33	45	13	42	12	89	25	63	18	98	28	79	23	55	16	52	15	25	7	86	25	30	9				
Missing	0	0	1	0	0	0	2	1	0	0	3	1	2	1	1	0	7	2	1	0	8	2	1	0				
Total	350	100	350	100	350	100	350	100	350	100	350	100	350	100	350	100	350	100	350	100	350	100	350	100				
	21+ participants				21+ participants				21+ participants				21+ participants				21+ participants				21+ participants							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	239	46	479	91	19	4	283	54	97	18	327	62	272	52	493	94	73	14	472	90	79	15	519	99				
No	111	21	7	1	455	87	42	8	280	53	48	9	92	18	18	3	342	65	1	0	309	59	1	0				
Sometimes	175	33	37	7	44	8	197	38	138	26	142	27	161	31	13	2	110	21	51	10	136	26	4	1				
Missing	0	0	2	0	7	1	3	1	10	2	8	2	0	0	1	0	0	0	1	0	1	0	1	0				
Total	525	100	525	100	525	100	525	100	525	100	525	100	525	100	525	100	525	100	525	100	525	100	525	100				

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Tables continued: Pupil responses for each Cycling Proficiency Scheme question before and after training by school participant size, gender and urban/rural school area

	Q1 Helmet Usage 				Q2 Safety Equipment 				Q3 Reflective Clothing – day time 				Q4 Reflective Clothing – night time 				Q5 Distance from kerb 				Q6 Looking over shoulder 			
	Males				Males				Males				Males				Males							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	186	39	391	82	21	4	234	49	59	12	268	56	207	43	387	81	70	15	398	83	57	12	437	92
No	143	30	28	6	411	86	77	16	317	66	80	17	157	33	38	8	309	65	28	6	296	62	16	3
Sometimes	148	31	58	12	43	9	166	35	95	20	123	26	112	23	51	11	91	19	50	10	114	24	23	5
Missing	0	0	0	0	2	0	0	0	6	1	6	1	1	0	1	0	7	1	1	0	10	2	1	0
Total	477	100	477	100	477	100	477	100	477	100	477	100	477	100	477	100	477	100	477	100	477	100	477	100
	Females				Females				Females				Females				Females							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	263	47	494	89	32	6	277	50	72	13	313	56	239	43	460	83	85	15	489	88	96	17	525	94
No	117	21	18	3	470	85	87	16	331	60	94	17	175	31	60	11	358	64	18	3	311	56	11	2
Sometimes	176	32	41	7	59	9	187	34	149	27	142	26	136	24	32	6	109	20	45	8	146	26	17	3
Missing	0	0	3	1	5	1	5	1	4	1	7	1	6	1	4	1	4	1	4	1	3	1	3	1
Total	556	100	556	100	556	100	556	100	556	100	556	100	556	100	556	100	556	100	556	100	556	100	556	100
	Urban				Urban				Urban				Urban				Urban							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	230	52	402	91	21	5	279	63	46	10	271	62	178	40	380	86	60	14	392	89	66	15	397	90
No	71	16	12	3	385	88	63	14	297	68	107	24	146	33	19	4	304	69	23	5	247	56	13	3
Sometimes	139	32	26	6	34	8	97	22	97	22	58	13	111	25	38	9	72	16	22	5	121	28	28	6
Missing	0	0	0	0	0	0	1	0	0	0	4	1	5	1	3	1	4	1	3	1	6	1	2	0
Total	440	100	440	100	440	100	440	100	440	100	440	100	440	100	440	100	440	100	440	100	440	100	440	100
	Rural				Rural				Rural				Rural				Rural							
	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%	Before	%	After	%
Yes	219	37	483	81	32	5	232	39	85	14	310	52	268	45	467	79	95	16	495	83	87	15	565	95
No	189	32	34	6	496	84	101	17	351	59	67	11	186	31	79	13	363	61	23	4	360	61	14	2
Sometimes	185	31	73	12	58	10	256	43	147	25	207	35	137	23	45	8	128	22	73	12	139	23	12	2
Missing	0	0	3	1	7	1	4	1	10	2	9	2	2	0	2	0	7	1	2	0	7	1	2	0
Total	593	100	593	100	593	100	593	100	593	100	593	100	593	100	593	100	593	100	593	100	593	100	593	100

Survey Methodology

The Cycling Proficiency Scheme (CPS) has operated in Northern Ireland schools for over 40 years, training more than 400,000 pupils. Early road safety education is crucial in keeping children safe on the roads. The purpose of the scheme is to help children develop their skills, increase their confidence as cyclists and identify risks they may come across on the roads. The CPS is delivered by school staff and instructors who are approved by, and registered with, DfI Safe & Sustainable Travel Division, Promotion and Outreach Branch. For the fourth consecutive year a survey of school children who took part in CPS in Northern Ireland was carried out to consider the attitudes of the children towards various aspects of road safety before and after completion of the scheme. The questions were designed to assess how much the scheme had changed the attitudes and actions of participants in respect of various safety aspects of cycling such as wearing a helmet and reflective clothing, carrying out safety checks on bicycles and specifics of manoeuvring on the roads. This analysis monitors the effectiveness of the Scheme, allowing the Department to identify positive changes in participants' behaviour as well as areas requiring improved support and guidance. As with 2016 and 2017, the cycling survey responses in 2018 were obtained through a show of hands in the classroom. When this new methodology was introduced in 2016, there were concerns that results could potentially suffer from bias as responses were not anonymous and participants may be hesitant responding in front of their classmates. However, the method was one that teachers could easily facilitate in order to get timely feedback and ensure a high response rate. Results in previous years were not significantly different, and Analysis, Statistics and Research Branch therefore concluded that the revised methodology could be continued in 2018.

In 2018, 456 schools in Northern Ireland carried out the Cycling Proficiency Scheme; however, due to delays, only 270 participating schools were available for this analysis. Approximately two fifths (110) of participating schools were sampled to take part in the survey, using a stratified random sampling methodology (stratified based on gender, urban v rural and course participant size). Responses were received from 59 of the schools who agreed to participate in the survey, giving a response rate of 54%. This is 6 fewer schools than took part in 2017 and as a result the number of pupils responding decreased from 1,166 to 1,033 (a fall of 11%).

The table below shows the percentage of respondent schools by gender, urban/rural classification and number of CPS participants in each school.

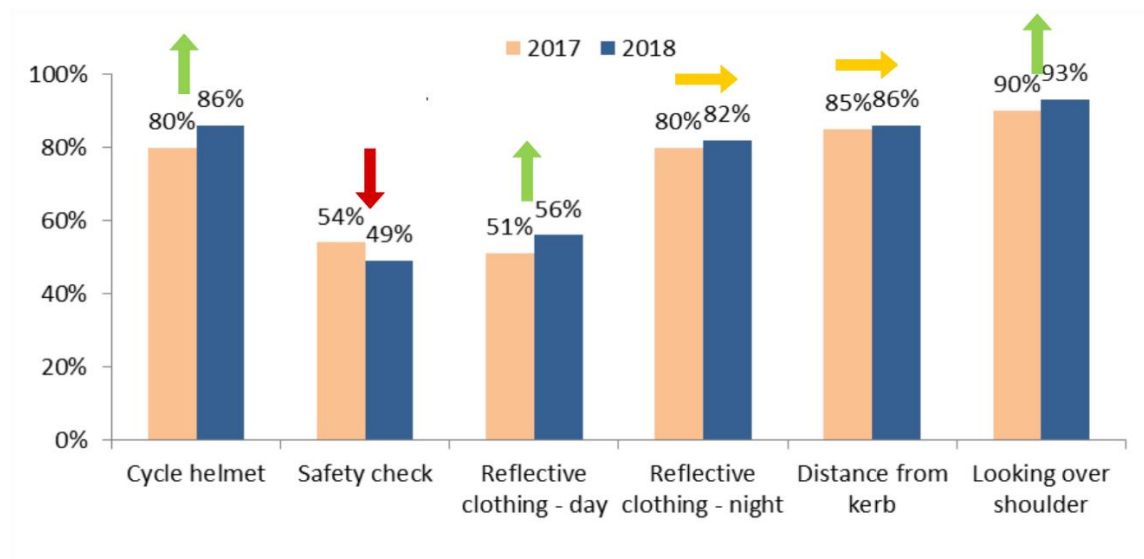
	CPS School Profile	Sample School Profile
Female	54%	Not Known
Male	46%	Not Known
Urban	41%	34%
Rural	59%	66%
3-10 participants	27%	19%
11-20 participants	49%	49%
21+ participants	24%	32%

The figures show that the respondent profile is broadly representative of all 270 participating schools, with no groups particularly over or under-represented in terms of their gender or urban/rural classification¹. Also, whilst a proportionate stratification by former Education and Library Board (ELB) area was not a key survey aim, nevertheless a good geographical spread of schools was achieved in the final sample. See the map of schools provided in Figure 1 of this report (Page 3). There was no need, therefore, to weight the results prior to undertaking the analysis.

Note that as the findings are derived from a sample survey and hence subject to sampling error, all differences reported in the commentary were tested to ensure that they were statistically significant (i.e., there was a less than one in twenty chance that they occurred through random factors alone). This means that, when comparing differences between subgroups with small numbers of respondents, some apparently large differences may not actually be statistically significant.

A comparison of the 2017 and 2018 results for pupils who have completed the scheme is illustrated in Figure 24. It can be seen that a higher proportion of pupils always wore a cycle helmet, wore reflective clothing during daylight hours and looked over their shoulder in 2018, while a lower proportion always carried out a safety check this year in comparison with 2017. There was no difference to report between the years in those who wore reflective clothing at night time and cycled at least a metre from the kerb. Note that comparisons between the years should be viewed with caution as there were six fewer schools and 133 fewer pupils this year involved in the study.

Figure 24: Proportion of pupils who answered ‘yes’ to each question after the CPS, 2017 & 2018



↑ Significant increase in trend
 ↓ Significant decrease in trend
 → No significant change in trend
 2017 base=1,166, 2018 base=1,033

¹ Location defined using NISRA Central Postcode Directory urban/rural classification. Boundaries are available for Northern Ireland as defined by the Planning Service. These areas are defined from Settlement Development Limits (SDLs) which are a statistical classification and delineation of settlements. See <https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/review-of-the-statistical-classification-and-delineation-of-settlements-march-2015%20%281%29.pdf> for more information.