

**Road safety education  
for children  
transferring from  
primary to  
secondary school**

## Road Safety Research Report No. 35

# Road safety education for children transferring from primary to secondary school

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## Executive Summary

Children are particularly vulnerable road users and there is a peak in child pedestrian accidents at the age of 12. The rise in accidents for children age 12+ coincides with the age at which most children transfer to a new secondary school. The move to a new school is one of the most important and eventful times of a child's school career.

The purpose of this research was to “to develop and evaluate a road safety training/awareness resource/programme to ensure that children have developed the skills required to match the independence they are given when they move to secondary school.” It was recognised that “critical to the success of road safety education and training for this age group is the active participation of parents/carers and [that] any training should directly address the issue of getting them involved.”

A review of existing road safety education resources revealed that, although many resources existed for the transition age group, very few placed any emphasis upon or highlighted the transfer from primary to secondary school. It was clear from discussions with teachers that any road safety education initiative for children transferring from primary to secondary school must take into account both the differing structures and organisation of primary and secondary schools and the transfer arrangements existing between them.

A survey of 725 parents of transition age children was undertaken to find out how they perceive their own and the school's role regarding road safety education. This was supplemented by focus group discussions with 14 parents and over 120 Year 6 (primary) and Year 7 (secondary) children.

In terms of dangers threatening children, parents were most concerned about children's actions (for example, their failure to concentrate), the actions of other road users (bad driving), the level of road traffic and non-road safety issues such as [fear of] strangers.

Both parents and children saw the move to secondary school as a major life change. The children expected to be given greater independence and most parents accepted this whilst striving to achieve a balance between protection and encouraging independence.

The children indicated that parents had been their most important advisers on road safety and travel matters. Parents were clear about accepting responsibility for road safety issues but drew support from schools and the media to provide information and advice. All the parents in the focus groups thought that teaching road safety in terms of strict adherence to rules and codes was not appropriate for this age group. They considered it more important for children to be able to assess each situation. Both children and parents also expressed clear preferences for resources to consider real road situations rather than the ‘perfect’ crossing places so often depicted in safety literature.

Based upon the results of these preliminary surveys, a draft educational programme was developed *Making Choices*. It consisted on five resources: a leaflet for Year 6 parents (issued in the autumn term at the time of selecting a secondary school), a booklet for Year 6

parents and a safer journey planner for Year 6 pupils (distributed via the school's pupil post in the spring term), activities for primary schools for use with Year 6 during the summer term and activities for secondary schools for use with Year 7 pupils in the autumn term.

To evaluate the effect of the use of the resources upon children's awareness of road safety issues, their decision-making responses and their change in travel patterns, a pre-test post-test design with a control and experimental group was used. Over 900 children from 37 primary and 12 secondary schools throughout Britain took part.

The evaluative measures were a 16 item attitude scale and a set of 17 questions based on seven photographs of typical road situations. The situations presented to the children required them to consider strategies. In addition, children were asked about their travel patterns.

The *Out and About* travel survey was unique in that the same children were surveyed twice – once at primary school and then a few months later at secondary school. Their travel patterns altered significantly and, not surprisingly, walking to school with an adult showed the sharpest decline. For journeys other than to and from school, there is further evidence of greater independence including in the use of public transport.

Half the items in the attitude scale showed significant differences between pre- and post-test. The experimental group tended to show a greater level of personal responsibility than the control group. In response to the strategy questions, the experimental group tended to show a greater awareness of personal safety issues, not only in road situations, but, for example, when using public transport.

Reviews of the teaching activities were received from 23 primary and 34 secondary teachers. Most primary teachers had integrated the activities within Geography, PSHE and to complement the existing transfer process. Few teachers stated that they would like to see anything added to the materials. Those that did requested photographs or a video. Other issues raised by primary teachers included the lack of curriculum time and the need for longer term planning.

In nearly all secondary schools, the teachers used the materials in timetabled PSHE or Social Education lessons. Again, there was little demand for additional material. Other comments made about the resources were generally positive although some teachers thought that the language used was sometimes too difficult – a view not commented on by any primary teachers.

It should be recognised that evaluations of this type are fraught with difficulties. The degree and quality of the intervention could not be controlled by the researchers but depended, as in real life, upon many other individuals including the pupils themselves.

Within the context of the transition from primary to secondary school, the issue of road safety is but one of many concerns felt by parents, teachers and children. A educational initiative of this type, which can be integrated into the transfer process with minimal additional work, can help to raise the profile of road safety at this critical point in a child's life.

It is strongly recommended that *Making Choices* is published and promoted nationally to schools and road safety professionals.

# 1 Introduction

Children are particularly vulnerable road users and there is a peak in child pedestrian accidents at the age of 12. This increase coincides with the age at which most children transfer from primary to secondary school. The move to secondary school represents a key stage of a child's development.

The purpose of this research was “to develop and evaluate a road safety training/awareness resource/programme to ensure that children have developed the skills required to match the independence they are given when they move to secondary school.” It was recognised that “critical to the success of road safety education and training for this age group is the active participation of parents/carers and [that] any training should directly address the issue of getting them involved.”

## 1.1 Project outline

The project consisted of six distinct stages which are outlined in Table 1.1. After background research into the transfer process, two qualitative studies involving listening to parents and listening to students were undertaken. On the basis of the information obtained, an educational programme was developed. This programme was then evaluated in a major study involving over 1800 children in 49 primary and secondary schools in six different local authorities. This report represents the final stage of the project.

Table 1.1 **Project outline**

<b>Project Phase</b>	<b>Outcomes</b>	<b>Timescale</b>
Background	Reviewing existing resources Identifying transfer procedures Agreement gained from local authorities	Nov 1996 – Mar 1997
Listening to parents and children	Survey of parents Discussion groups with parents Discussion groups with Year 6/ P7 pupils Discussion groups with Year 7/S 1 students Analysis of results	Mar 1997 – Jan 1998
Development of resources	Information leaflet for parents Booklet for parents Safer journey planner for children Ideas and activities for primary schools Ideas and activities for secondary schools	Jan 1998 – Dec 1998
Evaluation measures	Development of evaluation measures Agreement gained from participating schools	Mar 1998 – Dec 1998
The main study	Distribution of resources to schools Pre-tests in 19 experimental and 18 control primary schools Teacher briefings in experimental primary schools Teacher briefings in experimental secondary schools Post tests in 6 experimental and 6 control secondary schools	Dec 1998 – Dec 1999
Final report	Collation and analysis of data	Dec 1999 – May 2000

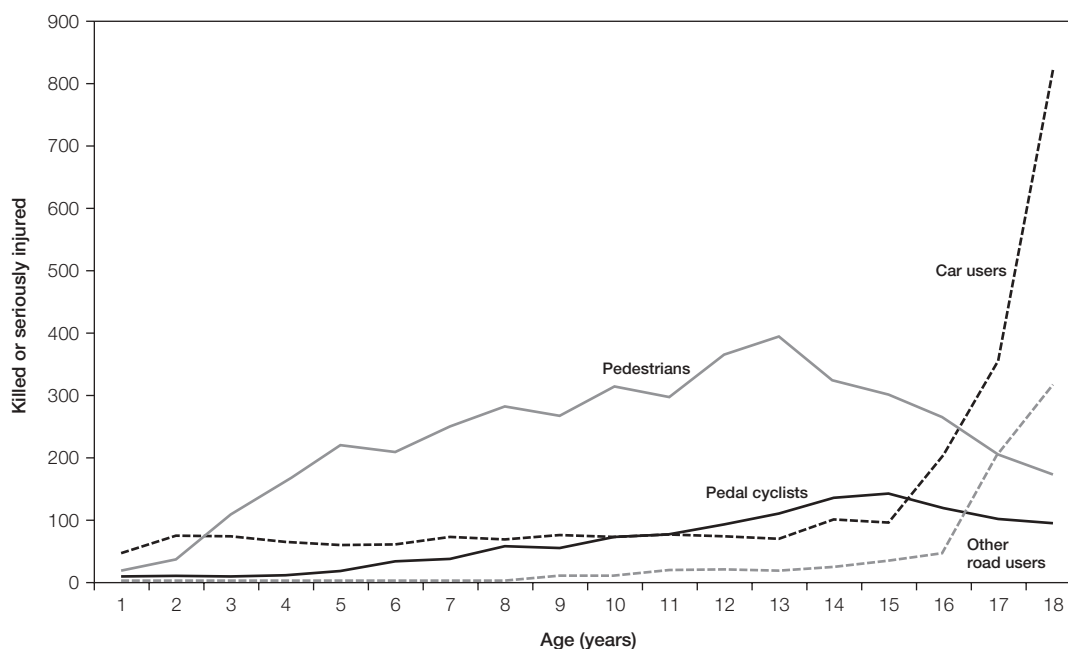
## 2 Background

This chapter starts with a brief overview of the accident statistics for children in the transition phase and the link with changing travel patterns. Some previous research into the capabilities of children is reviewed. The constraints imposed by the school curriculum are discussed along with the role of parents in teaching road safety skills to their children. The final section reviews the transfer process itself.

### 2.1 Accident statistics

The transition stage is marked by a rise in the number of killed and seriously injured casualties (Figure 2.1). In particular, child pedestrian casualties peak at the age of 13 whilst pedal cyclist casualties are still rising to their peak at age 15.

Figure 2.1: Killed and seriously injured casualties: by age and road user type Great Britain 1998 (Department of the Environment Transport and the Regions 1999)



The link between the transition stage and changing travel patterns was highlighted in the National Travel Survey (Department of the Environment Transport and the Regions 1998) which noted that that “... the most significant changes are between the ages of 11 and 12.” Bus use increases rapidly as longer journeys are made. The peak age for cycling for girls is 13 but the peak cycling age for teenage boys is 15. Beyond age 11, escort trips decline steadily for both boys and girls. More leisure trips are made and, for girls, this includes an increase in the proportion of trips made for shopping.

It is important to recognise that the changes are not just in the school journey. That journey is simply one example of a change in regular travel patterns. Attendance at a new school provides an opportunity for a child to form new friendships. This, in turn, may result in children taking longer journeys outside school hours. On transferring to secondary school, each child is therefore likely to have an increased exposure to road risk.

## 2.2 How capable are the children?

An early and widely-held view was that children below the age of 10 do not have the sensory or cognitive ability to cope with modern traffic (Sandals 1975). More recent research (Thomson *et al* 1996) argued that learning is more flexible than supposed and that there is certainly good reason to suppose that pedestrian training could begin as young as 4 years old. He concluded that “any serious attempt to promote the development of appropriate pedestrian behaviour ought to begin by explicitly training children in particular actions ... Once these patterns of action begin to be established they can be used as basic experiences from which to build a more articulated understanding of the behaviours to be used in different contexts ...”.

A more recent study by Whitebread (1997) proposed that learning to be a safe road user is essentially a problem-solving activity, although domain-specific knowledge can be gained from training approaches. He found that, over and above the effects of age, the metacognitive processes of awareness and control of cognitive strategies emerged as the most significant factors in his study of children aged 4-11 years old. This led to the conclusion that road safety should be taught using methods which encourage children to be more reflective and self-regulating in their pedestrian strategies.

West *et al* (1997) argued that motivational factors may be as, or more important, than inadequate skills as a cause of child pedestrian accidents. He proposed that ‘motivational training’ is needed to combat the kind of careless or reckless behavioural styles that put some children at greater risk of accident than others.

Young children undoubtedly need to develop skills. However, although being a competent road user necessarily involves the use of perceptual and motor skills, it also requires an understanding of how the traffic environment operates and a motivation to apply the relevant skills and knowledge.

## 2.3 Opportunities within the curriculum to teach road safety education

A recent survey in the United Kingdom (Harland *et al* 2000) indicated that only 20% of primary schools in England, Wales and Northern Ireland who responded to the survey had undertaken road safety work to prepare pupils for the transfer to secondary school. In the responding secondary schools, the teaching of road safety education tended to decline with increasing age of the pupils.

Support was provided to both primary and secondary schools by nearly two-thirds of road safety officers. But few road safety units worked with parents at the transition stage.

In both primary and secondary schools, road safety education was most frequently taught in Personal, Social and Health Education (PSHE). This in itself is a nonstatutory element of the curriculum in England and Wales.

The recent review of the National Curriculum in England has resulted in the revision of the PSHE guidance for Key Stages 1 – 4. For the first time, road safety is specifically emphasised. Within the transition age range, children should:

*recognise the different risks in different situations and then decide how to behave responsibly, including sensible road use (Key Stage 2)*

*recognise and manage risk and make safer choices about healthy lifestyles, different environments and travel (Key Stage 3)*

The new Welsh Personal and Social Education Framework (ACCAC 2000) lists 10 aspects of a person in society which can be developed within the school context. Under the Physical Aspect “... the ability to keep oneself and others safe is basic to physical development. The context for this includes the road, water, the home and other environments ...”.

## 2.4 Parents and road safety education

Most road safety education programmes involving parents have focused upon the preschool or infant child; for example, Children’s Traffic Club (Transport Research Laboratory 1990) and *Kerbcraft* (Department of the Environment Transport and the Regions 1997). As children get older, it is unclear whether parents think road safety is unnecessary or that it is something dealt with by the school.

A study made in New Zealand (Roberts 1995) concluded that adult accompaniment on the school-home journey was associated with a reduced risk of injury. It was therefore suggested that “strategies that greatly facilitate adult accompaniment would greatly reduce injury rate.” The children in this study were aged 5 – 15. Such an approach would contrast strongly with views expressed by, among others, Hillman (1990), who argued, on the basis of his studies of children in England and Germany, that lack of independent experience of road use has a disabling effect upon children.

Balding (1990) carried out a national survey of parents, teachers and health care professionals. In the junior/middle school age range (approximately 8-12 years), safety in traffic was rated as one of the most important topics to be taught in the curriculum by adults (parents, teachers, and health-care professionals). Balding suggested that it was extremely important that communication between home and school on such topics was maintained. As viewed by Balding, road safety is clearly an element of health education and personal and social development. This is an area that is very difficult for schools to approach in isolation from parents and, perhaps, depends to a greater degree than other areas of the curriculum for at least the tacit, and ideally the active, involvement of parents.

Few studies have attempted to understand what prior safety influence and experiences children bring with them to the formal learning situation of school. It is unclear how parents regard road safety (especially for older children) and what opportunities they take in everyday situations to promote safe use of the roads. An on-going study in Sweden (Bjorklid 1997) is linking children’s development to their social and physical interaction

with the environment. Early results highlight the anxiety parents feel about the road environment. “...The presence of traffic in local environments means that parents must impose limits on their children’s freedom, must watch over them and must accompany them to various amenities. The parents are torn between, on the one hand, protecting their children from traffic and, on the other hand, giving them the freedom to explore their local environment on their own, to engage in stimulating environmental experiences and thus to develop”.

## 2.5 Road safety education resources for transition

Data on existing resources for the transfer process were obtained from *Rosalind – a road safety linked database* (BITER 1998). A search of the database produced a list of 399 resources aimed at 10 – 12 year-olds<sup>1</sup>. Each was then examined and categorised.

### 2.5.1 Types of resources

**Curriculum guidance materials** – One example (Mercia undated) listed the specific objectives for children about to transfer from primary to secondary school. Children should:

- have an understanding of cycle procedure in a traffic environment
- demonstrate their ability to act responsibly and show consideration towards other road users, including being able to summon help in the event of an accident
- demonstrate that they can cross the road safely on their own in any conditions
- demonstrate an understanding of the *Highway Code for Young Road Users*

The document for secondary schools gave objectives about being safer cyclists and being able to identify dangers within their own environment. These objectives were echoed in guidance materials. The only omission from these documents was any specific mention of the change in travel patterns resulting from a change in school.

**Practical training courses** – Cyclist training schemes are generally aimed at the upper years of primary school. Research has suggested that such schemes, especially on-road courses, have a lasting positive effect on both children’s cycling skills and knowledge of road safety (Savill, Bryan-Brown and Harland 1996).

**Classroom-based resources** – Most of the classroom-based resources listed in *Rosalind* were aimed at general road use although those aimed specifically at pedestrians were also common. The descriptions suggested that hazard awareness was a frequent theme. Only a few resources highlighted the themes of health and the environment.

<sup>1</sup> Leaflets, posters and resources written in a language other than English were excluded from the analysis.



**Video and film resources** – There were 24 videos listed, the majority being aimed at cyclists and pedestrians. *Dangerous Journey* appeared to be the only one aimed at planning the school journey.

**Theatre in Education/Drama** – There were only five productions listed covering pedestrian and other road user issues. The productions which were aimed at 11 – 12 year olds suggested the importance of personal responsibility and decision-making.

**Non-school based resources** – These generally took the form of booklets for parents. Several of the booklets were aimed at a wide age range and there were none specifically intended to address issues concerning school transfer.

**Specific resources for children with special needs** – There were very few resources specifically designed for teachers, students or parents of this group.

**Safer Routes to School** – The approach to road safety education at the transition stage is likely to be influenced by the trend towards encouraging alternatives to motorised transport. Sustrans have developed the *Safe Routes to School* programme (Sustrans 2000) which contributes to the aim of reducing car use. Local Authority *TravelWise* initiatives (Travelwise 2000) and the Pedestrian Association's *Walk to School* events (The Pedestrians Association 2000) also promote walking and cycling.

### 2.5.2 Conclusions

Although plenty of resources exist for the 10 – 12 year-old age group, very few resources place any emphasis upon or highlight the change from primary to secondary school. Even the curriculum guidance documents reviewed mention transition only in terms of the desirability of continuity and progression.

It is clear that any road safety education initiative for children transferring from primary to secondary school cannot be developed in isolation from other activities. In addition, the structure and organisation of both primary and secondary schools will affect the development of any programme and determine whether it is practical to implement.

There was very little, if any, information concerning road safety issues provided to parents.

## 2.6 The transfer process

The existing organisation of education in the United Kingdom means that children generally transfer from primary to secondary school when they are between 11 and 12 years old (Table 2.1).<sup>2</sup>

<sup>2</sup> Some local authorities still operate middle schools. In such areas, pupils are preparing to leave one school for another at any age between 8 and 14.

Table 2.1 **Ages and stages of education in the United Kingdom**

Key Stage	Age of most pupils at the end of the school year			Year Group		
	England and Wales	Northern Ireland	Scotland	England and Wales	Northern Ireland	Scotland
1 (infant)	5-7	5-8	4-6	1-2	1-4	P1-2
2 (junior)	8-11	9-11	7-12	3-6	5-7	P3-7
3 (lower secondary)	12-14	12-14	13-14	7-9	8-10	S1-2
4 (upper secondary)	15-16	15-16	15-16	10-11	11-12	S3-4

To learn more about the transfer process, fifteen schools (ten primary schools, five secondary schools and one special school) in England, Scotland and Wales were visited.

### *2.6.1 Common transfer procedures*

Both primary schools and secondary schools were keen to ensure the smooth transfer of children from one school to another. All the primary schools visited had long-standing and established links with at least one local secondary school and were aware of the need to communicate with parents.

Common to all schools was the formation of primary and secondary school groupings which allowed the teaching staff from both primary and secondary schools to work together on curriculum and pastoral matters. The size of the groupings varied; some primary schools sent almost all their pupils to one particular secondary school; others spread their leavers across several schools. Amongst secondary schools, the number of feeder primary schools also varied quite widely.

A prime aim of all secondary schools was to allay pupils' fears and provide accurate firsthand information about the secondary school. This was partly to counteract the rumours that children had heard from older students. Concerns about the school journey were expressed, not so much in terms of safety, but more in terms of travel problems such as missing the school bus.

Concerns over curriculum development and continuity were expressed by some of the secondary members of staff interviewed. None of the schools visited had developed a liaison programme concerned with health or personal and social education. Secondary teachers were often unaware of the resources used in primary schools and vice versa. Teachers at both the primary and secondary schools visited were aware of the importance of the transition stage to the children and their parents. In all the schools, common factors in the transition arrangements of schools were apparent. Apart from differences in the labels used for the programmes there were strong similarities between all the schools regardless of whether they were in England, Scotland or Wales.

### *2.6.2 The transfer process*

**Autumn term** – During the autumn term of the child's final year of primary school, the local education authority will send details of admission procedures to parents. Meeting dates for open evenings at secondary schools in the area are often provided. Open evenings are also commonly advertised in the local press or on local radio to attract parents and their children who are not linked to the main feeder primary schools. The open evenings were generally held in the autumn term. Some secondary schools also hold 'taster lessons'. These tended to be in the more 'exciting lessons' that encouraged direct pupil participation.

**Spring term** – During the spring term, children are offered places at secondary schools. Applications by parents for their child to attend an alternative secondary school are usually processed at this time.

**Summer term** – Typically, a specific time is set aside for final year children from the feeder primary schools to visit the secondary school. Some schools arrange an afternoon visit whilst others may take the children for two or more days. For these visits, many secondary schools encourage children to use the means of transport that they will use when attending their new school as first year students.

Staff from secondary schools may also visit their feeder primary schools to talk to pupils. In some cases, former pupils return to talk about their experiences at secondary school.

### *2.6.3 Other links*

Most secondary schools had regular links with the local primary schools whatever the transition arrangements. These included visits to secondary school events such as plays. On occasion, the primary schools would use some secondary school facilities.

## 3 Listening to parents

One of the prime objectives of the whole project was to address directly the issue of involving the parents and carers of the transition age group. It was therefore essential to talk to parents of children in their last year of primary school to find out how they perceive their own and the school's role regarding road safety education. This chapter describes the methodology of a parental survey and subsequent focus group discussions and discusses the results obtained.

### 3.1 Postal questionnaire

A questionnaire was developed, piloted and then distributed to a total of 1,500 parents of children in the last year of primary school. A sample of 32 primary schools throughout the United Kingdom was used with the questionnaires being delivered to and returned from parents by pupil post. The survey was undertaken in autumn 1998.

A total of 725 completed questionnaires were returned by the schools to BITER – a response rate of 46%. The questionnaires were mainly completed by female parents/carers (63%). Although 81% of parents completing the questionnaire were white, all major ethnic groups were represented. Similarly, all built environments were represented in terms of the road in which the respondents lived. A high proportion of respondents (89%) had the use of a car.

#### 3.1.1 *Dangers threatening children*

A critical issue was the main dangers that parents perceived their children to be facing. Parents were invited to list up to three dangers. Although the questionnaire focused on road safety issues, the responses indicated that a wide variety of threats were perceived.

Grouping the threats by broad categories (Table 3.1), the main concern related to *children's actions* (31%). Within this category, the child's failure to concentrate was the main worry (10%) followed by their perceived lack of road safety ability (6%).

The remaining three categories showed similar incidences with each accounting for around 22% of the total responses. Within the category *actions of other road users*, the prime concern was poor driving, speed and inconsiderate motorists (16%). A similar incidence was observed for traffic, the prime concern within the general category of the *road environment*.

Non-road safety issues comprised 22% of the total responses. Almost half of these responses (10% of the total) related to strangers. It is noteworthy, however, that [fear of] strangers was cited by a quarter of all parents.

#### 3.1.2 *Making journeys as an independent traveller*

The only situation in which parents allowed their children a degree of independence was crossing main roads. Overall, 55% of parents allowed their children to do so.

The majority of children were not allowed to travel on a bus without an adult or cycle on local roads. Cycle ownership, though, was high with 78% of children having use of a bicycle. Girls were less likely to be allowed to cycle on local roads than boys.

Table 3.1 **Dangers to children as perceived by parents**

<b>Danger</b>	<b>% of responses</b>	<b>% of respondents</b>
<b>Children's actions</b>		
Not concentrating, paying attention etc.	9.7	23.2
Lack of road safety ability	6.1	14.7
Crossing roads	5.6	13.4
Over-confidence – playing around, arrogant	4.4	10.5
Cycling – generally or not properly, not knowing enough	2.9	7.0
Crossing between parked cars, behind buses, lorries	1.0	2.4
Travelling to school	0.6	1.4
Changing journeys – longer, unfamiliar, busier roads	0.3	0.8
<b>Total</b>	<b>30.6</b>	<b>73.5</b>
<b>Action of other road users</b>		
Poor driving – speed, inconsiderate motorists	15.7	37.7
Peer pressure	3.1	7.5
Parking – eg. inconsiderate parents around schools	2.5	5.9
Lack of parental responsibility	0.7	1.6
Drink driving – also drugs	0.5	1.1
Passenger related – no seat belts	0.3	0.8
<b>Total</b>	<b>22.8</b>	<b>54.6</b>
<b>Road environment</b>		
Traffic	17.1	41.1
Lack of safe crossing places	2.4	5.8
Darkness	1.5	3.5
Bus related – have to stand, no seat belts	0.9	2.1
<b>Total</b>	<b>21.9</b>	<b>52.4</b>
<b>Non-road safety dangers</b>		
Strangers	10.3	24.8
Smoking	0.9	2.1
Out alone	1.3	3.0
Leisure – sports injuries, roller skating	0.3	0.8
Environment (non-road) – rivers, home	2.5	6.1
Drugs/alcohol solvents	2.9	7.0
Bullying	4.1	9.9
<b>Total</b>	<b>22.4</b>	<b>53.7</b>
<b>Other</b>	<b>2.3</b>	<b>5.6</b>
<b>TOTAL</b>	<b>100.0</b>	

A total of 1,501 responses were received from 626 parents. 99 parents (14%) did not answer the question.

Only a minority of parents (46%) who would not allow their children to travel independently gave reasons for their decision.

The most common reason for not allowing children to cycle or cross main roads alone was the traffic environment. In the main, children were not allowed to travel on buses because there was “no need”; ie parents owned cars and could transport their children when necessary. Fear of strangers was also a commonly cited reason.

### 3.1.3 Teaching road safety

By the time children reach the age for transferring to secondary school, they will already have experience of using the roads, be it always accompanied by an adult or as an independent traveller. Unlike some other aspects of health education, it is not possible to ‘say no’ to using the roads. As a result, almost all parents will probably have given some road safety guidance to their children.

Parents were asked how they had encouraged their child to keep safe when using the roads. Typically, the response was in terms of giving specific road safety messages to their children (69% of respondents). Only a minority (15%) said that they got actively involved with teaching road safety to their children.

Of the specific road safety messages, the most common involved the word ‘Look’ as in the messages ‘Stop and look’, ‘Look all around’ and ‘Look both ways’. Other common responses were concerned with finding and using safe places to cross the road, typically protected crossings. Although the above messages stress positive actions, it still appeared common for many parents to offer negative ‘Don’t’ messages, for example, *Don’t cross between parked cars*.

From a pre-determined list, parents were asked to indicate the importance of road safety topics. The road safety topics had been derived from those suggested in local authority curriculum guidelines for this age group. The importance ranged from 0 (should not be taught) to 5 (very important). A perceived order of importance was calculated by dividing the total score by the number of responses (Table 3.2). All topics were considered at least *important* in the eyes of parents although cycle maintenance and an awareness of accident statistics were rated somewhat lower than the other topics.

Table 3.2 Road safety topics important to parents

Topic	Score*
Identifying road hazards and safe places to cross	4.8
Being responsible for their own safety	4.8
Seeing and being seen	4.7
Judging the speed and distance of traffic	4.6
Planning safe routes	4.4
The effects of alcohol on road users	4.4
Cyclist training	4.4
The Highway Code	4.3
Using public transport safely	4.3
Consideration for other people using the roads	4.2
The effects of road accidents	4.2
Peer group pressure	4.0
Cycle maintenance	3.6
Awareness of accident statistics	3.5

\* Range – 0 (should not be taught) to 5 (very important)

Most parents (63%) appeared very ready to recognise and accept that it was their responsibility for ensuring that their children had an understanding of the road safety topics listed and are aware of how to keep themselves safe when using the roads (Table 3.3). There was, however, a prevailing view that the road safety officer/police and primary and secondary schools also have a role to play. Schools alone were not seen to have a major responsibility.

Table 3.3 Who should take responsibility for ensuring that children know about road safety?

	%
Parent	63.0
Road Safety Officer/Police	41.8
Primary School	35.1
Secondary School	31.0

Although parents did not generally expect schools to take a leading role in teaching their children road safety, it was from the school that many parents obtained road safety advice. The media was the second most cited form of advice. Parents then considered that their own experience and common-sense provided relevant advice. Literature (mainly leaflets) or videos were the fourth most important form of information.

At primary school level, there appeared to be very little involvement in school-based road safety education. About two-thirds of parents were aware that road safety education was being taught but less than 2% had helped with any road safety activity in the school.

When asked about possible road safety promotion ideas, helping teachers with road safety lessons came bottom of the list (Table 3.4). Much greater preference was given to providing parents with an ideas booklet.

**Table 3.4 Parents views of proposed road safety promotion ideas**

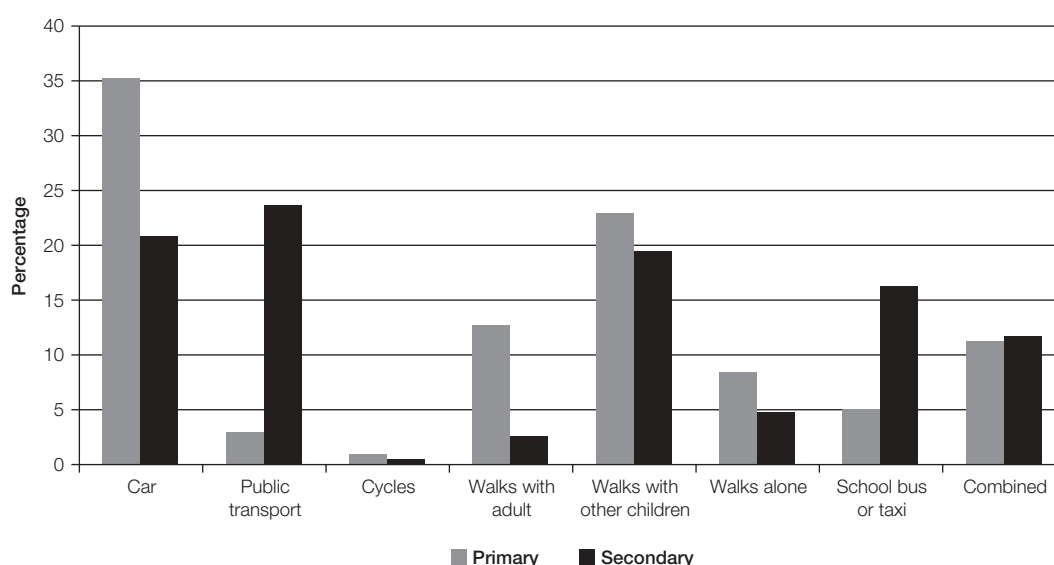
Proposed idea	No of responses	Score <sup>1</sup>
Giving all parents a booklet with ideas on how to help their children be safer on the roads	699	4.2
Including road safety in the secondary school prospectus	694	3.8
Providing parents with a road safety video	696	3.8
Providing road safety information at the first parents' evening held at the secondary school	695	3.4
Helping teachers with road safety lessons	678	2.7

<sup>1</sup> 0 = dislike the idea to 5 = very interested

### 3.1.4 Parental awareness of change in travel patterns

Many parents were aware that their child's journey to school would change substantially with the move to secondary school (Figure 3.1). Indeed, 40% of respondents said that the journey to school had had some influence upon the choice of school.

**Figure 3.1 Anticipated changes in modes of transport on transfer to secondary school**





## 3.2 Focus group discussions with parents

Six group discussions were held with parents from four different local authorities. Arrangements to conduct the discussion groups were made by letter via the primary schools. Parents were asked to complete an acceptance form and indicate the most convenient time for them to attend. Fourteen parents took part; 12 mothers and two fathers. Each discussion group was held at the primary schools. The group discussions generally lasted just over an hour. Five issues were discussed.

### 3.2.1 *Changes in the traffic environment*

As an ice-breaker, parents were asked what changes had occurred since they were children. Many commented how they were given greater freedom and independence when in the last year of primary school. Nearly all recounted anecdotes of being allowed to use the bus and none had walked to school with their parents.

All parents were very aware of the increase in road traffic. The view was expressed that the volume of traffic and the unpredictability of drivers made it very difficult for children to anticipate and judge how to respond safely when using the road.

### 3.2.2 *Independent journeys*

Parents allowed their children varying degrees of independence. The variation was due both to differences in attitudes towards parenting and the perceived safety of the local road environment. All parents were very concerned but their solutions to their child's safe road use resulted in different approaches. Some parents adopted a total protection approach and others made a conscious effort to allow degrees of independence.

“I suppose I consider myself now a bit too over-protective when I look at how I treat my daughter to how other people treat their children. It's very rarely that she would be on her own crossing the roads. I can't think of any situations.”

“I'm sort of letting the wire out a bit at a time. You prove that you're responsible and I'll let you go a little bit further. This is what I've let her grow up getting used to.”

Parents who lived in rural locations generally seemed less keen on allowing their children to make independent journeys. The traffic on the main roads in rural areas was described as travelling fast; there were not always pavements and the bus service was deemed inadequate.

There was little evidence from the interviews that parents regarded the bicycle as a means of independent personal transport for their children. When their Year 6 children used their bicycles, it appeared to be mainly as a toy.

The need to give gradual independence was frequently mentioned by the ‘less protective’ parents. These parents generally felt confident that their children could cope on the local roads, but main roads were still cited as boundaries. Parents could not always say when they thought they would allow this boundary to be crossed, although the move to secondary school was mentioned as a possibility. This may also have reflected their general views on parenting.

Generally the more protective parents had not considered the impact that the move to secondary school might make on their children’s lifestyle and travel patterns, but it was seen as a time when it would be necessary to let go.

“Perhaps when he starts secondary school or something. I’ll be taking him on the first morning and make sure the roads are safe and then I’ll let him go on his own.”

### *3.2.3 Impact of secondary school*

At the time of the interviews, all of the parents, bar one, knew which secondary school their child would be attending. The move to secondary school marked for all parents a very distinct and important point in their child’s life. With the exception of one parent, they were very aware that walking with their child to school was unlikely. Several parents stated that the issue of road safety and the preparation for a change in journey had only occurred to them as an issue because of participation in the project.

“It focuses the mind and I think the questionnaire was well-timed from that point of view. When you consider secondary school you are also considering your child having to be more independent. You just don’t see kids going to secondary school with their Mum, it’s just not on.”

### *3.2.4 Responsibility for teaching road safety*

In the main, road safety education was deemed to be the responsibility of both parents and the primary school, a view which supported the findings from the questionnaire.

Road safety education was seen as a relevant topic within the primary school but it was generally felt that, by the time children had reached secondary school, it was probably too late for them to be taught about road safety. Most parents were also aware that the secondary school timetable might be a constraint, although it was mentioned that if possible there should be some reinforcement.

“I think they do [teach road safety in the primary school] but we can’t be complacent about having talked about these things in general terms and the school can’t provide individual specific coaching. It’s got to be both.”

### 3.2.5 Parental teaching of road safety

The discussions indicated that some parents had made a conscious effort to assess their child's road safety ability whilst others admitted to not really thinking about it. It was apparent that some parents had simply assumed that their children would somehow pick up the skills just by using the road with their parents.

Two fathers had adopted the approach of covert observation and had followed their child on an independent journey. Both explained that they had discussed and planned the route with the child beforehand. Other parents were somewhat vague in explaining how they taught their children, mentioning watching their child when out together, and talking about the need to stop, look and listen in response to the "advert on the TV with the two hedgehogs". It was not fully explained what they were watching for or whether they questioned their child or asked them to make the crossing decisions.

This feeling that their children had reached a critical stage was apparent when the issue of ways to teach road safety was discussed. All parents considered that the strict adherence to rules and codes was felt to be inadequate for children aged 10-12 years. Whilst accepting that road safety needed to be tackled in a less childlike manner, parents were not always confident about how to approach it.

They tended to be aware that they did not always adopt the 'text book' methods. The situations described in leaflets always appeared to be perfect crossing places which did not help them prepare their children for coping with the less than perfect crossing place.

"Well the fact of the matter is that they are not going to cross the road at crossings. Although I know that my children can cross the road at safe spots, what I really should do is recognise that they're going to do that and teach them to cross at unsafe spots as well. But it kind of defeats the object ..."

"At the end of the day your child isn't safe until they can cope with a new situation, and I'm nowhere near that with mine."

## 3.3 Summary

Parents were aware that their children faced a wide range of dangers in the local environment, not all of which were related to traffic. They recognised the move to secondary school as a major life change in which their children expected to be given greater independence. Most parents accepted this whilst striving to achieve a balance between protection and encouraging independence.

Parents were clear about accepting responsibility for road safety issues but drew support from schools and the media to provide information and advice. All the parents in the focus groups thought that teaching road safety in terms of strict adherence to rules and codes was not appropriate for this age group. They considered it more important for children to be able to assess each situation and also expressed a clear preference for resources to consider real road situations rather than the idealised crossing places so often depicted in safety literature.

## 4 Listening to children

### 4.1 Introduction

This chapter describes the focus group discussions with Year 6 (primary) and Year 7 (secondary) children.

The purpose of these discussions was to ascertain how children felt about the move to secondary school and the effect it would have on their independence. Their views on the traffic environment in general were also sought.

### 4.2 Method

A discussion outline was developed and used with both age groups. Both rural and urban schools were represented as were single sex and mixed schools. Contact teachers were asked to select mixed-ability groups of children who would not mind talking to visitors to the school. BITER led six focus group discussions (3 primary and 3 secondary) and a further six primary and seven secondary groups discussions were conducted by road safety officers. In all 61 primary and 64 secondary children took part.

### 4.3 Results

The results of the discussions are described under six headings.

#### 4.3.1 *The journey to school*

As an opening question the children were asked about how they travelled to school. There was no attempt to 'add up' the different methods of travel as the questionnaire provided data on this issue. The question really acted as an 'ice-breaker' and allowed the children to get used to talking with a tape recorder.

The location of the school obviously influenced the mode of travel. Generally, the Year 7 children travelled a longer distance. However, some primary children said they would be transferring to secondary schools that were closer to their home. Children attending a Catholic primary or secondary school tended to travel further than children attending non-denominational schools. The primary children were taken by car to school, whereas the Year 7 students used public transport. Both these Catholic schools were in an urban location and access to public transport was not a problem.

Most Year 6 pupils did not expect to be taken to secondary school by a parent unless driven in the car. This was acceptable but walking with a parent to secondary school, as stated by one child "...would be a total embarrassment." None of the Year 7 students said that they walked to school with a parent.

Any concerns that Year 6 children had about the move to secondary school did not include worries about road safety. The most commonly cited fear was that of bullying followed by the amount of homework that they would have to do. The Year 7 students reported that many of the fears about going to secondary school were not realised.

#### *4.3.2 Independent travel*

The degree of independence had generally increased with the move to secondary school, and some Year 7 students were now almost quite nonchalant about travelling to places that had formerly been prohibited. Most of the children had requested permission to be allowed to go somewhere without an adult and been refused at some stage. The reasons for not being allowed to do something were usually because of the traffic or “weirdos.”

Most Year 6 pupils expected to be allowed more independence when in secondary school, not only in terms of travel but also in other matters, for example, being allowed to have their ears pierced. Generally, the requests made by Year 7 children reflected their age, for example by asking to attend concerts. The amount of independence did not seem to be simply age related as the family culture and the unique relationship that each child had with its parents were also commented upon.

However, the built environment played a role in determining how far parents would allow their children to travel independently. Children in Year 6 who lived on a new estate that was reasonably pedestrian and cycle friendly tended to be allowed greater local freedom than those living in an older urban environment.

#### *4.3.3 Roads*

The local roads around the primary schools were usually considered reasonably safe. Most of the primary schools were situated in a residential estate although some had busy roads just off the estate. Some Year 6 children commented on the congestion outside the school at particular times of day that could sometimes cause difficulties. In contrast, the Year 7 children (with the exception of those from the rural school who participated) tended to view the roads around the school as busy and with “fast traffic.” Narrow country roads were seen as a particular problem for pedestrians and cyclists.

The attitude of drivers was frequently commented upon and both Year 6 and Year 7 children had experience of drivers not stopping at crossings. They thought that drivers had little understanding or sympathy for the pupils.

#### *4.3.4 Cycling*

Most pupils had a bicycle although only a few of the children were keen cyclists; often the parents or another relative of these children was also a cyclist. Some of the Year 7 students stated that they preferred to use roller blades or be given designer clothes rather than a bike for Christmas.

The difficulties of cycling were mentioned and many children commented that it was difficult to cycle on the roads where there were parked cars. Several of the cyclists opted to ride on the pavements rather than the road. However, one child questioned the usefulness of off-road cyclist training and would want further training “Only if it takes us on the road. It’s harder learning from the pavement because it’s not the same atmosphere.” The built environment in which the children lived rather than their age tended to influence whether the children would cycle or not. There was little evidence of children stating that they used their bicycles specifically as a mode of transport. Some Year 6 pupils indicated that they would like to cycle to school, but other issues such as bike security were then raised.

The opinion on cycle helmets varied but overall they were not regarded in a positive light. It was felt that helmet design could be improved and that they were uncomfortable as well as expensive. Cycle helmets were more likely to be worn only on a long journey or on cycle rides with the family, but “not for play.” However, it was usually accepted that they were a good idea, at least in theory. Generally Year 7 students were more anti-helmets than Year 6 although similar criticisms were made by both, namely that they were uncomfortable and unfashionable. One Year 7 student would wear a helmet “Only if there was a law.” Another child responded with an emphatic “Certainly not!” when asked about wearing a helmet.

#### *4.3.5 Drivers and driving*

The ambivalence expressed towards cycle helmets was similar to that expressed about seat belts, mostly by Year 7 students. They accepted that they were probably a good thing, but were not always conscientious about wearing one, especially if sitting on the back seat and not even in the front on short journeys. Year 6 children were far more compliant about seat belts.

With the exception of two children, there were very strong aspirations to become the car drivers of the future. One child was looking forward to becoming a driver “So you can get around easier instead of walking or going on the bus.”

Generally both Year 6 and Year 7 children were critical of young drivers (speed and loud music) and considered that good drivers were both skilful and considerate. However, some children were honest enough to admit that although they knew what made a good driver, they also enjoyed speed and found the macho image of the car culture attractive. Some children were quite happy to admit to liking speed “because it’s fun.” In contrast, some children found that going fast made them feel sick and scared. One child even cited an occasion of asking her father to slow down to be told by him “You’ll live.”

What also became apparent as the children discussed drivers was that parents often used car journeys as an opportunity to discuss aspects of road safety; for example, to explain what the road markings and road signs meant. Both Year 6 and Year 7 children said that they would ask their parents questions about using the roads when sitting in the car.

#### *4.3.6 Who taught them about road safety*

Nearly all children, including Year 7 commented that parents had contributed the most to teaching them about road safety. One boy did comment that he thought it was the responsibility of the Council. The primary school had also contributed, but to a lesser extent. Some children also mentioned that older siblings or cousins had taught them.

### **4.4 Summary**

Year 6 children were expecting to be given greater independence with the transfer to secondary school not only in terms of travel but in other issues as well. Taking children to secondary school by car was the only acceptable parental involvement in the journey. The local built environment tended to influence how much independence parents permitted. Generally roads around the primary schools were considered to be safe. Most pupils had a bicycle. Only a few were keen cyclists and many commented on the difficulties of riding on the road. Overall, cycle helmets were not regarded positively. Most children wanted to become car drivers in the future although they were critical of young drivers – for speed and loud music – and drivers in general – or being unresponsive to the needs of pedestrians.

## 5 Developing the resources

The task of developing the resource/programme became more focused as a result of both the survey and the discussion groups. The development of the resources took into account the following issues:

- Aim at parents, but involve the children
- Use schools as a means of distribution to parents and children
- Link in with the timing provided by the transition process
- Use a non-patronising style – emphasis upon decision making
- Recognise the maturity and changing lifestyle of the children
- Have linked activities for primary and secondary schools

As finally developed, the resource consisted of five elements:

- Leaflet for parents
- Booklet for parents
- Safer journey planner for pupils
- Activities for primary schools
- Activities for secondary schools

Each element is described separately.

### 5.1.1 Leaflet for parents

<b>Format</b>	Full colour A5 leaflet (when folded)
<b>Distribution</b>	Issued at the time secondary school choice was being finalised
<b>Purpose</b>	<ul style="list-style-type: none"><li>● to highlight the change in children's journeys when they move on to secondary school</li><li>● to highlight the increase in children's independence when they move on to secondary school</li></ul>



### 5.1.2 *Booklet for parents*

<b>Format</b>	Full colour A4 magazine format booklet. Contents include:  <ol style="list-style-type: none"><li><b>1 Moving on to secondary school</b> Highlighting the changes</li><li><b>2 Out together</b> Ideas for encouraging safer behaviour</li><li><b>3 Planning safer journeys</b> Thinking about journeys and different ways</li><li><b>4 Looking and asking</b> Questions about everyday road situations</li><li><b>5 Personal safety</b> Simple strategies for parents and children</li></ol>
<b>Distribution</b>	Issued to primary schools during at the end of spring/beginning of the summer term. Distributed by schools to children in their last year of primary school to take home to parents.
<b>Purpose</b>	For parents to: <ul style="list-style-type: none"><li>● recognise the change in children's journeys when they move on to secondary school</li><li>● realise the effect that the increase in children's independence has on personal travel</li><li>● use practical suggestions for encouraging children to make safer decisions when walking, cycling, using public transport and as a vehicle passenger</li><li>● devise strategies for personal safety with their children</li><li>● ask their children questions about using the roads safely</li><li>● use opportunities to discuss strategies for coping with typical road situations</li></ul>

### 5.1.3 *Safer journey planner for children*

<b>Format</b>	Full colour booklet – small diary size. Contents include individual activities and information about: <ul style="list-style-type: none"><li>● Lifestyle</li><li>● Personal safety</li><li>● Planning journeys</li><li>● Using public transport</li></ul>
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**Distribution** Issued to primary schools at the end of spring/beginning of the summer term. Distributed by schools to children in their last year of primary school.

**Purpose** For children to:

- recognise the changes in their journeys when they move on to secondary school
- know that increased independence also means accepting greater personal responsibility
- plan journeys to new places
- accept the importance of making safer decisions
- find out about public transport in their area

#### *5.1.4 Activities for primary schools*

**Format** Two colour A4 comb-bound books. The content included:

- Background information
- Five activities for primary schools
- Notes for teachers
- Photocopiable sheets for pupil use if required
- Evaluation sheets for teachers

**Distribution** Issued to primary schools during the spring/early summer term and to be used during the summer term.

**Purpose** Five activities:

**Finding your way** – for children to

- Visualise journeys
- Identify potential hazards
- Consider place and distance

**Traffic movement** – for children to

- Be aware that traffic needs to be managed
- Identify peak travel times

**What's the difference** – for children to

- Identify differences between the primary and secondary

**On the street** – for children to

- Identify the directions in which traffic travels
- Recognise the road features that influence traffic
- Know the strategy for crossing where there are parked cars

**Who is responsible for your safety?** – for children to

- Accept some personal responsibility for keeping safe

### 5.1.5 *Activities for secondary schools*

**Format**

Two colour A4 comb-bound books. The content included:

- Background information
- Five activities for primary schools
- Notes for teachers
- Photocopiable sheets for pupil use if required
- Evaluation sheets for teachers

**Distribution**

Issued to secondary schools during the spring/early summer term to be used with the new intake of pupils during the autumn term.

**Purpose**

Five activities:

**Changes and directions** – for children to

- Recognise the changes in travel patterns
- Give and understand directions

**Independent traveller** – for children to

- Recognise the importance of journeys to everyday life
- Record personal journey patterns
- Reflect on the safety of each journey made

**Feeling scared** – for children to

- Consider their perception of risk
- Discuss choices of action on safety

**The other point of view** – for children to

- Recognise other road users' problems and points of view
- Discuss the consequences of an action on other people

**What if ... ?** – for children to

- Make decisions about safety
- Predict the possible outcomes to a decision

## 6 Evaluation of the resource materials

### 6.1 Introduction

After a brief description of the methodology and sample characteristics, this chapter looks at the changes in travel patterns resulting from the transition to secondary school (Section 6.3). The next two sections analyse the effects of the *Making Choices* resources upon changes in childrens' attitudes towards road safety issues (Section 6.4) and their knowledge of road safety (Section 6.5). The final section of the chapter (Section 6.6) looks at the responses of primary and secondary teachers to the educational materials, the childrens' recall of them and the childrens' recall of the help provided by teachers and pupils in getting ready for their new journey to secondary school.

The aim of the main study was to evaluate the effect of the use of the resources upon children's awareness of road safety issues, their decision-making responses and their change in travel patterns. The study used a pre-test and post-test design with a control and an experimental group.

#### 6.1.1 *The timetable*

Any study conducted in schools is constrained by school timetables and school events. The schools had some flexibility in deciding how to incorporate the resources into their existing curriculum planning. Use of the resources for parents and children was totally dependent on personal interest and commitment. The outline task timetable is shown in (Table 6.1).

Table 6.1 **Main study timetable**

Task	Dates
Information leaflet distributed to experimental schools	Dec 1998 – Jan 1999
Pre-tests conducted in primary schools	Jan – Feb 1999
Booklets for parents and children distributed	Apr 1999
Ideas and activities for schools distributed	May 1999
Briefing meetings with experimental primary and secondary schools	May 1999
Briefing notes developed for all BITER and Road Safety Officers staff	May 1999
Post-tests conducted in secondary schools	Oct – Dec 1999

#### 6.1.2 *The sample*

Six local authorities across Great Britain participated in the main study: Gwent, Leicestershire, Lincolnshire, Lothian and Borders, London Borough of Newham and Plymouth. The authorities were selected to include a range of built environments.

The intention was to track pupils from primary to secondary school. With the welcome assistance of Road Safety Officers, profiles for selected secondary schools were completed to ascertain the main feeder primary schools.

The pre-test sample consisted of 1,888 pupils from 37 primary schools in six local authorities – an average of 50 pupils per primary school. The post-test sample consisted of 1,788 pupils from 12 secondary schools in six local authorities – an average of 149 pupils per secondary school.

It was possible to match data on the three activities of the pre-test and the post-test for a total of 945 pupils; 428 control pupils and 517 experimental pupils (Table 6.2). The main reasons for the data loss were: pupils transferred to a secondary school outside the schools participating in the research, ‘control’ pupils went to an ‘experimental’ school (and vice versa) and pupils were absent from school on the day of the post-test.

**Table 6.2 The sample – matched pupils**

Local authority	No of schools		No of Matched pupils	% distribution by sex		Type of pupil		Sig level
	Primary	Secondary		% Male	% Female	% Control	% Experimental	
Gwent	6	2	162	43.8	56.2	59.9	40.1	0.001
Lothian & Borders	6		193	48.2	51.8	46.1	53.9	
Lincolnshire	7	2	156	50.6	49.4	28.2	71.8	0.001
Leicestershire	6	2	146	51.4	48.6	55.5	44.5	
LB Newham	6	2	129	41.1	58.9	30.2	69.8	0.001
Plymouth	6	2	159	55.3	44.7	49.1	50.9	
<b>Total</b>	<b>37</b>	<b>12</b>	<b>945</b>	<b>48.6</b>	<b>51.4</b>	<b>45.3</b>	<b>54.7</b>	

The gender distributions in the six local authorities showed no significant differences. However, there were differences in the distribution by type of pupil; the percentages of pupils in the experimental group were significantly higher in Lincolnshire and the London Borough of Newham and significantly lower in Gwent.

Pupils at the six control secondary schools came from 18 feeder primary schools – an average of 24 pupils per primary school. The range of numbers of pupils was wide; from 5 to 70 (Table 6.3).

Pupils at the six experimental secondary schools came from 19 feeder primary schools – an average of 27 pupils per primary school. The range was somewhat less wide; from 5 to 46.

### *6.1.3 Existing road safety activities in the primary schools*

All participating schools were asked to complete a profile sheet and to indicate the current road safety activities within the school. The secondary school response to this request was poor with only six schools providing this information. This may be due to the contact member of staff being unaware of what was happening in the whole school. In the primary and secondary schools that did respond, road safety education was most common in Personal, Social and Health Education.

Prior to the main study, the control primary schools reported a slightly higher level of road safety education already in place than the experimental schools.

Table 6.3 Pupils per primary and secondary school

Secondary school reference	No of pupils	No of primary schools	Pupils per primary school	
			Mean	Range
Control				
50	81	3	27	9-53
51	44	3	15	5-30
55	39	3	13	12-15
56	78	3	26	20-31
58	89	3	30	6-70
60	97	3	32	25-37
<b>Total</b>	<b>428</b>	<b>18</b>	<b>24</b>	<b>5-70</b>
Experimental				
53	112	4	28	22-36
54	91	3	30	11-46
57	80	3	27	19-38
59	104	3	35	22-43
61	65	3	22	5-44
62	65	3	22	12-32
<b>Total</b>	<b>517</b>	<b>19</b>	<b>27</b>	<b>5-46</b>

## 6.2 The pre-test and the post-test

The activities undertaken by the children for the pre-test and the post-test were devised to:

- note their changing travel patterns
- ascertain changes in their level of independence
- obtain a picture of the decisions they would make in a range of road use situations
- detect any changes resulting from the use of the *Making Choices* resources

Inevitably, certain considerations had to be taken account. From discussions at earlier stages of the project, it was clear that few schools were able to give more than 40 minutes for children to complete the tests. All children in one class had to be able to take the tests at the same time. It was also much easier for schools if all children in the Year Group were tested rather than only those who were part of our experimental and control groups. This was especially true when conducting the post-tests in the secondary schools.

The pre-tests were conducted when the children were in primary school and the post-tests after the children had transferred to secondary school. In both types of school, the tests were usually conducted with one class group at a time. The pre-test and the post-test were administered in the order set down below. Research staff and Road Safety Officers led the tests with assistance from teachers at each school.

### 6.2.1 Pre-test

Three activities were devised:

*Out and about* – A nine question survey of children’s travel patterns including their present journey to primary school and the proposed journey to secondary school.

*Moving On* – A sixteen item questionnaire to which the children responded *I agree, I don’t agree* or *Not sure*.

*Making Choices*<sup>1</sup> – A series of questions based on seven photographs of typical road situations. The situations presented to the children required them to consider strategies. There were not necessarily ‘right’ or ‘wrong’ answers.

### 6.2.2 Post-test

*Out and about* – A ten question survey of children’s travel patterns. The first five questions were similar to those used in the pre-test. Question 6 and 7 were concerned with unprompted recall of the resources (*Making Choices*). Questions 8 – 10 asked students about preparation for the journey to secondary school.

*Moving On* – The same 16 questions were used as in the pre-test, but the order was reversed. A question about travel to secondary school was modified to refer to travelling to somewhere different (Statement number five on the pre-test and statement number 12 on the post test).

*Making Choices* – The first two questions of the post-test asked pupils if they recalled the *Making Choices* resources. The subsequent 17 questions were based on scenarios or photographs where decisions had to be made.

1 A clear distinction should be made between *Making Choices* – the title of the resources for parents and pupils and *Making Choices* – an activity used in both the pre- and post-test.

All answers were coded and entered into a database. For the open-ended questions, sufficient codes were generated to cover all the responses provided. At a later stage, some grouping of responses occurred. No judgements were made as to whether the answers to open-ended questions were correct or incorrect. In most instances, there was no simple dichotomy of right and wrong – rather a continuum from less safe strategies to safer strategies.

## 6.3 Changes in travel patterns

This section deals with the changes in travel patterns that took place between the last year of primary school and the first term of secondary school. It is based upon the self-reported information provided by the 945 matched pupils in completing *Out and About*.

### 6.3.1 Journeys to and from school

In the last year of primary school, nearly three-quarters of pupils walked to school, either alone, with friends or siblings or with an adult. Almost all the remainder (24%) came by car. Distinct differences in the modal split by sex were observed. Girls were significantly more likely to walk to school with siblings or an adult, boys were more likely to walk by themselves and less likely to walk with siblings or adults (Table 6.4).

Table 6.4 **When I come to [primary] school, I usually –**

	Male	Female	Percentage Total	Sig level
Walk with friends	26.9	22.6	24.7	
Walk by myself	29.7	18.9	24.2	.001
Come by car	21.4	25.7	23.6	
Walk with siblings	8.7	15.2	12.1	.001
Walk with adult	9.0	13.2	11.1	.001
Come by bus	2.8	3.9	3.4	
Ride my bike	1.5	0.4	1.0	
<b>Total (N =944)</b>	<b>100.0</b>	<b>99.9</b>	<b>100.1</b>	

For the journey home from school, walking with friends accounted for over a third of all travel (Table 6.5). Travelling by car was much less frequent and there was a slight drop in walking with siblings. Again, girls were significantly more likely to walk with siblings whereas boys were more likely to walk on their own.



Table 6.5 When I come home from [primary] school, I usually –

	Male	Female	Percentage Total	Sig level
Walk with friends	39.5	33.6	36.5	
Walk by myself	24.7	19.0	21.7	.001
Go by car	17.0	17.9	17.5	
Walk with adult	10.0	13.6	11.9	
Walk with siblings	5.7	11.5	8.7	.001
Go by bus	1.5	3.7	2.7	.001
Ride my bike	1.5	0.6	1.1	
<b>Total (N = 944)</b>	<b>99.9</b>	<b>99.9</b>		

Comparisons with the national figures for walking to school (Department of the Environment Transport and the Regions, 1998) cannot be made directly. The present study was concerned with children in their last year of primary school and their first year of secondary school only. The national (1995/97) figures for travel to school are provided for primary and secondary age groups only. In the 5-10 age group, 54% of children walked to school whereas in the 11-16 age group the incidence decreased to 42% mainly due to an increase in bus travel.

The higher incidence of walking at primary age in the current study (72%) may be due to several factors including parents giving their children greater independence in the last year of primary school and differences in the methodology of the two studies.

Whilst still at primary school, pupils were asked how they thought they would travel to their new secondary school. The answers given were compared with those given once pupils had started at their new school (Table 6.6).

Overall, the predictions made by the primary school pupils were fairly accurate. The main differences were that more pupils travelled to school by car (14.1%) than predicted (7.3%) and fewer cycled (2.4% against a prediction of 7.3%). Part of these differences may be due to pupils attending a different secondary school than they had originally expected.

The general travel patterns for journeys to and from secondary school changed significantly (Table 6.7 and Table 6.8). Walking with friends and travelling by bus showed increases as compared with travelling to and from primary school. Walking with an adult showed the sharpest decline. Only three children (0.3%) said that they walked to school with an adult and only four children (0.4%) walked home from school with an adult.<sup>2</sup>

<sup>2</sup> To allow a valid chi-square comparison to be made, the pupils walking with an adult have been omitted from Table 6.7 and Table 6.8.

Table 6.6 **Comparison of predicted and actual mode of travel to secondary school**

Mode of travel	Predicted %	Actual %
Walk with other children	52.9	46.8
Go by bus	20.4	19.8
Walk by myself	11.8	16.6
Go by car	7.3	14.1
Ride my bike	6.3	2.4
Walk with adult	1.0	0.3
Go by train	0.3	0.0
<b>Total (N = 906)</b>	<b>100.0</b>	<b>100.0</b>

Table 6.7 **When I go to [secondary] school, I usually –**

Travel mode	Male	Female	Sex (%) Total	Sig level
walk with friend of same age	42.8	39.7	41.2	
come by bus	16.0	23.5	19.9	.001
walk by self	20.6	13.0	16.7	.001
come by car	12.1	16.0	14.1	
walk with younger sibling	4.4	7.0	5.7	
ride my bike	4.2	0.8	2.4	.001
<b>Total (N = 942)</b>	<b>100.1</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.8 **When I come home from [secondary] school, I usually –**

Travel mode	Male	Female	Sex (%) Total	Sig level
walk with friend of same age	42.3	44.0	43.2	
come by bus	17.0	23.1	20.1	.001
walk by self	23.7	14.9	19.2	.001
come by car	8.1	9.6	8.9	
walk with younger sibling	4.9	7.8	6.4	
ride my bike	4.0	0.6	2.3	.001
<b>Total (N = 924)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.1</b>	

For the journeys to and from school, boys were significantly more likely to walk by themselves or ride a bike whereas girls were significantly more likely to come by bus.

### 6.3.2 Crossing roads

The greater independence of boys was also seen in answers to the question about which roads they crossed on their own (Table 6.9). Boys were significantly more likely than girls to say that they crossed all roads on their own.

Table 6.9 I cross these roads on my own [primary school]

	Male	Female	Sex (%) Total	Sig level
No roads at all	2.8	4.8	3.8	
The nearest road to my house	17.3	18.0	17.6	
All the roads near my house	33.7	40.1	37.0	
All roads	46.2	37.2	41.6	.05
<b>Total (N = 941)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

By the first term of secondary school, the proportion of children crossing all roads on their own has increased and there is no longer a significant gender difference (Table 6.10).

Table 6.10 I cross these roads on my own [secondary school]

	Male	Female	Sex (%) Total	Sig level
No roads at all	4.6	3.1	3.8	
The nearest road to my house	14.0	16.9	15.5	
All the roads near my house	22.8	25.8	24.3	
All roads	58.6	54.1	56.3	
<b>Total (N = 941)</b>	<b>100.0</b>	<b>99.9</b>	<b>99.9</b>	<b>NS</b>

### 6.3.3 Using a bike

At primary school, the possession of a bicycle was higher amongst boys (Table 6.11). They are also more likely to ride their bikes on the road as opposed to the pavement or away from roads (Table 6.12).

Table 6.11 **Possession of a bicycle at primary school**

	Male	Female	Sex (%) Total	Sig level
Have a bike	89.7	84.6	87.1	.05
Do not have a bike	10.3	15.4	12.9	
<b>Total (N = 944)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.12 **[At primary school] I ride my bike –**

	Male	Female	Sex (%) Total	Sig level
Away from roads	4.4	9.7	7.1	.001
On pavement	30.4	38.7	34.5	.001
On roads	65.2	51.6	58.4	.001
<b>Total (N = 822)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

The incidence of use of a bike did not change between primary and secondary school; boys continued to be more likely to use one (Table 6.13). Amongst those pupils who used bikes, there was a greater incidence in riding on the roads and the sex difference was no longer apparent (Table 6.14).

Table 6.13 **Possession of a bicycle at secondary school**

	Male	Female	Sex (%) Total	Sig level
Have a bike	89.3	79.1	84.1	.001
Do not have a bike	10.7	20.9	15.9	
<b>Total (N = 942)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.14 [At secondary school] I ride my bike –

	Male	Female	Sex (%) Total	Sig level
Away from roads	4.4	6.3	5.3	
On pavement	21.5	27.4	24.4	
On roads	74.1	66.3	70.3	
<b>Total (N = 792)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

### 6.3.4 Using public transport

At primary school, pupils were also asked about their use of public transport – buses and trains. Overall, nearly one in five children (19%) never used a bus. Girls were more likely than boys to use the bus (Table 6.15). Amongst those who did use buses, girls were more likely to travel with adults and friends of their own age whereas boys were more likely to travel on their own (Table 6.16).

Table 6.15 Ever use the buses [primary school]

	Male	Female	Sex (%) Total	Sig level
Yes	76.3	84.6	80.6	.001
No	23.7	15.4	19.4	
<b>Total (N = 942)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.16 [At primary school] I travel on the buses –

	Male	Female	Sex (%) Total	Sig level
With my parents	46.6	52.6	49.8	
With friends of my own age	29.3	33.8	31.8	
On my own	24.1	13.6	18.4	.001
<b>Total (N = 759)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

After one term at secondary school, there was a slight increase in the proportion of boys and girls who ever used the bus (Table 6.17). Girls remained significantly more likely than boys to use buses. The pattern of bus usage changed. Both boys and girls were much more likely to travel on buses independently of their parents (Table 6.18).

Table 6.17 **Ever use the buses [at secondary school]**

	Male	Female	Sex (%) Total	Sig level
Yes	80.3	88.8	84.7	.001
No	19.7	11.2	15.3	
<b>Total (N = 941)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.18 **I travel on the buses [secondary school] –**

	Male	Female	Sex (%) Total	Sig level
With parents etc.	17.2	19.1	18.2	
With friends	47.4	59.1	53.7	.001
On my own	35.4	21.9	28.1	.001
<b>Total (N = 797)</b>	<b>100.0</b>	<b>100.1</b>	<b>100.0</b>	

Overall, one third of children never used the train or Underground (Table 6.19). There was no difference in the proportion who never used trains between boys and girls. Amongst those who did use trains, there was no significant difference between boys and girls in the proportion who travelled with adults or with persons of their own age or on their own (Table 6.20). Only 3% of boys and no girls travelled on the train on their own.

Table 6.19 **Ever use the train (or Underground) [at primary school]**

	Male	Female	Sex (%) Total	Sig level
Yes	66.6	71.0	68.9	
No	33.4	29.0	31.1	
<b>Total (N = 944)</b>	<b>100.0</b>	<b>100.1</b>	<b>100.0</b>	<b>NS</b>

Table 6.20 **[At primary school] I go on the train (or Underground) –**

	Male	Female	Percentage Total	Sig level
With my parents	85.2	89.6	87.5	
With friends or on my own	14.8	10.4	12.5	
<b>Total (N = 850)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

Overall, the percentage of pupils using the train (or Underground) at secondary school showed little change but, unlike at primary school, significantly more girls than boys used the train (Table 6.21). As with the use of buses, both boys and girls were much more likely to travel on trains independently of their parents (Table 6.22). Girls were less likely than boys to travel on their own and more likely to travel with parents.

Table 6.21 **Ever use the train (or Underground) [at secondary school]**

	Male	Female	Sex (%) Total	Sig level
Yes	65.7	72.6	69.3	.05
No	34.3	27.4	30.7	
<b>Total (N = 937)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.22 **I go on the train (or Underground) [at secondary school] –**

	Male	Female	Sex (%) Total	Sig level
With parents	67.0	74.4	71.0	.05
With friends of own age or older	24.6	22.2	23.3	
On my own	8.4	3.4	5.7	.05
<b>Total (N = 649)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

## 6.4 Changes in attitudes towards road safety issues

*Moving on* consisted of 16 statements to which the pupils marked Agree, Disagree, Not sure. The same 16 statements (except one) were used both pre- and post-test. The exception was the statement “When I first go to secondary school, I don’t want to travel there on my own”. This statement was changed in the post-test to “When I first go somewhere different, I don’t want to travel on my own.” Each statement was scored by assigning a score of 1 for ‘Agree’, – 1 for Disagree and 0 for Not sure.

Table 6.23 shows the mean pre- and post-test scores for the experimental and control groups. Comparisons were made separately for each group between the pre- and post-test scores using the Wilcoxon matched paired signed ranks test.

The table shows that eight of the 16 statements showed significant differences between the pre- and post-test scores for both groups. Four of these statements (1, 5, 7, and 13) were concerned with independence and personal responsibility.

For example the statement, “I’m not worried about going round on my own” showed a significant shift towards greater disagreement at the post-test for both groups. This increased concern is corroborated by the answers to the statement, “When I first go to secondary school, I don’t want to travel there on my own” (and its amendment in the post-test).

However, both groups also moved towards greater disagreement with the statement, “I’m not too happy about going to places I don’t know by myself.” There was also a shift towards greater disagreement in response to the statement, “My parents still think I’m too young to go out on my own.”

Of the four statements that showed a significant difference between the pre- and post-test scores for the experimental group only, three were concerned with independence. There was a shift towards greater agreement with the statement, “I think that I am old enough now to travel about on my own.” Similarly, there was a move towards disagreeing with the statement, “When I’m out with a grown-up it’s up to them to make sure that I am safe.” However, there was also a shift towards disagreeing with the statement, “My parents trust me to look after myself when I’m out on my own.”



Table 6.23 **Moving on – pre-test and post-test comparison**

No	Statement	Experimental group			Control group		
		Pre-test Mean	Post-test Mean	z* Sig level	Pre-test Mean	Post-test Mean	z* Sig level
1	I'm not worried about going round on my own	0.47	0.23	-5.55 0.00	0.51	0.27	-4.81 0.00
2	Children cause a lot of accidents by not taking enough care when they cross the road	0.65	0.50	-3.28 0.00	0.54	0.48	-1.03 0.30
3	I think that I am old enough now to travel about on my own	0.41	0.56	-3.60 0.00	0.42	0.46	-0.61 0.54
4	If I don't look before I cross the road, it'll be my fault if I get run over	0.80	0.79	-0.39 0.70	0.85	0.79	-1.58 0.12
5	When I first go to secondary school, I don't want to travel there on my own	0.12	0.49	-6.68 0.00	0.09	0.46	-6.51 0.00
6	There should be more lollipop ladies and men to help children cross the road	0.72	0.72	-0.13 0.89	0.59	0.65	-1.35 0.18
7	I'm not too happy about going to places I don't know by myself	0.55	0.43	-2.36 0.02	0.60	0.32	-5.36 0.00
8	The roads near me are very dangerous – they should do something about it	0.09	0.04	-1.33 0.18	0.01	0.02	-0.09 0.93
9	Most drivers drive too fast – they should do something about it	0.70	0.50	-4.93 0.00	0.71	0.55	-3.71 0.00
10	It's up to me to make sure that I am safe when I'm out	0.91	0.92	-0.68 0.50	0.89	0.92	-0.87 0.38
11	I think most drivers are careful when they see children about	0.23	-0.11	-6.96 0.00	0.09	-0.07	-2.85 0.00
12	When I'm out with a grown-up it's up to them to make sure that I am safe	0.32	0.11	-4.30 0.00	0.15	0.13	-0.47 0.64
13	My parents still think I'm too young to go out on my own	-0.34	-0.69	-7.68 0.00	-0.33	-0.70	-7.13 0.00
14	Using the roads isn't easy – you have to think about what you're doing	0.84	0.63	-5.58 0.00	0.77	0.61	-3.75 0.00
15	My parents trust me to look after myself when I'm out on my own	0.82	0.76	-2.00 0.05	0.79	0.81	-0.77 0.44
16	Staying safe on the roads is easy	-0.35	-0.20	-3.40 0.00	-0.39	-0.23	-2.50 0.01

\*Using Wilcoxon matched-pairs signed-ranks test

In response to the statement, “Children cause a lot of accidents by not taking enough care when they cross the road” the experimental group showed a significant shift towards disagreement. Perhaps, the shortcomings of other road users were being recognised. For both the control group and the experimental group the post-test scores showed a strong move towards disagreement with the statement, “I think most drivers are careful when they see children about.” Both groups also showed less agreement with the statement “Using the roads isn’t easy – you have to think about what you are doing”. For the statement, “Staying safe on the roads is easy” both groups moved towards less disagreement.

## 6.5 Knowledge of road safety

The two activities entitled *Making Choices* were designed to provide a picture of the decisions pupils would make in a range of road use situations and to estimate the effects of any changes resulting from the use of the resources entitled *Making Choices*. The results of the first test were designed to provide a pre-test baseline; the results of the second, different, test were designed to estimate the effects of the educational intervention.

### 6.5.1 Pre-test baseline

The pre-test version of this test consisted of 18 questions based on seven photographs of real-life road situations. Five of the photographs related to crossing the road; the remaining two related to traffic directions and routes to school.

Only two of the 18 questions produced a significant difference between the control and experimental groups. On the basis of these results, it was concluded that there was not sufficient evidence to conclude that the control and experimental groups differed significantly in their knowledge and awareness of road safety issues.

### 6.5.2 Post-test analysis

The post-test consisted of a set of 18 questions which divided naturally into 7 groups of road safety issues:

- Personal safety
- Parked cars
- Cycling
- Traffic directions
- Using buses
- Injury risk and green issues
- Peer group and social pressures

**Personal safety** – Two questions in *Making Choices* (Questions 3 and 4) dealt with the issue of personal safety. Question 3 dealt with the issue of needing to call home when you are on your own and have no money (Table 6.24). Three options were provided.

Overall, nearly 80% of the sample opted for dialling 100 from a public telephone and asking to make a reverse charge call. Only a few (3%) opted for the other option with any possibility of success – stopping someone and asking to borrow their mobile phone. Nearly one in seven respondents (14%) did not know what to do. The experimental group were significantly more likely than the control group to opt for dialling 100 and asking to make a reverse charge call; the control group were more likely not to know what to do.

Table 6.24 **You are on your own, have no money and need to call home. Do you –**

Strategy	Control	Experimental	Group (%) Total	Sig level
Stop and ask to borrow mobile phone	2.6	3.0	2.8	
Dial 100 from a public telephone and	73.9	81.8	78.2	.02
Dial 1471 from a public telephone and	6.4	3.6	4.8	
Don't know	-17.2	11.7	14.2	.02
<b>Total (N = 938)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

The second question was open-ended and asked respondents to write down four things that they could do before going out to make themselves safe. One suggestion (*Let someone know where you're going*) was provided, leaving three to be completed. A total of 46 different answers were grouped into one of five categories. Compared with the control group, the experimental group were more likely to offer general awareness messages and less likely to offer variations on the inform someone scenario (Table 6.25). The control group had a significantly higher incidence of missing responses than the experimental group (Table 6.26).

Table 6.25 **Keeping safe strategies suggested by control and experimental groups**

Strategy	Experimental	Control	Group (%) Total	Sig level
Telephone contacts	19.7	17.6	18.5	
Inform someone	40.8	45.9	43.6	.02
Carrying items	6.5	7.6	7.1	
Don't messages	3.4	3.9	3.7	
Safe road usage messages	5.3	5.9	5.6	
General awareness	24.3	19.2	21.4	.02
<b>Total (N = 2,373)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

Table 6.26 **Keeping yourself safe – number of missing responses**

Group	N	Mean	Std deviation
Experimental	517	0.44	.73
Control	428	0.54	.81

**Crossing between parked cars** – For a long time, crossing between parked cars was discouraged in official road safety advice. More recently, given the difficulties in crossing away from parked cars in many urban areas, advice as to how to cross safely in such situations has been given.

Three questions in *Making Choices* were concerned with this issue. The first question (Question 5) was a picture question, primarily designed to focus respondents' minds on the issue.

There were three positions selected to stop and look both ways for traffic before crossing: at the kerb, at the outside edge of the cars at the rear of the Ford Escort, and in front of the Ford Escort. In comparison to the control group (Table 6.27), the experimental group was less likely to stand at the outside edge of the cars but more likely to stand in front of the Ford Escort.

Table 6.27 **Where to stand to look both ways for traffic before crossing**

	Control	Experimental	Group (%) Total	Sig level
At kerb	44.1	48.0	46.2	
At outside edge of cars	52.5	45.0	48.4	.02
In front of Escort	3.4	7.0	5.3	.02
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

In terms of the route taken to cross the road (Table 6.28), the experimental group was more likely to select *other route* than the control group.

Table 6.28 **Route for crossing road between parked cars**

	Control	Experimental	Group (%) Total	Sig level
From hedge to gap	72.8	69.8	71.1	
From gap to in front of VW	7.4	9.0	8.2	
From in front of Escort to in front of VW	17.3	12.9	14.9	
Other route	2.5	8.3	5.7	.001
<b>Total (N = 873)</b>	<b>100.0</b>	<b>100.0</b>	<b>99.9</b>	

Question 6 was an open-ended question that asked about the signs that might indicate that a parked car was about to move. Respondents were asked to suggest three signs. The answers were then grouped into three categories; vehicle related factors (such as exhaust fumes, engine noise or lights), the behaviour of people (someone walking towards or getting into a car) and other factors. The experimental group tended to offer more answers than the control group but the difference was not significant (Table 6.29). There was no difference in the type of answer given.

Table 6.29 **Signs that a parked car is about to move – number of answers given by group**

Group	N	Mean	Std. deviation
Experimental	517	2.81	.50
Experimental	517	2.81	.50
Control	428	2.74	.60
Control	428	2.74	.60

t = 1.845 for df 943; p = 0.067  
t = 1.845 for df 943; p = 0.067

Question 7 examined the sequence of actions necessary to cross the road between parked cars. Respondents were required to place the six actions listed in the correct order. Around one in seven respondents (14%) provided the correct sequence. For each stage, however, the modal response was for the correct action (Table 6.30). There was no difference between the control and experimental groups in terms of the percentage who gave the correct sequence of actions (Table 6.31).

Table 6.30 **Sequence of actions to cross the road between parked cars – % correct**

Action	%
A Find a space wide enough between the parked cars and check the gap on the other side	49.7
B Stop at the kerb	34.8
C Check the cars to make sure they aren't about to be driven off	32.2
D Walk to the outside edge of the parked cars and stop to look and listen	39.3
E Look both ways for traffic – more than once	46.7
F If there is no traffic, cross to the other side continuing to look and listen	77.3

Table 6.31 **Percentage of correct sequences of actions by group**

	Control	Experimental	Group (%) Total	Sig level
Correct	13.8	14.1	14.0	
Incorrect	86.2	85.9	86.0	
<b>Total (N = 929)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

**Cycling** – A series of questions relating to cycling issues was asked. Particular emphasis was placed upon the issue of riding on the pavement.

Question 8 created a scenario in which a friend's house was ten minutes walk away or two minutes by bike. Respondents were asked which method they would choose and, if they decided to ride, whether they would ride on the road or the pavement. About half the group stated that they would walk; the remainder decided to ride, almost equally split between riding on the pavement and on the road (Table 6.32). The experimental group were significantly more likely to elect to ride on the pavement.

Table 6.32 **Choice of travel by group**

	Control	Experimental	Group (%) Total	Sig level
Ride on pavement	21.4	28.4	25.2	.05
Ride on road	27.1	24.9	25.9	
Walk instead	51.5	46.7	48.9	
<b>Total (N = 935)</b>	<b>100.0</b>	<b>99.9</b>	<b>100.0</b>	

A later question asked if riding on the pavement was illegal (Table 6.33). Half the respondents thought that it was illegal; most of the remainder thought that it was not. No difference was found between the control and experimental groups.

**Table 6.33 Is it illegal to ride on the pavement by group**

	Control	Experimental	Group (%) Total	Sig level
Yes	52.0	50.0	50.9	
No	24.8	28.0	26.5	
Not sure	23.2	22.0	22.5	
<b>Total (N = 923)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

Various strategies were put forward for ensuring that pedestrians did not get hurt when riding on the pavement (Table 6.34). Typically, the suggestion was to cycle around the pedestrians. No difference in the answers obtained was found between the control and experimental groups.

**Table 6.34 If you do ride on the pavement, how can you make sure that pedestrians don't get hurt?**

Strategy	Control	Experimental	Group (%) Total	Sig level
Cycle round pedestrians	52.2	61.2	57.1	
Stop to let pedestrians past	15.9	14.9	15.4	
Warn of your approach	7.3	7.9	7.6	
Ride in single file	6.3	4.6	5.4	
Ride on the road	6.8	3.7	5.1	
Get off bike when you see pedestrians	5.3	3.1	4.1	
Other strategy	4.3	3.3	3.8	
Use bike path/lane	1.8	1.2	1.5	
<b>Total (N = 877)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

Question 9 was an open-ended question that asked about the dangers that cyclists face when riding along a road with parked cars. Respondents were invited to write down three possible dangers. A total of 2,374 dangers were given. The most common response was cars moving off from the kerb (28%). The experimental group was significantly more likely to respond with general safety messages and the need to keep control of the bike (Table 6.35).

Table 6.35 **Dangers when cycling along a road with parked cars by group**

Danger	Control	Experimental	Group (%) Total	Sig level
Cars starting off from kerb	29.0	26.3	27.5	
General safety messages	17.7	21.8	19.9	.01
Traffic moving along road	20.1	19.6	19.8	
Keeping control of bike	10.2	13.6	12.0	.01
Pedestrians	9.4	7.9	8.6	
Stationary/parked cars	9.3	7.4	8.3	
Cars parking	4.4	3.5	3.9	
<b>Total (N = 2,374)</b>	<b>100.1</b>	<b>100.1</b>	<b>100.0</b>	

A final question on cycling asked if cyclists were required to give way to pedestrians standing on a traffic island (Question 12). The responses were fairly evenly split. No difference was found between the control and experimental groups (Table 6.36).

Table 6.36 **When riding a bike, should you stop to let a person standing on a traffic island cross the road**

Danger	Control	Experimental	Group (%) Total	Sig level
Yes	36.2	38.5	37.5	
No	44.9	41.7	43.2	
Not sure	18.8	19.8	19.4	
<b>Total (N = 929)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

**Directions of traffic** – Two questions dealt with directions of traffic and crossing the road. In Question 10, pupils were presented with a photograph and a plan drawing of a road junction. The scenario was that they were standing on a traffic island and were required to draw arrows on the plan to show all the directions that traffic could come from.

Overall, the largest incidence of incorrect answers was for the side road to the station – traffic approaching from behind the person’s left shoulder (Table 6.37). No differences existed between the control and experimental groups in their answers to this question.



Table 6.37 *Every which way* – % correct answers by road and group

Road		Control	Experimental	Group Total	Sig level
Side road to station	Correct	56.6	53.5	54.9	
	Incorrect	43.4	46.5	45.1	
	Total (N = 810)	100.0	100.0	100.0	NS
Major road	Correct	74.1	71.7	72.8	
	Part correct	8.5	10.0	9.3	
	Incorrect	17.3	18.3	17.9	
	Total (N = 857)	100.0	100.0	100.0	NS
Other side road	Correct	78.2	77.8	78.0	
	Incorrect	21.8	22.2	22.0	
	Total (N = 841)	100.0	100.0	100.0	NS

A second question (Question 11) explored the reasons why traffic islands make it easier to cross the road. Most respondents provided an appropriate answer and no difference existed between the control and experimental groups (Table 6.38).

Table 6.38 *Reasons why a traffic island makes crossing the road easier* by group

Reason	Control	Experimental	Group Total	Sig level
You can stop safely in the middle of the road	46.2	43.3	44.6	
You do not have to cross over all the road	29.0	27.4	28.1	
You do not have to look out for traffic coming both ways	12.0	13.4	12.8	
Cars cannot come onto the island	8.8	10.5	9.8	
You can see the traffic coming easier	3.9	5.4	4.7	
<b>Total (N = 892)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

**Using buses** – With the move to secondary school, it was likely that pupils would make increased use of public transport, particularly buses. Question 15 asked pupils to write down five things that they need to find out before catching a bus. The first answer (find out where the bus stop is) was provided.

There was no difference between the experimental and control groups in terms of the number of answers provided. However, the experimental group was significantly more likely to suggest personal safety issues as information to be found out before catching the bus (Table 6.39).

Table 6.39 Information to be obtained before catching a bus by group

Information			Group (%)	Sig level
	Control	Experimental	Total	
Bus stop, route	41.0	44.5	42.9	
Bus times	31.3	27.9	29.4	
Cost	21.7	18.6	20.0	
What to do on bus	3.9	5.1	4.6	
Personal safety	2.1	3.9	3.1	.01
<b>Total (N = 3,032)</b>	<b>100</b>	<b>100</b>	<b>100</b>	

**Risks from accidents and pollution** – Question 16 of *Making Choices* reproduced the nine item true-false quiz contained within the *Journey Planner* provided to pupils in the experimental group. All the questions related either to the risk of accident involvement or health issues associated with transport.

Table 6.40 shows the proportion of the experimental and control group that agreed with each of the nine statements. Three significant differences were observed between the control and experimental groups. In each case, the experimental group had a higher percentage of correct answers. The questions were all related to risk of accident involvement. Issues relating to health and pollution tended to be well understood by both groups.

Table 6.40 True-false quiz – % agreeing by control and experimental group

Statement	Validity			% agreeing Total	Sig level
		Control	Experimental		
The most dangerous age for children is between 12 and 15	Correct	25.7	47.9	37.9	0.000
Little children are more likely than I am to be involved in a road accident	Incorrect	65.6	57.4	61.1	0.011
Less than 10,000 children are killed or injured each year on Britain's roads	Incorrect	60.7	53.1	56.5	0.025
People my age are more likely to be abducted than killed in a road accident	Incorrect	37.8	32.3	34.8	NS
People my age get killed crossing between parked cars	Correct	74.8	78.2	76.7	NS
Most children get knocked down in the winter	Incorrect	60.7	64.3	62.7	NS
Drivers can make it safer by slowing down	Correct	94.1	95.2	94.7	NS
Cars and lorries are a major source of pollution	Correct	91.3	90.9	91.1	NS
It's healthier to walk or cycle to school than go by bus	Correct	91.3	91.2	91.3	NS

Note: the sample sizes for individual answers ranged from 886 to 918.

**Social pressures** – Often, individual behaviour is influenced by social or peer pressures. Questions 17 – 19 described three such situations. Respondents were asked to write down what they would do in the circumstances.

The scenario in Question 17 was as follows:

You have gone shopping with a friend and are going to catch the bus home. You both see the bus at the bus stop. Your friend starts to run across the road. You look at the crossing about 25 metres along the road.

The experimental group was significantly more likely than the control group to try and stop and/or warn the friend (Table 6.41) and less likely to offer just general advice based upon the Green Cross Code.

Table 6.41 **Strategies for question 17 by control and experimental group**

Strategy	Control	Experimental	Group Total	Sig level
Use protected crossing	43.4	41.2	42.1	
Stop/warn friend	17.4	26.5	22.6	.02
General Green Cross Code	24.4	17.8	20.7	.02
Cross with the friend	11.2	10.8	11.0	
Wait for next bus	3.6	3.6	3.6	
<b>Total (N = 828)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

The scenario in Question 18 was as follows:

You are pushing your bike home from school and talking to a friend. It is a busy main road. Your friend asks for a lift on your bike.

The control group was significantly more likely than the experimental group to say no to the friend without giving any reason (Table 6.42).

Table 6.42 **Strategies for question 18 by control and experimental group**

	Control	Experimental	Group (%) Total	Sig level
No – no reason given	68.4	56.8	61.9	.01
No – reason given	22.1	29.3	26.2	
Agree to giving lift	9.4	14.0	12.0	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

The final scenario in this section was as follows:

When you go out with your friends, parents take it in turn to be taxi drivers. One parent is not a very good driver – he drives fast and doesn't seem too safe. Next time you go out with your friends, it is his turn to give a lift.

About half the respondents suggested that you should not go with the unsafe driver (Table 6.43). No difference was obtained between the two groups in terms of the suggested strategies.

Table 6.43 **Strategies for question 19 by control and experimental group**

	Control	Experimental	Group (%) Total	Sig level
Ask someone else to drive	22.5	16.9	19.4	
Don't go with unsafe driver	48.7	48.7	48.7	
Go with driver	11.4	14.8	13.3	
Try and influence driver	17.4	19.6	18.6	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>NS</b>

## 6.6 Using the resources

The distribution of the resources and the use of the suggested activities by primary and secondary schools were dependent on teachers. The researchers did not impose a prescriptive programme – which would have been very difficult to achieve as the curriculum is already subject to severe time constraints. An element of the process evaluation was to see how schools would incorporate the material and whether links were made with the issues raised in the children's safer journey planner and the magazine for parents.

The resources for parents and children were distributed via the primary schools. Teachers used the resource in primary during the summer term 1999. In the secondary schools, the resources were used during October and November 1999.

### 6.6.1 *The response from primary teachers*

Responses from 23 teachers were received from 17 experimental primary schools. Two primary schools in one authority did not return evaluation sheets. Teachers were asked to rate each of the five activities that they used and invited to make free responses.

#### *Context and comments*

Teachers were asked to describe the overall context in which the materials were used. With the exception of one school that stated that the materials were used as "Separate class lessons", most teachers had integrated the activities within Geography, PSHE and to complement the existing transfer process. Comments included:

“Built into the secondary transfer process and linked strongly to the personal safety component of our health education programme.”

“As an extension/geography exercise in the main. A good post SATs activity.”

“Discussion work on/land the development of independence needed for transfer between schools. Map work done on routes around school/to home/to school.”

Few teachers stated that they would like to see anything added to the materials; “Nothing really – some excellent issues, appropriate to the age group.” Those that did requested photographs or a video.

When asked for other comments, the main issues raised were lack of time and the need for longer term planning. Many teachers said that they would use the materials next year. For example,

“The fact that we have not completed our plans was due solely to internal school organisation problems. I plan to use the excellent suggestions/material with my 1999/2000 class in the Autumn Term.”

### *The activities used*

Activity 1, *Finding your way* and Activity 5, *Who is responsible for your safety?* were both used by twelve schools. Activity 3, *What's the difference?* was the next popular, used by eleven schools. Activity 2, *Traffic movement* and Activity 4, *On the street* were the least used. *On the street* was considered “unrealistic” by one teacher because it involved work outside of school. However, another teacher found that it linked well the local authority Traffic Trail.

### *Primary teachers' rating of the resource*

Teachers were asked to score the resource for schools (Table 6.44 and Table 6.45). A score of 1 was *excellent* and 5 *poor*.

Table 6.44 **Ratings of the materials by primary teachers**

Overall response	Excellent				Poor	Total
	Score 1	Score 2	Score 3	Score 4	Score 5	
Presentation and format	5	9	1	2		17
Support to the transfer process	6	6	4	1		17
Ease of use	2	11	2	1	1	17
Relevance to the age group		16	1			17
Timing of the materials to schools	2	3	3	6	3	17
Link with the parents' magazine	1	8	7	1		17
Link with the children's safer journey planner	3	10	3	1		17
<b>Total</b>	<b>19</b>	<b>63</b>	<b>21</b>	<b>12</b>	<b>4</b>	<b>119</b>
%	16	53	18	10	3	100

Table 6.45 **How primary teachers rated each activity**

Overall response	Excellent				Poor	Total
	Score 1	Score 2	Score 3	Score 4	Score 5	
Finding your way	22	36	18	1	1	78
Traffic movement	5	41	13	1		60
What's the difference?	11	42	17	1		71
On the street	17	24	1			42
Who is responsible for your safety?	29	34	11	3		77
<b>Total</b>	<b>84</b>	<b>177</b>	<b>60</b>	<b>6</b>	<b>1</b>	<b>328</b>
%	26	54	18	2	0	100

### 6.6.2 *The response from secondary teachers*

Individual teachers were requested to respond, giving a response from 34 members of staff (Table 6.46). There was a poor response from one secondary school where only one geography teacher had participated.

#### *Context and comments*

In nearly all secondary schools, the teachers used the materials in timetabled PSHE or Social Education lessons. These lessons were normally between 50 minutes and one hour long. The exceptions being the geography teacher mentioned above and another school that used the materials for twenty minutes each day during tutorial periods. The teaching approach used tended to be based on discussion:

“Questions encouraging the thinking process and using answers to put across ideas on road safety.”

“Class discussion, listening skills, reading, brainstorming, paired work.”

Few teachers that indicated that additional material would be useful. Those that did suggested a video, more background information, or examples of work.

Other comments made about the resources were generally positive. For example, “Good package which links road safety with realistic situations where decision making is required.” One Head of Year commented:

“The teaching pack has been well received by the tutor team. They have been very positive in the teaching of this unit of work with comments like ‘Road safety is such an important issue – so relevant to Year 7’ this pilot has been a pleasure to be involved in – your support has been excellent! Thank you.”

Some teachers were concerned about the language used – something not commented on at all by primary teachers.

“Some of the wording of questions was quite difficult for Year 7s to understand.”

“Perhaps in some cases the language was too advanced.”

As might be expected there were differing views on the amount of time needed to complete each activity, anything between five and sixty minutes. Two teachers from the same school (so each had the same amount of time available) commented;

“Tasks often completed very quickly by some pupils. Extensions were needed.”

“Sometimes the activities were a little too time consuming and difficult to finish in the time allocated.”

### *The activities used*

Activity 1, *Changes and directions* and Activity 2, *Independent traveller* were both used by 31 teachers. Activity 5, *What if... ?* was the next most popular, being used by twenty four teachers. Twenty-two teachers used Activity 3, *Feeling scared* and the least used activity was Activity 4, *The other point of view* (Table 6.47).

Table 6.46 Ratings of the materials by secondary teachers

Overall response	Excellent				Poor	Total
	Score 1	Score 2	Score 3	Score 4	Score 5	
Presentation and format	8	15	6	1	1	31
Support to the transfer process	7	16	4	2	1	30
Ease of use	6	16	3	2	2	29
Relevance to the age group	10	12	5	0	2	29
Timing of the materials to schools	6	13	6	3	2	30
Link with the parents' magazine	2	14	8	1	3	28
Link with the children's safer journey planner	3	16	5	1	3	28
<b>Total</b>	<b>42</b>	<b>102</b>	<b>37</b>	<b>10</b>	<b>14</b>	<b>205</b>
%	20	50	18	5	7	100

Table 6.47 How secondary teachers rated each activity

Activity	Excellent				Poor	Total
	Score 1	Score 2	Score 3	Score 4	Score 5	
Changes and directions	37	85	45	16	0	183
Independent traveller	37	65	53	16	1	172
Feeling scared	25	77	18	11	1	132
The other point of view	19	45	34	6	0	104
What if ... ?	38	81	33	15	0	167
<b>Total</b>	<b>156</b>	<b>353</b>	<b>183</b>	<b>64</b>	<b>2</b>	<b>8</b>
%	21	47	24	8	0	100

### 6.6.3 Children's recall of the resources

The pupils' recall of the educational resources (*Making Choices*) was measured in two ways. Within the *Out and About* questionnaire, unprompted recall was measured in Question 6 which asked if pupils remembered being given any of six resources (five of which were named). Only two of the resources were real.

The highest level of unprompted recall was for *Making Choices* – pupil journey planner, recalled by one third of the experimental group (Table 6.48). The *Making Choices* – parents' booklet achieved a much lower level of unprompted recall, broadly comparable to that achieved by three non-existent resources. Although a booklet for parents, it was taken home with the journey planner by the pupils to give to their parents.



Prompted recall was measured subsequently in the *Making Choices* questionnaire where the *Parents Booklet* and *Pupils Journey Planner* were separately shown to the pupils and they were asked if they remembered getting a copy of either resource. To try and avoid any response bias, it was made clear that some pupils would have got a copy and others would not have been given one.

When prompted (Table 6.49 and Table 6.50), around three-quarters of the experimental sample recalled both the parents' magazine and the pupil journey planner.

Table 6.48 **Unprompted pupil recall of resources**

Name of resource	% recall		Sig level
	Experimental	(N = 945) Control	
<i>Making Choices</i> – pupil journey planner	33	6	.001
<i>Making Choices</i> – parents' booklet	14	5	.001
<i>New Times</i>	14	1	.001
<i>Staying Safe</i> – magazine	9	4	.01
<i>Staying Safe</i> – leaflet	8	9	NS
Other resource	8	30	.001
Not given anything	12	42	.001

Table 6.49 **Pupils' prompted recall of *Making Choices* parents' magazine**

Group		Prompted recall %
Control (N = 426)	Yes	9
	No	76
	Not sure	15
	Total	100
Experimental (N = 517)	Yes	75
	No	14
	Not sure	11
	Total	100

Table 6.50 Pupils' prompted recall of *Making Choices* – pupil journey planner

Group		Prompted recall (%)
Control (N = 426)	Yes	7
	No	82
	Not sure	11
	Total	100
Experimental (N = 517)	Yes	72
	No	18
	Not sure	11
	Total	100

#### 6.6.4 How children rated *Making Choices*

In the question following the unprompted recall, children were asked to rate on a five point scale those resources which they recalled being given in their last year at primary school. Unfortunately, children often rated resources which they had claimed in answer to the previous question not to have recalled. The results of this in-built check called into question the validity of their ratings and these data have therefore been discounted in the evaluation.

#### 6.6.5 Pupils recall of help from parents and schools

Table 6.51 compares the help provided by parents of the experimental and control pupils in getting ready for the new journey to secondary school. Respondents were permitted to provide multiple response answers. Half the sample (51%) did not do anything special with their parents to prepare for the new journey.

There was no significant difference in the proportion of pupils in the two groups whose parents *talked about road safety to me*. However significantly more pupils in the experimental group *looked at road safety booklets with my parents and talked, planned the journey I would take to secondary school, and practised the journey to secondary school*. Significantly fewer pupils in the experimental group *didn't do anything special*.

Table 6.51 **How pupils got ready for their new journey to secondary school**

	Control	Experimental	Group (%) Total (N=968)	Sig level
I didn't do anything special	55.1	47.2	50.8	0.02
I planned the journey I would take to secondary school	31.3	38.1	35.0	0.05
My parents talked about road safety with me	20.1	23.4	21.9	NS
I practised the journey to secondary school	10.5	17.6	14.4	0.01
I looked at road safety booklets with my parents	5.4	13.0	9.5	0.001

Overall, over 40% of the control group and nearly 20% of the experimental group claimed that they had not done anything special at primary school to help them with their new journey to secondary school (Table 6.52). A significantly higher proportion of the experimental group claimed that their *teachers at primary school talked about road safety*, that they *did road safety activities in the classroom*, and that *their primary teacher took them out on the roads around the school*.

Table 6.52 **How the primary school helped pupils with their new journey to secondary school**

	Control	Experimental	Group (%) Total (N=968)	Sig level
My teachers at primary school talked about road safety	40.7	67.9	55.6	0.001
We did road safety activities in the classroom	26.9	46.8	37.8	0.001
My primary teacher took us out on the roads around the school	15.2	26.5	21.4	0.001
We didn't do anything special	41.4	19.0	29.1	0.001

Amongst the control group, road safety activities in secondary school were substantially less than in primary school (Table 6.53). Nearly two-thirds (64%) of control pupils claimed that they *didn't do anything special* compared to less than a third (28%) of the experimental group.

There was also a significantly higher incidence of specific road safety activities within the experimental group with almost two-thirds (63%) claiming *that teachers have talked about road safety* and almost half (41%) saying that they *have done road safety activities in the classroom*.

Table 6.53 **How the secondary school helped pupils with their new journey**

	Control	Experimental	Group (%) Total (N=968)	Sig level
Teachers have talked about road safety	31.8	62.9	48.8	0.001
We didn't do anything special	63.6	27.9	44.0	0.001
We have done road safety activities in the classroom	11.7	41.4	27.9	0.001
Teachers took us out on the roads around the school	0.0	6.2	3.4	

## 7 Discussion and conclusions

The purpose of this research was to “to develop and evaluate a road safety training/awareness resource/programme to ensure that children have developed the skills required to match the independence they are given when they move to secondary school.”

It was also recognised that “critical to the success of road safety education and training for this age group is the active participation of parents/carers and [that] any training should directly address the issue of getting them involved.”

During the initial stages of the project, the views of those involved in the transfer process were sought – primary and secondary schools, parents, children in their last year of primary school and children in their first year of secondary school. Existing resources were reviewed to ensure that there was a need for a new resource for this age group. Based on the information obtained from these initial stages, a resource programme was developed and evaluated.

### 7.1 Background processes

#### *7.1.1 Transfer procedures in schools*

Teachers recognised that the ethos of the generally smaller primary school was somewhat different to that of the larger and busier secondary school. The induction programmes focused on children getting to know the school systems, layout and staff. Genuine concern was expressed about children settling in. Teachers did not consider safety and travel issues as unimportant; rather they had not usually been given any emphasis.

Teachers agreed that safety and travel issues were relevant to the age group but were constrained in what they could do by the twin pressures of time and a crowded curriculum. It was very evident from teachers that schools could only use a programme of road safety activities if the programme supported the current transfer procedures.

#### *7.1.2 Changing lifestyles*

Obtaining the views of primary and secondary school teachers, parents and children was an invaluable precursor to developing the resource.

Both parents and children saw the move to secondary school as marking the beginning of the next stage of growing up. Their main concerns were not, however, connected to road safety or travel. These issues had not usually been considered in any depth. However, issues of personal responsibility and independence did emerge as relevant.

The children expected to be given greater independence on reaching secondary school. Whilst most parents accepted this change, they were concerned about striking a balance between protection and encouraging independence. They recognised that the road environment had changed considerably since they were aged eleven and this in turn

appeared to make them less sure of how to teach their own child road use skills. Concerns expressed by parents and children about greater independence were not, however, confined to the school journey but extended to all journeys.

The children indicated that parents had been their most important advisers on road safety and travel matters. Parents were clear about accepting responsibility for road safety issues but drew support from schools and the media to provide information and advice. All the parents in the focus groups thought that teaching road safety in terms of strict adherence to rules and codes was not appropriate for this age group. They considered it more important for children to be able to assess each situation. Both children and parents also expressed clear preferences for resources to consider real road situations rather than the ‘perfect’ crossing places so often depicted in safety literature.

### *7.1.3 Changing travel patterns on school journeys*

The *Out and About* travel survey was unique in that almost 1,000 children were surveyed twice – once at primary school and then a few months later at secondary school.

Overall, predictions made by the primary school children about their mode of travel to secondary school were quite accurate. The travel patterns altered significantly and, not surprisingly, walking to school with an adult showed the sharpest decline.

Boys, at both primary school and secondary school, were more likely to travel to school on their own than were girls. It is unclear whether this is due to boys being given greater independence, or simply that girls prefer to travel to school as part of a social group.

The predominant mode of travel to primary school was walking (almost 75%). At secondary school, this had reduced to around 64%. More children were travelling by bus or cars, perhaps indicating that children are travelling further to attend school. However, it has to be remembered that variations in the local built environment around individual schools and the catchment area of each are likely to affect decisions about mode of travel to school. When considering the viability of further encouraging modal shift, it would seem appropriate to take into account local variations and difficulties.

### *7.1.4 Changing travel patterns on other journeys*

For journeys other than to and from school, there is further evidence of greater independence. Once at secondary school, there is an increase in the proportion of children ‘crossing all roads’, especially girls.

Although bicycle use did not alter, there was some increase in the independent use of buses by both boys and especially girls. Both were much more likely to travel on buses independently of their parents. However, as no distinction was made between bus journeys to school and other journeys, some of this increase may be accounted for by travel to school. As with the use of buses, both boys and girls were more likely to travel on trains independently of their parents.

With the exception of the journey to school, the results of the *On the Move* survey do not show huge changes in independent travel. It seems that children and parents gradually accept wider boundaries – a theory supported by the discussions held with children in their first year of secondary school.

The transfer to a new school may mark a definite start to a new stage of independence, but the degree of autonomy may be developed over time and is part of the whole process of maturation.

## 7.2 Evaluation

The resource was evaluated in two ways. The first evaluation was concerned with the acceptability of the resource to teachers and children in terms of its content and presentation and how well it served their needs. Secondly, the effect of the use of the resources upon children's awareness of road safety issues and their decision-making responses was evaluated.

### 7.2.1 Use of the resource

It would have been much easier to simply concentrate on children in their last term of primary school. However, in transferring from primary to secondary school, pupils go through three stages – leaving primary school, the actual transition time during the summer break and, lastly, the induction phase of attending their new secondary school.

In view of this process, four specific target groups were identified – children, their parents, primary schools and secondary schools. A safer journey planner was developed intended for use by the children individually. To complement this, a magazine for parents was also developed. Specific activities were also developed for primary and secondary schools.

### 7.2.2 Timing and response

The parental survey was conducted during the autumn term, at the time that secondary school choices were being made. Several parents taking part in the follow-up interviews suggested that their participation had made them think about travel and safety issues.

Schools distributed the children's safer journey planner and the magazine for parents during the early summer term. The primary schools used the activities during the late summer term. Secondary schools used the activities around the middle of the autumn term.

The distribution of the safer journey planner and the use of the primary school activities were intended to complement one another. At no time was it prescribed how and when the materials should be used and distributed. Schools were relied upon to know their pupils and how they wanted to plan their own programme. Neither were parents requested to adhere to a rigid programme of activities.

The direct involvement of parents in road safety programmes can be problematic but the parental survey showed that there was a clear preference by parents for being provided with booklets to help their own child. This was taken into account when developing the resources. More children in the experimental group reported that they prepared for their journey to secondary school with their parents using booklets, as well as planning and practising the route.

Parental involvement was ascertained using the children's responses to a question about the preparations for the new journey to secondary school. A disadvantage of this approach is that it was not possible to get a response from parents about what they thought of the booklet. The advantage was that parents could not say they had used the booklet to create a positive impression.

### *7.2.3 Effects upon awareness of safety issues*

Evaluation of educational interventions are fraught with difficulties, not least because researchers have little control upon the degree and quality of the intervention unless they deliver it themselves. Unless the intervention is designed to be delivered by outside speakers, such a strategy is inappropriate.

In the present research, the intervention is even more complex in that different parts of it were designed to be delivered by parents and teachers and, to an extent, by the pupils themselves (by reading the *Journey Planners* provided to them). In no sense, therefore, can it be said that the intervention was at a consistent level across all pupils. As such, it will mirror any national educational programme.

The choice of measuring instruments is open to much discussion. Although it is easier to test rote recall of road safety knowledge as exemplified by the *Green Cross Code* or the *Highway Code for Young Road Users*, children passing through the transfer process are at the stage of trying to develop strategies for coping with complex road environments. Behaviour in idealised situations and the use of absolute rules are no longer as relevant as for younger age groups.

The alternative approaches, of illustrating road safety issues with photographs of real life situations and inviting open-ended answers, is a more time-consuming process both for the respondent and the researcher. It is also more subjective and the calculation of a total score for a test becomes more difficult. Yet, for children in this age group, there is rarely a right and wrong behaviour; rather a less safe and a safer strategy. Which is the safer strategy may depend upon other factors, such as the prevailing traffic or weather conditions, rather than being an absolute truth at all times.

The attitude scale, *Moving On*, provided some indications as to changes occurring during the transfer process. The experimental group tended to show a greater level of personal responsibility including accepting that they were old enough to travel on their own and that grown-ups were no longer totally responsible for looking after them when they were out. The greater disagreement with the statement that their parents trust them to look after



themselves when out on their own may reflect the childrens' perceptions of the concerns over their safety still felt by their parents. Both parents and children understand that the transfer process is a major life stage.

The results from the *Making Choices* test tend to suggest that the greatest effect of the intervention upon the experimental group was in increasing their awareness of personal safety issues – mirroring, to an extent, the results of the *Moving On* attitude scale. The experimental group were better informed as to how to make an reverse charge call and were more likely to offer general awareness messages about keeping safe when out. In the section on using buses, the experimental group were more likely to suggest personal safety issues as information to be found out before catching a bus. Part of the reason for this greater emphasis may come from their raised awareness of the risks of injury as evidenced by responses to the True-False quiz.

### 7.3 Meeting the intended purpose

The outcomes of the project have been successful in meeting the original objectives. Resources have been developed that complement the transfer processes adopted by both primary and secondary schools. The response from teachers, despite the time and curriculum constraints, was very positive.

Equally important, without using a staff intensive programme, parents supported their children in the move to secondary school by working together to plan and practise the new journey.

The travel survey provided a data on children's changing school journey and the travel independence children gained once moving to their new school.

As well as directly meeting the project objectives, additional information on the role that parents played as road safety educators was gained by conducting the parental survey and the parent discussion groups. The discussion groups with children supported the views expressed by parents – that is a request for 'grown-up' road safety and recognition that the road environment can be complex, rather than perfect. Both parents and children clearly understood that decisions had to be made where the safer option was not always clear. Parents accepted that their children needed to be able to cope safely with new situations and be confident in making choices.

Within the context of the transition from primary to secondary school, the issue of road safety is but one of many concerns felt by parents, teachers and children. A educational initiative of this type, which can be integrated into the transfer process with minimal additional work, can help to raise the profile of road safety at this critical point in a child's life.

It is strongly recommended that *Making Choices* is published and promoted nationally to schools and road safety professionals.

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