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Safely to School: A Study of Safer Routes to School in the Classroom

**Transport Research
Planning Group**



**SAFELY TO SCHOOL: A STUDY OF SAFER ROUTES TO
SCHOOL IN THE CLASSROOM**

**Valerie Wilson, The SCRE Centre
Tony Graham, ODS Ltd**

**Kevin Lowden, The SCRE Centre
John Hall, The SCRE Centre
Katy Fyfe, ODS Ltd**

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EXECUTIVE SUMMARY

Introduction

1. The issue of road safety is currently the focus of much activity by the Scottish Executive, local authorities, schools, the police and various interest groups. It is also a prime concern for parents. This report presents the findings from a seven-month study of one such initiative – the Safer Routes to School (SRTS) project – and examines the ways in which it has been integrated into the school curriculum. The research was commissioned in January 2003 by the Scottish Executive Development Department and undertaken by a team from the Scottish Council for Research in Education (SCRE) Centre and ODS. This summary draws together the main findings and implications for Safer Routes and other road safety initiatives.

The Wider International Picture

2. A survey of the international literature revealed that a range of complex inter-related factors and processes affect children's vulnerability to road accidents. Important variables include the child's age, gender and level of social disadvantage. Previous research suggests that initiatives should:

Be multifaceted;

Include changes to the physical environment;

Take account of the fact that road safety is perceived to have a low value amongst secondary school pupils and their teachers;

Use high quality resources;

Include attempts to change young people's behaviour as well as their awareness and knowledge; and

Be based upon relevant content, which is related to the wider school curriculum, delivered by trained teachers, and based upon a school travel plan.

Challenges Facing Road Safety Education in Scotland

3. Interviews with a small number of key informants suggest that:

There are a growing number of road safety initiatives at local and national levels.

There is a shared view about what constitutes good practice.

There is a general lack of awareness about initiatives, which leads to duplication of efforts.

There is a need to integrate Safer Routes to School within the curriculum, train teachers appropriately, involve pupils in the design of projects and ensure that projects are sustainable.

What are Local Authorities Doing?

4. Responses from 31 local authorities to a survey of their road safety practices indicate that:

30 local authorities are or have been involved in Safer Routes to School projects.

Local authority roads/transport departments usually have the main responsibility for the management and budgets for SRTS.

Local authorities spend more money on engineering/infrastructure related to road safety than they do on road safety curriculum initiatives.

26 local authorities have appointed or plan to appoint School Travel Co-ordinators.

20 local authorities provide literature and/or resources to schools to support SRTS.

Only 6 local authorities evaluated their SRTS projects.

It is good practice to include pupils *and* parents, and relate curriculum developments to local engineering work.

How are Schools Responding?

5. A detailed study of six case study schools (four primary and two secondary) provided a picture of Safer Routes to School activities in a selection of Scottish locations.

Schools have responded in a variety of ways to the challenge of integrating road safety into the school curriculum.

Teachers report that road safety projects must compete for time in the curriculum with other priorities.

Teachers believe that the pressures of lack of time and parental support affect the efficacy of Safer Routes within the curriculum.

Pupils report participating in a variety of road safety activities at school. These include: puzzles, questionnaires, project work, input at assemblies, cycling proficiency training, publicity events such as 'Walk to school' days, leaflets, stickers, and police/lollipop person visits.

Generally pupils thought that the content of road safety education was interesting.

Secondary school pupils thought that road safety was more relevant to younger pupils because 'they need it more than we do'.

Most pupils prefer interactive approaches to learning and teaching about road safety, such as discussion, drama, role-play, theatre tours, experiential learning, and project-based work, and were highly critical of didactic approaches.

Teachers believe that the key success factors are: committed individuals, accessible and active support services (eg from Road Safety Officers/Units), and clear local policies.

What Can Parents Do?

6. A survey of a sample of parents in the six case study schools revealed that:

74% of parents report that their children walk to school often.

48% of parents thought that cars were a very safe mode of transport for children to use to travel to school: this was more than for any other way of getting to and from school.

90% of parents identified busy roads and fast traffic as the most important problems faced by children travelling to school.

Over 50% of parents expressed concerns about wider safety issues related to assaults, bullying, street lighting and possible abductions.

Nearly all parents (98%) accepted their responsibility to educate their children in road safety.

99% thought that road safety should be introduced when children were aged between 5 and 7 years old.

Some believe that children should be encouraged to take more responsibility for their own road safety by teaching them to walk or cycle safely to school.

7. Finally, despite their general willingness to take the major responsibility for their child's road safety, it is clear that parents expect local authorities, the police, schools and other road users to play a part. In particular they want more active traffic management, and other parents to behave responsibly by reducing their driving speed and refraining from parking or dropping children off near the school.

Conclusions and Implications

8. A number of important issues emerge from this research which have implications for the way local authorities and schools develop road safety. Our findings confirm that:

9. *Practices vary:* Local authorities spend varying amounts of money on road safety and locate responsibility for it in different departments. Local authorities and schools also employ a variety of strategies to implement road safety. The most successful appear to be based upon co-operation between roads/transport and education departments so that local engineering/infrastructural changes are linked to curriculum developments in schools.

10. *Certain schools are more interested in road safety:* It was generally reported that primary schools are more interested in road safety than secondary schools. This may be entirely appropriate given the need to introduce road safety to young children, but appropriate and targeted road safety education is required at all stages.

11. *Perceptions of danger:* There was some evidence to show that perceptions of danger vary according to the location of the school and the age and gender of the child. Those schools involved in School Travel Plans and SRTS were more interested in promoting walking and tended to ignore cycling. Few pupils report cycling to school.

12. *Commitment of schools:* All the case study schools reported that they were fully committed to SRTS, and this view was confirmed by local Road Safety Officers and School Board personnel.

13. *Competing priorities:* Unfortunately, all informants indicated that road safety had to compete at school level with other curricular priorities and pressures. Lack of time in what

was perceived to be an already crowded curriculum, and lack of support from parents, were frequently cited factors, which affected the efficacy of road safety education.

14. *Support and resources:* Teachers welcome support from local authorities, well-designed resources, and expert input, e.g. the police, Road Safety Officers. Some resources, such as ‘*Streetsense*’ are currently being developed by the Scottish Road Safety Campaign. However, a number of informants think that there is a need to provide teachers with further appropriate training so that they can integrate SRTS within the 5–14 curriculum or Personal and Social Education in secondary schools.

15. *Changing children’s behaviour is difficult:* The literature recognises that a complex set of factors affect children’s ability to behave safely on their routes to and from school. All accept that changing children’s behaviour is difficult and is unlikely to be achieved by programmes which merely target awareness and attitudes.

16. *Supportive infrastructures:* Safer Routes to School projects appear to have more impact and sustainability when there is a supporting school and local authority infrastructure (such as School Safety Teams) which involves a range of key partners, and enthusiastic and motivated individuals and groups in key positions who will champion SRTS.

17. *Integrated projects:* Those involved in our study stressed that SRTS projects that involve a curricular, classroom-based content are more likely to be accepted by teachers and maintained if their design is closely related to the 5–14 curriculum, and provides appropriate assessment procedures, accessible resources and teacher guidance.

18. *The role of parents:* All agree that parents have a crucial role to play in SRTS as educators and role models. Not only do they often determine how a child will travel to and from school but most also accept that they have the primary responsibility for their child’s safety. It is imperative to engage with parents, demonstrate to them that integrated traffic management approaches are being taken to eliminate unsafe behaviour by other parents, and allay their fears about the speed and volume of road traffic, and the wider dangers of bullying, assaults and abductions.

19. *Input from pupils:* Most informants recognised that children and young people should be involved in the development of SRTS initiatives and in the peer education of younger children. Young people themselves indicated that they prefer inter-active approaches to road safety education.

20. *Monitoring and evaluation:* Only six local authorities reported that they had undertaken evaluations of SRTS projects. We believe that evidence should be collected to show which initiatives are most effective and, if possible, the impact on road accident statistics.

Recommendations

21. We think that SRTS could more effectively be integrated into schools across Scotland if:

- Local authority transport and education departments co-operated in the planning and organisation of SRTS projects within their authority to ensure that engineering infrastructure is informed by, and also supports, curricular developments;
- Local authorities and schools shared examples of good practice in road safety;
- Schools established targets for embedding SRTS in their school development plans;
- Headteachers and School Boards made more efforts to inform parents of SRTS and engage them in its activities;
- Parents demonstrated appropriate behaviour, especially regarding driving and parking near to schools;
- Teachers were offered school-based training to help them integrate SRTS resources in their lesson plans;
- Account was taken of pupils' views, especially their preference for experiential learning; and finally
- All local authorities be encouraged to monitor and evaluate their SRTS activities.

CHAPTER ONE THE STUDY

INTRODUCTION

1.1 This report presents findings from a seven-month study of the place of Safer Routes to School (SRTS) in the school curriculum in Scotland. It was commissioned by The Scottish Executive Development Department in January 2003 and conducted by the Scottish Council for Research in Education Centre (SCRE) and ODS. The study comprised three distinct phases: first, a review of previous research on road safety; second a survey of all 32 local authorities; and third, a more detailed investigation into the implementation of SRTS in six case study schools. This report draws together the main findings from the study and highlights a number of issues which have implications for Safer Routes to School and other road safety initiatives.

BACKGROUND

1.2 One of the main aims of the Scottish Executive is to deliver a sustainable, effective and integrated transport system. In *Making it Work Together: A Programme for Government* (1999), the Executive made a commitment to ‘build an integrated transport system, which meets our economic and social needs but does not threaten the health of the environment’ (p.15). It recognized the roles which motorists, cyclists and pedestrians could play in the development of this integrated system. An allocation was made to local authorities so that they might make improvements to the physical environment, for instance by installing new crossings, and creating new footpaths and cycle ways, in order to encourage more children to walk or cycle to school. The Safer Routes to School initiative sits within this general framework of integrated transport, and also within a context in which the percentage of children who walk to school has declined rapidly since 1972.

THE RESEARCH PROJECT

1.3 The overarching aim of this study was to review the Safer Routes to School in the Classroom initiative, by local authority area. In particular the project examined:

The effectiveness of SRTS work in the school curriculum in local authorities in Scotland; and
The extent to which Scottish Executive funding has helped local authorities develop the concept of SRTS in the school curriculum, and how the Cycling, Walking and Safer Streets Fund (CWSS) allocation could influence future developments at a local authority level.

RESEARCH QUESTIONS

1.4 The study addressed a number of research questions, which may conveniently be grouped under the following broad headings:

Questions related to attitudes and experiences of local authorities and the activities they have undertaken to implement road safety for children and young people.

Questions related to practices in road safety at school level.

Questions related to the attitudes of other stakeholders, such as children and young people, parents/guardians, community and other agencies.

Questions related to the further development of the Cycling, Walking and Safer Streets Fund (CWSS), and in particular, how it may be more effectively targeted.

DESIGN AND METHODS

1.5 The research comprised a combination of quantitative and qualitative approaches, ranging from a postal survey of local authorities to in-depth interviews at school level. Information was collected in three phases:

1.6 **Phase 1** entailed a review of previous research on the implementation of road safety initiatives with children and young people, and sensitising interviews with a small number of key informants. Five key informants, identified with the help of the project advisory group, were interviewed in depth (see Appendix 2).

1.7 **Phase 2** was a survey of all 32 local authorities in Scotland in order to identify: the engineering work and curriculum activities they had undertaken under the auspices of Safer Routes to School; how they allocated financial and management responsibility for children’s road safety; and the extent to which these had been evaluated. Questionnaires were sent to:

all Directors of Education (32)

all Directors of Transport (32); and

all Road Safety Units listed on the website of the Scottish Road Safety Campaign (22).

1.8 Respondents were advised of these multiple mailings and were encouraged to collaborate and return one response per authority. Reminder letters and questionnaires were sent to seven School Travel Co-ordinators in the seven local authorities which had not replied within two weeks, in order to provide a comprehensive picture of activities across Scotland. The distribution of questionnaire returns is shown in Table 1 below.

Table 1.1: Distribution of local authority questionnaire returns

Questionnaire type	Return from:					Grand Total
	Education	Road Safety Unit	Transport	Police	Other	
Education	12		2	1		15
Road Safety Unit		2	2	4	3	11
Transport	2		8			10
Reminder	3		1		1	5
Grand Total	17	2	13	5	4*	41

* Returns labelled ‘other’ are from departments named ‘Development Services’, ‘Strategy and Design’, ‘Commercial and Technical Services’, and ‘Technical Services’ whose remit is unclear from their title.

1.9 Responses were obtained from all but one very small local authority. Most (22) questionnaires were returned from the departments to which they had been addressed; others had clearly been forwarded between departments or organisations.

1.10 **Phase 3** of the study explored examples of good practice for SRTS work in six case study schools (four primary and two secondary). They represented schools in rural, urban and suburban areas, local authorities and schools of varying size, and schools where there was evidence of recent SRTS activity. These provided detailed insights into the processes involved in developing SRTS measures in schools and the factors which support or inhibit developments. Each case study involved:

Interviews (in-depth, face-to-face, or telephone) with:

- a nominated teacher with responsibility for co-ordinating Safer Routes to School and similar initiatives.
- school board or parent association representative. (In one school a focus group was conducted with the school Road Safety Team which included parents, school janitor, and others involved with the school and travel to school/road safety issues.)
- local Road Safety Officer.

Pupil focus groups (with groups of P6 and P7 pupils in each primary school, and S1 and S2/3 pupils in each secondary school).

Parental/carer survey of 30–50 parents chosen at random from pupils in upper primary and lower secondary school classes in each of the six case study schools. The completed questionnaire was returned directly to SCRE using a post-paid reply envelope.

Examining documentation relevant to each school's Safer Routes to School/travel to school/road safety measures.

ANALYSIS

1.11 The overall framework for the analysis was provided by the research questions indicated in 1.4 above. The framework was sufficiently flexible to allow modification where necessary, in the light of emerging information from each phase of the research, and from discussions with the Scottish Executive and the Advisory Group members. Bibliographical software (Endnote) was used to organise the literature search and analysis. Survey responses were analysed using the Statistical Package for the Social Sciences (SPSS) to determine frequencies, cross tabulations and other significant associations. Interviews were recorded both by notes and by tape. Qualitative information was analysed thematically by respondent group, from notes, and drawing on partial transcriptions for clarification and illustration.

THE REPORT

1.12 This final report is designed to be as concise and readable as possible. It comprises seven chapters of which this introduction is the first.

Chapter 1 introduces the study and outlines the aims, questions and methods.

Chapter 2 sets the study in the context of findings from previous published research on children's road safety.

Chapter 3 indicates the particular challenges which face road safety initiatives for children in Scotland.

Chapter 4 presents an overview of the ways in which local authorities are attempting to implement SRTS.

Chapter 5 gives insights into how the initiatives are working at school level.

Chapter 6 describes the role of parents in these initiatives.

Finally, in **Chapter 7**, we draw out the main conclusions and implications for SRTS.

Additional information is provided in the appendices.

CHAPTER TWO **SETTING THE CONTEXT: KEY ISSUES FROM THE LITERATURE**

CONTEXT

2.1 To provide a context for our study on Safer Routes To School (SRTS), this chapter draws together findings from previously published literature on road safety for young people, measures to promote safer travel and related issues.

Statistics on young people road safety

2.2 A range of sources has demonstrated the need for measures to promote safer routes to school and general road safety for young people. The Scottish Executive statistics (2002) reveal that in 2001 there were 1,486 child (0–15) pedestrian accidents in Scotland, of which 353 were serious or fatal (14 fatal). There were also 309 child cyclist accidents, of which 56 were serious or fatal (4 fatal).

2.3 The Scottish Road Safety Campaign (SRSC) leaflet *Road Safety Education: A Strategy for Scotland* (2002) provides details of a national strategy for road safety education (RSE) for all schools in Scotland. It notes that the *Annual Report of the Registrar General for Scotland (2000)* showed that 51 people in the 0–19 age group died following Road Traffic Accidents (RTAs) in that year, and that road traffic accidents cause the majority of accidental deaths in that age group. Also ‘more child pedestrians in Scotland, per head of population, are killed or seriously injured compared to the rest of the UK’.

2.4 *The Annual Report of the Registrar General for Scotland (2000)* also showed that casualty rates for child pedestrians increase with age, with 12–15 year olds being the most likely to be involved in road accidents. Male pedestrians are more at risk than females. In the 5–11 age group, twice as many boys as girls are likely to be killed or seriously injured. Boys are still more at risk in the 12–15 age group, although the difference between the sexes is less evident.

2.5 Road accident statistics and recent research have highlighted the younger teenage group as particularly at risk of being involved in serious pedestrian accidents (Sawyer, 1998). Sawyer also found gender differences in young teenagers’ pedestrian behaviours, with males more likely to take ‘extreme risks’. Although boys constituted the majority of road accident casualties at all ages, Sawyer states that ‘accident statistics show that the difference between boys and girls is narrowest during their early teenage years’.

2.6 The *Annual Report of the Registrar General for Scotland (2000)* reveals that travelling to, and particularly from, school is a crucial time for road safety with the peak time for child casualties being weekdays, from 3 pm to 5 pm, at the end of the school day, and Friday being the peak day.

2.7 Social disadvantage has also been shown to be a factor with child pedestrians in the lowest socio-economic group being over 4 times more likely to be killed than those in the highest socio-economic group. Ethnicity is another factor associated with accidents: children from ethnic minority groups are more at risk of being injured in an accident than other groups (White *et al.*, 2000).

UNDERSTANDING THE CAUSES OF ACCIDENTS AND FACTORS INFLUENCING SAFER TRAVEL TO SCHOOL

2.8 The literature identifies two major causes of travel-related accidents (accident aetiology) involving young people: children affected by multiple social disadvantage are significantly more likely to be involved in road traffic accidents; and complex social and environmental factors at neighbourhood level also affect the level of risk.

2.9 Studies reveal that across the UK and Europe certain groups appear to be more at risk of an accident involving traffic. Assaily (1997) examined research and statistical literature from various countries (e.g. Britain, France, Germany, Sweden and The Netherlands) dealing with child pedestrian accidents, and drew attention to the similarities of accident aetiology in the various countries. The groups which emerge most at risk are: the 5–9 year olds, the 10–14 year olds, and aged persons; teenage males; and those classified as being of lower socio-economic status. There were also similarities across European countries in how accidents involving young people happened, with the most common including dashing out into roads and crossing from behind parked cars. The visual search ability of the individual child was also found to play a role.

The importance of social disadvantage

2.10 Bagley (1992) argues that the study of injuries to child pedestrians and cyclists in urban contexts should include the study of complex elements interacting within a total environment. This complexity, and the need for further research, is illustrated from a study of 400 child victims in an urban, ecological study, and of 67 individually-studied child victims and controls. Bagley states that the individual vulnerability of some children puts them at high risk when they live in certain types of urban neighbourhood. The conclusion is that children involved in road traffic accidents ‘more often came from lower-class families, families with a single parent and economically poor families’. The study ‘has also shown the degree to which these child victims are likely to be concentrated in areas of a city marked by multiple social disadvantage’.

2.11 Graham (2002) researching road safety and social inclusion points out that:

Within Scotland there are significant variations in the incidence of injury and death which are related to a range of socio-economic factors. Membership of a socially-excluded group, i.e. one which does not have the same access to employment, education, good housing, transport and amenities, increases the likelihood of being involved in some form of road accident.

2.12 He therefore recommends including Road Safety Units as partners in Social Inclusion Partnerships (SIPs), increasing links between agencies, increasing community involvement in road safety measures and planning, and more training and development support for Road Safety Units and relevant others.

2.13 White *et al* (2000) reviewed the literature on road accidents and children living in disadvantaged areas. They note that:

During 1997 there were 3,795 child casualties (aged 0–15 years) resulting from road accidents in Scotland, and of these 1,892 were child pedestrian casualties accounting for 46% of pedestrian casualties of all ages...Child pedestrian casualty rates in Scotland were significantly higher than those in England and Wales, 53% higher for fatal and serious casualties.

2.14 Their review concluded that there was an increased risk of child casualties in road accidents in disadvantaged areas.

Accidents involving public transport

2.15 Children's behaviour on and around school buses has also been studied as a factor concerning safer routes to school. Research by Buchanan (2002) on child accidents on route to and from school in Scotland aimed to establish the extent of the problem of child pedestrian casualties related to the bus journey to or from school during 1999–2000. The main findings indicated that a small but significant proportion of accidents involved a bus, either as a hitting vehicle or as a vehicle present at the location of the accident. In these accidents 4 children were killed and 53 were seriously injured. One hundred and eleven children were slightly injured. Buchanan also found that children (particularly boys) in the age group 11–14 were most vulnerable, and that the majority of casualties occur on the journey home from school as children alight from buses at the non-school end of the journey, with most children 'running at the time of the accident'. Buchanan (2002) states that 'the most typical casualty would, therefore, be a boy aged 11–14 injured running across a road having alighted from a local service bus on the way home from school'.

Parental ability to assess children's pedestrian/traffic skills

2.16 While not strictly a factor in its own right, parent's ability to assess their child's pedestrian skills can contribute to the overall risk context. Dunne *et al* (1992) reiterate that pedestrian injuries remain the most common cause of death from trauma for young school-age children. Their study was based on the hypothesis that parents' abilities to accurately assess their children's street-crossing skills vary with the crossing and the age of the children, being less accurate for younger children. Children at three developmental levels (aged 5–6, 7–8, and 9–10 years) and their parents were evaluated on four street-crossing tests and a control vocabulary test. For each test, children's answers were compared to parents' estimates of their children's performance. Parents overestimated the abilities of their 5- to 6-year-olds on all four tests ($p < .01$). Parents overestimated the abilities of 7- to 8-year-olds on two of the tests ($p < .05$) and parents accurately assessed the abilities of the 9- to 10-year-olds. On the vocabulary test, parents overestimated their children's performance at all age levels ($p < .01$). The results support the hypothesis and indicate that parents' expectations for their children's pedestrian skills are least accurate for 5- and 6-year-olds, with the mismatch decreasing as the children get older. Therefore, inaccurate expectations of children's pedestrian skills may be a useful target for injury prevention programs.

REDUCING ROAD ACCIDENTS

2.17 Concern over road accident statistics has led to a policy response from the Scottish Executive, and numerous initiatives. The Scottish Road Safety Campaign (SRSC) has launched *Road Safety Education: A Strategy for Scotland*. At local authority level, an allocation has been made so that authorities might make improvements to the physical environment, for instance by installing new crossings, creating new footpaths and cycle ways, in order to encourage more children to walk or cycle to school. The Safer Routes to School initiative sits within this general aim of integrated transport and also in a context in which the percentage of children who walk to school has declined rapidly since 1972.

2.18 The literature on attempts to reduce road accidents involving children and young people generally includes three main approaches: environmental and engineering measures, psychologically-based skills training approaches, and education initiatives.

Environmental and engineering measures

2.19 Burns *et al* (2002) looked at the effects of a 20mph speed reduction initiative in Scotland. They found that the introduction of 20mph speed limits had the effect of reducing average traffic speed, and reducing both the number and severity of recorded accidents.

2.20 Another Scottish study (Ross Silcock Limited, 1999) examined the impact of traffic calming schemes, and found that such measures not only had the potential to reduce the speed of traffic but also, where speeds had been noticeably reduced, to improve perceptions of safety for cyclists and pedestrians. This in turn led to children being allowed to play out, walk to school and cycle more.

2.21 A study by Sharples and Fletcher (2001) that examined pedestrian perceptions of road crossing facilities revealed that crossings were unlikely on their own to promote greater use of walking and active travel. Both users and non-users were generally satisfied with what crossings were provided locally and the main reasons for using crossings were 'convenience', or they were 'on their route', or 'safety'.

2.22 The literature also indicates the importance of including young people's opinions in road safety developments. For example, Tonucci and Rissotto (2001) first examined the characteristics of the degradation of the urban environment in Italy and the costs that this entailed for children's development, in particular as far as play experience and autonomous mobility are concerned. They reveal how children's participation experiences can lead to the acquisition of a fresh sensitivity and competence by city administrators and technicians. They found that children possessed the capacity to identify problems relating to road safety as they emerge, and to propose solutions that were often innovative and useful.

Psychological-based skills training approaches

2.23 The literature also identifies the role developmental psychology and training approaches can have in modifying children and young people's behaviour concerning pedestrian safety.

2.24 Cross *et al* (2000) evaluated the Child Pedestrian Injury Prevention Project (CPIPP) involving 1,603 children aged 6–9 years. The children were each assigned to one of three groups: high intervention (educational, community and environmental interventions); moderate intervention (education only); and comparison (usual road safety education). They found that:

While several methodological limitations may have influenced the study outcomes, these data nonetheless indicate that in the study sample the CPIPP educational intervention decelerated the natural increase in children's pedestrian-related risk behaviour.

2.25 Demetre (1997) also focused on applying developmental psychology to Children's Road Safety. This study reviewed the contributions of developmental psychology to understanding children's vulnerability as road users, and to the formulation and assessment of appropriate intervention programmes. Problems and insights encountered by attempts to apply developmental psychology are illustrated with reference to studies of children's errors in selecting an unoccluded road-crossing location. On the basis of these studies Demetre argued that evidence concerning developmental sequences for specific road user abilities might yield important clues to intervention, provided that 'the temptation to infer an invariant "normal" pattern to development is resisted'.

2.26 As with many attempts to impact on risk and health behaviours, interventions meet with limited success. As previously noted, the literature stresses that pedestrian injuries are a complex problem for which no single intervention will be completely effective. For example, Rivara *et al* (1991) highlight this point with their evaluation of the effectiveness of a school training program based on developmental psychology. The programme targeted US public school students in grades K to 4 with an eight session training programme by a single teacher using cross-age teaching, videotape feedback, and parent-child activity workbooks. Rivara *et al* conclude that pedestrian skills of children can be improved but that such a programme must be part of a broader effort if pedestrian injuries are to decrease.

2.27 Developmental skills training has also been used to attempt to improve children's skills in planning safer routes to school. For example, Thomson (1997) identified deficiencies in young children's route planning strategies in traffic contexts and reviewed intervention programmes relating to this ability (including those tailored for use with groups of young children, and for use by parents from socio-economically deprived areas of Glasgow). Evidence concerning age-related changes was found that revealed that only a small proportion of children aged 5 years were able to construct safe routes to a destination, with the proportion increasing steadily through the middle childhood years. Thomson found that rigorous evaluations of programmes using pre-test/post-test comparisons and no-treatment controls demonstrated that intervention programmes could dramatically improve 5-year-olds' abilities concerning route planning strategies.

Road Safety Education

2.28 Distinct from approaches based on developing specific social psychological behaviour skills, some road safety education uses broader education inputs that aim to improve knowledge and promote informed decision-making.

2.29 A study by Graham *et al* (2000) of Road Safety Education (RSE) in the Scottish curriculum found that:

- Road safety education depends on the commitment of the headteacher and the class teacher.
- Good examples were identified, but RSE is often repetitive and non-developmental.
- RSE should have a place within Personal and Social Development (PSD).
- Road Safety Units should provide less direct input and more support and advice to teachers.
- The most effective road safety education is developed by partnerships between class teachers, parents and Road Safety Officers, each supporting the others.
- The Scottish Road Safety Campaign's (SRSC) main role lies in the development of a national strategy.

2.30 The Scottish Road Safety Campaign (SRSC) has now developed such a national strategy and endorses the recommendations of Graham *et al* (2000). It has also produced a leaflet and website to disseminate its national strategy (SRSC, no date).

2.31 Research into Road Safety Education in S3 to S6 in Scottish secondary schools (Pringle, 2002) found that very little RSE was being taught. The main reason for this was that RSE was not considered appropriate, either by teachers or their pupils, for the upper secondary school. As Pringle highlighted:

Road Safety carried with it connotations of primary school, and of learning rules by rote. In addition, lack of good resources and lack of teaching time were seen as additional problems.

2.32 These findings are similar to Sawyer's (1998) qualitative study of young teenagers and road safety which noted that:

In general, young teenagers are not interested in road safety education, seeing it as something 'for kids' and as 'boring' and 'repetitive'.

2.33 Sawyer (1998) states that if road safety campaigns are to target the young teenagers group, they should focus on real-life approaches, stressing both the short- and long-term impact of suffering a pedestrian road accident.

2.34 Similar to Graham (2000), Pringle (2002) concludes that Road Safety Education should be treated as a topic related to personal safety and risk taking, and promoted and taught in this context. Pringle also suggests that RSE should be renamed. These measures would help RSE to 'be perceived and assimilated as a more adult topic'. In addition, evaluations of specific education resources indicate that these can serve as useful reminders of content covered in RSE. For example, Reid *et al* (2000) found that the SRSC travel pack was a useful reminder to children aged 8–10 years of road safety issues and may have increased their knowledge of specific elements of road safety. Although this is not strictly a curriculum or school-based pack, it was found to be useful in reinforcing children's

understanding. The packs were well used, and their role as a ‘reminder’ (rather than as disseminating new information) was valuable.

The relative impact of various approaches

2.35 There is a debate running through the literature over the superiority of developmental or behavioural skills training and classroom education approaches in impacting on pedestrian safety skills. Van Schagen and Rothengatter (1997) noted that earlier findings indicated that classroom instruction could only affect knowledge and does not improve road crossing skills. However, their study, carried out in the Netherlands, produced contrary findings. Their results indicated that both classroom instruction and the behavioural training could achieve knowledge and behavioural improvements, even though the latter approach appeared to be slightly superior. Van Schagen and Rothengatter suggest that instruction carried out in the classroom can be beneficial in acquiring complex psychomotor skills. The conclusion is reached that precise formulation of the educational objectives and use of audio-visual media are essential factors determining the effectiveness of cognitive instruction of road crossing skills in the classroom.

2.36 Thomson *et al* (1998) examined the effectiveness of using parents to promote the development of road crossing skills in young children. This study looked at the use of parent volunteers to deliver practical training in road crossing skills. Volunteers were trained, who then trained children in small groups for two sessions. Thomson *et al* (1999) found that:

Significant improvements relative to controls were found in all children following training. Improvements proved robust and no deterioration was observed two months after the programme ended. Comparison with a previous study in which training was undertaken by highly qualified staff showed that the volunteers were as effective as ‘expert’ trainers.

2.37 In line with wider literature on the effectiveness of health behaviour interventions, we find that the literature on influencing pedestrian safety stresses that it is easier to impact on knowledge and attitudes than on behaviour. And as Zeedyk *et al* (2001) highlight, increasing knowledge in this area does not usually improve behaviour. In their study of children in Dundee, those who had received training performed no better than children in a control group. Sawyer (1998) also found an apparent difference between young teenagers’ knowledge and their actual behaviour: ‘it was clear that road safety messages had been absorbed but had not been translated into action’.

PROMOTING MORE ACTIVE AND SUSTAINABLE TRAVEL TO SCHOOL

The extent of active travel

2.38 In their *Review of Research on School Travel*, Derek Halden Consultancy (2002) found that:

The proportion of children in Scotland being driven to school by car is increasing rapidly and reached 20% of journeys to school in 2000... Although levels of car based travel to school are lower in Scotland than in England, they are growing strongly.

2.39 The Scottish Executive's (2003) consultation document *A Walking Strategy for Scotland* set out its aim to encourage walking as a means to promote health and road safety. The document included a figure of 21% for the number of pupils (of all ages) travelling to school by car or van in 2001.

2.40 As part of an evaluation of the **sportscotland** Active Primary School Programme (APSP), Lowden *et al* (2001; 2002) found that across the 11 APSP pilot schools 33% of primary pupils were transported to school by car despite most pupils in this study living relatively close to their school.

Reasons for less-active travel

2.41 A common theme across the research literature is that parents' attitudes and perceptions play an important role in children and young people's mode of travel to school. Halden *et al* (2002) report that:

Perceptions of safety and risk often do not match actual risk, so influencing attitudes to risk is an important element in changing travel behaviour.

2.42 However, there is evidence that the concerns some parents and teachers have relating to cycling to school are well founded. Granville *et al* (2001) conclude that:

Cyclists are generally not considered to deserve priority on the road by most other road users. The exception was drivers who also cycled who showed more tolerance and sympathy towards the rights of cyclists.

2.43 Situational factors such as geographical location can also play a role in how children and young people travel to school. Halden *et al* (2002) found that:

For many school trips in Scotland bus travel is the only practical alternative to car travel and the poor image and travel experiences of children on buses is a major concern.

2.44 As the proportion of children being driven to school has increased steadily over recent years studies have shown that this increase is not solely due to demographic and geographic factors. Granville *et al* (2002) found that the 'habit of driving children to school is becoming more common place' and explored the reasons for this. They found a complex interplay of factors:

...increasing distances to travel to school, in part exacerbated by free parental choice of schools, gender of a child, area of residence, increasing numbers of single parent households and households where both parents work, increasing affluence of the Scottish population and increasing car ownership levels.

2.45 They recommend better public transport and school buses. However, McWhannell and Braunholz (2002) found that teenagers thought school buses were 'rowdy', 'noisy' and 'unruly'. There was also consensus among young people that smoking and fighting on school buses and school-time buses were off-putting for young people as well as other travellers.

School buses are seen as being old and poorly maintained. They also have an image of being heavily vandalised...The introduction of the American Yellow School Bus is seen as one positive option.

2.46 Halden *et al* (2002) found that parents also shared young people's concerns and perceptions about bus travel to school. Kniveton (1986) also suggests that parental attitudes and perceptions concerning forms of travel to school for their children may reflect sex stereotypes. They were more likely to accompany girls, with relatively few parents accompanying boys to school in a study of 22 infant schools.

2.47 The Scottish School Travel Advisory Group (SSTAG, 2003) highlights their aim to promote a modal shift away from car use in travel to school. The Group recommends that all schools have a school travel plan. However, Granville (2002) states that 'given the success of community based schemes it is of concern that only about 2% of schools have school travel plans'. The SSTAG Report (2003) also stresses that a higher profile must be given in general to school travel issues with walking and cycling being promoted. As we shall see in Chapter 4, there does seem to have been a recent shift towards a much higher level of promotion of School Travel Plans and School Travel Co-ordinators following the SSTAG report.

CONCLUSIONS

2.48 The literature reveals that:

- A range of complex inter-related factors and processes affect children's vulnerability to road accidents. Important variables include age, gender and level of social disadvantage.
- Multifaceted responses are required to improve children's road safety and promote safer travel to school.
- Changes to the environment, eg engineering measures, and education and behavioural skills development programmes have been shown to have potential.
- However, improving only young people's awareness and knowledge of road safety measures does not necessarily mean they will adopt safer behaviours.
- Upper secondary school pupils and their teachers appear to place a low value on Road Safety Education (RSE). Some argue that this is because of the dubious quality of much RSE, rather than its lack of relevance for upper secondary pupils.
- Researchers conclude that all RSE should: have relevant content related to the wider curriculum; be delivered using effective teaching methods from teachers supported by appropriate external agencies (such as SRSC and local Road Safety Officers/Teams); and be based upon a school travel plan.

CHAPTER THREE THE CHALLENGE FACING SCOTTISH SCHOOLS

INTRODUCTION

3.1 This chapter presents the evidence from interviews with key informants, which were conducted in order to inform the research team about the extent to which Safer Routes to School is being implemented in Scotland, and the major challenges that it faces. The main themes to emerge are presented below.

Management of SRTS at local authority level

3.2 Key informants believed that Safer Routes to School developments were limited because of a general lack of communication between relevant organisations and failure to integrate related initiatives. However, they were optimistic that Road Safety Officers and the newly appointed travel co-ordinators would play an increasingly important role. Some were concerned that the ‘current lack of visibility’ of these co-ordinators might reduce their effectiveness and that steps should be taken to promote their work and develop partnerships. Nevertheless, it was hoped that as travel co-ordinators become established, communication and joint working will increase.

3.3 All agreed that:

Management of SRTS and its related activities varied in emphasis and priority across local authorities. They suggested that ideally SRTS should have a consistent strategic framework yet remain flexible enough to meet local needs.

Most local authorities and schools provide some guidance on safety for pupils concerning school trips and school bus travel. However, there is a dearth of curriculum-based initiatives and resources for SRTS across Scotland.

Limited funding has been available for road safety, and this has impacted on its development in the school curriculum. Some fear that the recently agreed contract of employment for teachers (McCrone Report) has implications for staffing SRTS projects.

There should be clearer links between road safety and the curriculum. Two informants stressed that road safety could be more systematically featured in the Health Education 5–14 Guidelines..

Others advocated that a ‘whole school approach’ should be adopted to the implementation of road safety in the curriculum in order to avoid fragmentation of delivery.

Informants pointed out that there have been ‘too many players’, which has resulted in inconsistency and repetition in SRTS. They proposed more co-operation and communication across key national bodies, such as the Scottish Executive, Health Scotland, **sportscotland**, Sustrans, SRSC. Some believed that the Active Primary School Programme could be a ‘key vehicle for SRTS’ given that part of its focus is active travel to school.

Informants thought that although rural areas are just as affected by road safety issues, they are often overlooked by policy makers and planners. One informant believes that planners

perceive rural areas to be ‘quiet’ compared to urban localities. However, schools in rural areas often lack pavements, road lighting and other measures that promote safety.

Some thought that small schools, located predominantly in rural areas, face additional problems because they rarely have separate car parking for staff and visitors. One informant cited some ‘close-calls’ where accidents have almost occurred because the school play ground was used as a car park.

Amendments to The Special Educational Needs and Disability Act (2001) require councils, schools and bus companies to review their provision for access by April 2004. (This has implications for safety, curb heights, steps onto buses/chair lifts, etc.)

Issues of funding

3.4 Informants believed that most of the funds available for Safer Routes to Schools had been spent on the engineering aspects of road safety, eg traffic-calming arrangements around schools. Typically these initiatives were funded and overseen by local authority transport departments and were generally more expensive than curriculum development. However, informants pointed out that both were equally important to the successful implementation of SRTS. There was general agreement that progress of SRTS was hindered by local authorities’ failure to integrate education and engineering measures. In addition, some informants pointed out that as a consequence of devolved budgets, the allocation of funding at school level was dependent upon headteachers’ priorities.

SRTS in schools and interesting curriculum developments

3.5 There was consensus that examples of good practice for Safer Routes to School could be identified, but that these were not widespread throughout schools and local authorities in Scotland. Development was influenced by the priorities of key individuals, such as Directors of Education and headteachers. One informant believed that recommendations for road safety linked to 5–14 Guidelines were required. Most characterised the development of SRTS in the curriculum as ‘piecemeal’, lacking in coherence, and not necessarily geared to the age or stage of the pupil. Resources varied in quality, and in the extent to which schools and local authorities used them, as did available training for teaching. One person suggested that SRTS was best provided by teachers, with support from external agencies. It was, however, agreed that more appropriate resources and curriculum input were beginning to develop.

Examples of Safer Routes in the curriculum

3.6 Informants identified a number of examples which illustrate ways in which SRTS has been embedded in the curriculum in some schools. These include:

The development of SRSC resources for secondary schools which can be used by teachers preparing pupils for 5–14 Levels D and E in the lower secondary. Examples of work at Level D require pupils to identify ways in which the local environment can affect their health; whereas Level E examples develop decision-making skills based upon whether to wear a cycle helmet. These resources were accompanied by complementary guidelines that linked to existing 5–14 education guidelines and targets.

The SRSC has produced *Streetsense* as a resource for use in all Scottish primary schools. It was developed with assistance from two seconded primary school teachers and all activities

link to road safety attainment targets within the Health Education 5–14 National Guidelines. The pack includes teachers' notes, lesson plans and pupil activities. Two secondary school teachers have been seconded to the SRSC to modify the content of the resource for use in secondary schools.

The SRSC resources also include activities and information for parents and carers concerning walking with children. All resources will be accessible via a website and on a CD-ROM so that local authorities and teachers may adapt them to local circumstances. All are accompanied by notes for teachers with guidance on how to link them to the 5–14 Guidelines. The website has addresses for further support and there are extra activities for extension work.

The Scottish School Board Association believed that a safe school travel educational resource produced by the former Strathclyde Region and the SSBA was a rare example of a quality curriculum resource (*Safe School Travel is Cool Travel*, SSBA and Strathclyde Region, 1995).

The West Lothian example

3.7 A number of informants identified developments in West Lothian as examples of good practice. During the past 5 years the local authority has been developing support for SRTS for schools and children. Combined funding from both the Education and Transport Departments has been used to appoint a specialist co-ordinator. This person has a teaching background but is based with the local police force. This 'sharing' of the post and responsibilities has, it is claimed, greatly improved joint working, communication and effective practice. More importantly, SRTS is accorded priority status at a strategic level, since its overall management resides with the Head of the Council's Development and Regulatory Services.

3.8 The co-ordinator has embarked upon a Safer Routes to School Charter funded by West Lothian Council and supported by Standard Life. Currently 44 of the council's schools subscribe to the Charter. Schools may be awarded the Charter at Gold, Silver or Bronze levels after completing a choice of tasks which demonstrate commitment to safer routes (eg the production of travel-to-school plans). The Award lasts for three years after which time schools have to re-apply in order to show that they are maintaining their activities to promote safer routes work. The school provides evidence that they have met targets by submitting lesson plans, policies, and portfolios of project work. Training is an essential part of the process and schools have to work with parents and School Boards, and also provide staff and parents with training. The initiative is designed to fit within wider healthy living approaches and reflect current local road safety issues. Other West Lothian developments included:

All primary schools now have 20 mph zones during school hours. This development is linked to the P6 work for the Charter Award which addresses traffic trails.

There has been a growth in the number of cycle projects, and cycle training is provided by SRSC for teachers. As a result of a review of the SRSC *Scottish Cycle Training Scheme* in 1998, a new cycle training scheme¹ was developed. The revised scheme took account of

¹ *The Scottish Cycle Training Scheme* is a resource pack designed to cover the basics of cycling plus issues related to the environment, risks and responsibilities. It contains: A Teachers' Guide, activities booklet, Health Education 5–14 Curricular Guidelines, a video, trainers' guide and certificate. In addition, a guide for parents is available separately.

developments that had taken place in the primary school curriculum and in the area of sustainable transport. The scheme has been made available to schools through local authority Road Safety Units.

In addition, the Active Primary School Programme co-ordinators liaise with those involved and facilitate after-school activities, such as off-road cycle path training. Other developments concerning the promotion of safety for cycling have been linked to the Scottish Cycle Development Council which provides family weekend cycle courses. Over 1,500 children have been trained. The council is also supporting such developments with a 'Pedal and Park' initiative and the installation of chains for cycles on walls and railings, following a suggestion from pupils. This provided a low cost effective alternative to racks and shelters. The supporting pack includes reflective stickers, cycle maintenance booklets, postcode security labelling kit, and guidance on cycle safety, the use of helmets, high-visibility clothing, and discussing routes with parents. The council will also provide a helmet free of charge to families who cannot afford to purchase one.

A project for secondary schools is currently being developed by seconded teachers and resourced by Lothian and Borders police and Standard Life. It will include the integration of schools' policies, local bus policies, and a pack for use with S1 and S2 pupils, driving courses for S6, and eventually 20mph zones around secondary schools.

Examples of other initiatives

3.9 Informants provided examples of other initiatives taken in various local authorities. These include:

- A Junior Road Safety Officer² programme in primary schools, in which two pupils were elected from P6–P7 to promote road safety in their school using peer education;
- A Director of Transport is involved with the Scottish School Travel Advisory Group (SSTAG) Commission which looked at guidance for safer routes;
- A local authority education department which has produced clear literature and guidance for parents on Safer Routes to School;
- A local authority education department which has been active in improving safer transport to school in rural areas; and
- A local authority education department which is committed to promoting Safer Routes to School.

Evidence of 'identifiable impact' for SRTS

3.10 Informants reported a lack of robust evidence to show the impact of SRTS work. However, they quoted anecdotal reports that these programmes were welcome and helpful.

Barriers and facilitators

² A national Junior Road Safety Officer (JRSO) scheme is available for use in all primary schools in Scotland. JRSOs are encouraged to administer a notice board, talk to classes and assemblies about road safety and run competitions within their schools.

3.11 Most believed that a lack of communication and focus were the two main barriers to effective SRTS work. These prevented good practice from being extended across schools. Further problems were caused by the number of people and organisations involved in safer routes and active travel and the lack of shared aims and approaches. Informants suggested that ‘what works and how best to implement it’ should be disseminated more widely.

3.12 Another informant stressed the importance of having a key person in each school who can ‘drive the initiative and bed it into the school and curriculum’. Experience had shown that in the absence of such people resources ‘would be used briefly and then sit on the shelf’.

3.13 Some reported that engineering measures can be problematic in that drivers attempt to steer around speed bumps bringing them very close to the kerb. They also ignore zigzag markings outside schools because there is no legislation to enforce their use.

Definitions of ‘good practice’ and views on promoting SRTS

3.14 Key informants suggest that SRTS good practice is characterised by:

Consistency across schools and local authorities, but with flexibility to suit local needs;

Initiatives and measures that are feasible, realistic, user-friendly, and promote a sense of ownership among teachers and pupils;

Links with the wider curriculum. Ideally, SRTS content should feature in a spiral curriculum from primary school through to secondary schools using a cross-curriculum approach. One informant stressed that ‘teachers need to be able to see the links otherwise they will not use it’;

Adequate resources to sustain the initiative over time;

Involvement of pupils by taking account of their needs and ideas for road safety, and their ability to act as peer educators;

Good, clear communication amongst partners, in order to prevent teachers becoming frustrated by apparent confusion and overlap;

A sharing of good practice, ideas and programmes;

Involvement of the local community and parents. Informants stressed that ‘they [parents] are the key to all of this’, and that all SRTS work needed to stress the wider benefits of safer/active routes to school, particularly the health benefits;

Monitoring of initiatives and feedback to key organisations to assist the development of programmes and demonstrate impact. Currently, informants believe that there is too little monitoring and evaluation;

Joined up programmes with key partners including teachers, pupils, parents, police, road safety officers and other health agencies; and

Local policies and initiatives involving a person, or a small number of co-ordinators, who have a strategic overview of education, transport and police developments and resources.

CONCLUSIONS

3.15 Information from key informants reveals that:

There are a growing number of initiatives at local and national level that address safer travel to school and related issues, either directly or as part of a wider remit.

There is a general lack of awareness about such initiatives which leads to duplication of effort and potential confusion. Schools in particular are seen to be puzzled by the plethora of initiatives with a similar focus and aims.

There is a dearth of robust evaluations of the effectiveness of SRTS, which also take into account the complex issues involved.

There is a common view on what constitutes good practice in SRTS and informants were able to identify some examples.

There is a need for greater communication amongst key organisations involved with safer, active and sustainable travel, and a need for a key co-ordinator at local level who has an overview of education, transport and police developments and resources.

There is a need to integrate Safer Routes to School within the curriculum using a cross-curriculum approach, with teachers who are committed and appropriately trained.

There is some concern about the sustainability of various Safer Routes to School work. To make an impact and maintain the interest of teachers, informants believe that there needs to be a longer-term investment of time and resources.

Finally, key informants stressed that greater pupil involvement in the design of local SRTS programmes is essential in order for such provision to reflect their needs. There is also scope for young people to act as peer educators. The involvement of the local community and parents was also seen as fundamental.

CHAPTER 4 LOCAL AUTHORITY SRTS PROVISION

4.1 This chapter presents findings from a survey of local authorities. Completed questionnaires were returned by 31 of the 32 local authorities in Scotland: eight made multiple returns from different departments; and an additional two returned questionnaires completed by Police Forces, covering more than one local authority. We identify:

The extent to which engineering work and curriculum development had been conducted as part of Safer Routes to School;

How local authorities had allocated financial and management responsibility for children's road safety; and

Evaluations of Safer Routes to School activities conducted by local authorities.

THE EXTENT OF LOCAL AUTHORITY INVOLVEMENT WITH SRTS PROJECTS

4.2 Almost all of the local authorities (30) reported that they had been involved with Safer Routes to School projects in the past, and most (27) were currently involved. The number of projects per authority ranged from 1 to 55, with the average number of projects being 14.

FINANCING SRTS PROJECTS

4.3 In the majority of authorities, roads/transportation departments held budgets for Safer Routes to School. However, in six authorities responsibility was shared across two or more departments.

Table 4.1: Local authority departments that hold the budget for SRTS projects

Departments or organisations within local authority holding budget for SRTS	No.
Council roads/transport department	30
Council education department	7
Police service	1

Note: Respondents were asked to identify more than one department or organisation if applicable. 31 authorities provided information for this question.

4.4 The total amount spent to date by each authority on Safer Routes to Schools projects ranged from £12,200 to £1,400,000, with the average being £422,700. Much of this was on engineering/infrastructure projects. For example one local authority reporting spending the whole of its SRTS budget (ie £1,400,000) on engineering projects; whereas, another indicated that it had spent none of its SRTS budget on such projects. The average spent on engineering projects was £387,300. Only thirteen authorities provided a breakdown of the amount that had been spent on SRTS in the curriculum projects, or on in-school activities with pupils. The total amount spent per authority ranged from £0 to £100,000, with the average being £18,900. Nine authorities reported that they had specifically funded curriculum projects: the average spent was £27,300. It is important to note that these average figures were inflated by one local authority that reported spending £100,000 on curriculum projects, out of a total budget

of c£240,000. However, as this information was supplied by a transport department, it may not necessarily accord with the education department’s definition of a ‘curriculum project’. If this outlier is excluded, the next highest amount spent on curriculum development for road safety was £60,000 and the third was £30,000 (out of a total of £1,000,000).

4.5 Spending on ‘curriculum projects’ as a proportion of total budget for road safety could only be calculated for a few local authorities, in which it ranged from 3 to 6%. Four authorities explicitly stated that their ‘curriculum’ budget was ‘nil’, and a further five reported that their ‘infrastructure’ budget was equal to their total budget (implying that nothing was allocated for curriculum development in road safety).

4.6 Twenty-five (25) local authorities identified the Scottish Executive as their source of funding for SRTS, of which 13 made specific mention of CWSS money. Seventeen (17) authorities also reported using their own money to (at least partially) fund SRTS, of which 3 said it was their sole source of funding for SRTS. (These included authorities with large SRTS budgets and we think that respondents may have failed to recognise the source of the funding, and mistakenly reported merely the route by which it arrived at SRTS. In addition, one response was from a police force, which may not have been fully aware of funding routes). Other sources of funding mentioned were:

‘Quality of Life’ funds (3)

‘Better Neighbourhood’ funds (1)

School Travel Plan funds (1)

New Opportunities Fund (1).

MANAGEMENT AND ORGANISATION OF LOCAL AUTHORITY SRTS PROJECTS

4.7 It is not surprising that the majority (29) of departments that have management responsibility for Safer Routes to School projects are roads/transport departments given that they were also typically the ones which controlled road safety budgets. Table 4.2 below provides details.

Table 4.2: Departments with responsibility for the management of SRTS projects

Department or organisation	No.
Council roads/transport department	29
Council education department	8
Health Board or other health organisation	1
Police service	2

Note: Respondents were asked to identify more than one department or organisation, if applicable.

4.8 In eight local authorities the management of SRTS was shared between two or more departments, and in four authorities both budget and management was shared. However, despite the narrow distribution of management and budgetary responsibilities within most authorities, a range of other departments and organisations were involved, education and the police being the main ones.

Table 4.3: Departments and organisations involved in SRTS projects

Department or organisation	No.
Council roads/transport department	30
Council education department	27
Health Board or other health organisation	8
Police service	23
Voluntary organisations	2

Note: Respondents were asked to identify more than one department or organisation, if applicable.

NATURE OF LOCAL AUTHORITY INPUT TO SRTS PROJECTS

4.9 Twenty local authorities reported that they provided resources, such as literature for use in the classroom, to support SRTS. The range of resources identified included:

SUSTRANS (the sustainable transport charity) materials (2)

Royal Society for the Prevention of Accidents (RoSPA) materials (1)

Police Road Safety Unit materials (2)

Scottish Road Safety campaign materials (4)

‘Walk to School’ (3)

‘Ways to safety’ (4)

A local authority health curriculum pack (1)

The Green Cross Code (1)

The authority’s own SRTS materials (4)

Health Education Board for Scotland (HEBS) (now Health Scotland) materials (1); and

Twenty local authorities also promoted School Travel Plans.

SRTS projects where engineering works have been complemented by in-school activities

4.10 Eighteen local authorities reported that they were engaged in SRTS projects that involved engineering or infrastructure works complemented by in-school activities with pupils. The average number of projects per authority was 13. Fifteen local authorities provided detail on what these ‘complementary projects’ included:

- Classroom-based activities including assessments of risk associated with various routes to school. In some cases these were part of, and informed, local authority measures to address ‘dangerous/hazardous’ routes;
- Projects instigated by pupils and School Boards in which children were involved in the design of initiatives and schemes;
- School-led, pupil-informed projects involving classroom work, engineering work, and out-of-school activities (Walking Bus and traffic trails);

- Environmental education resources with traffic trails for schools, incorporating Safer Routes to School engineering works;
- Before and after surveys to monitor impact;
- Junior Road Safety Officers in schools promoting school SRTS work;
- Pupil councils identifying local ‘black spots’ and working with School Boards to inform local engineering work;
- Secondary school cycling projects;
- Cycle sheds and other measures to promote cycle use. For example, secondary school pupils designed a cycle storage facility funded through a SRTS award of £10,000;
- Walking Bus projects;
- Developing safer routes and active travel initiatives in association with the local NHS health boards’ health education departments;
- Information sheets for all primary schools in one local authority;
- Traffic trails related to improved road layout;
- Parent training and induction courses to promote work done in schools on SRTS;
- ‘Practical pedestrian training using simulated equipment indoors’ for primary pupils. Local visits and research to assess and discuss SRTS issues and required changes;
- Peer education and pupil presentations to peers;
- Range of engineering work including traffic-calming, off-road parking, and cycle paths;
- Curriculum pack with associated Information and Communications Technology (ICT) and teaching material; and
- One local authority reported moving away from project-based initiatives to teaching children how to cope with various situations (training model).

4.11 One local authority stressed that sometimes the success of SRTS projects varied but only one highlighted the importance of enlisting the support of the local community and parents. However, two case study headteachers believed that in schools located in rural areas and also in more affluent areas, parents and the community in general were more likely to participate in school activities. Initially parents may be unsure about volunteering but as one school travel co-ordinator pointed out:

The Walking Bus is a very ‘visual’ thing – its not until the bus starts that people get involved and see it as a good idea.

EVALUATION AND MONITORING OF THE IMPACT OF SRTS PROJECTS

4.12 Only six local authorities reported that they systematically evaluated their Safer Routes to School project(s). None of these six provided copies of their evaluation findings as requested. However, they felt that they had sufficient evidence to show that pupils’ travel-to-school arrangements had changed as a consequence. Six other local authorities stated that it

was ‘too early’ to identify any impact and one had found no impact. Examples of impacts included:

- Greater awareness among pupils of danger (1)
- More cycling to school (2)
- More walking to school (4, of which 3 mentioned Walking Buses); and
- Less driving to school (1).

4.13 Twenty-eight authorities identified the main successes of their Safer Routes to School project(s) as:

- Raised awareness of road safety among pupils (11)
- Improved infrastructure/engineering work (8)
- Increased pupil safety (8)
- Modal shift in pupils’ travel arrangements (4); and
- The establishment of a Walking Bus scheme (1).

LOCAL AUTHORITY WORK CONCERNING SCHOOL TRAVEL CO-ORDINATORS

4.14 A recent development in the drive to promote Safer Routes to School and similar efforts across Scotland has been the introduction of School Travel Co-ordinators. Their role arose from recommendations made by the Scottish School Travel Advisory Group which was set up to look at how to promote efficient, environmentally friendly ways of getting to and from school. The function of Co-ordinators is to work with teachers and pupils to promote the health and environmental benefits of alternative travel choices. Twenty-three (23) authorities planned to appoint a Travel Co-ordinator; three stated that they already had one in place; and three had no plans at present to appoint a Co-ordinator. For those authorities that had appointed a School Travel Co-ordinator, or were planning to, the majority (17) were locating them within roads/transport departments. Five would locate the person in the education department and one would locate the Co-ordinator in a school. Three authorities did not know where these personnel would be located and a further three authorities stated that the School Travel Co-ordinator would be based either in the transport or education department. Table 4.4, below, shows the local authorities that had, or had plans to introduce, School Travel Co-ordinators, and the departments in which they were, or would be based.

Table 4.4: Current or planned location of School Travel Co-ordinators

Location of School Travel Co-ordinators	No.
Council roads/transport department	17
Council education department	5
School	1
Don’t know	3

4.15 It is clear that the majority of those local authorities that have, or plan to have, School Travel Co-ordinators see the roads/transport department as the most appropriate location for them. Again, this is not surprising, given that as we saw earlier, these departments typically have responsibility for the budgets for SRTS projects.

CONCLUSIONS

4.16 Responses from the 31 local authorities that participated in the survey show that:

- 30 local authorities have been involved with SRTS projects recently and 27 are currently active in SRTS work.
- Local authority roads/transport departments typically have the main responsibility for, and management of, SRTS work. They are also usually the budget holders for SRTS projects.
- 26 local authorities have either appointed or plan to appoint School Travel Co-ordinators. These are typically located within local authority road/transport departments.
- Local authorities had spent more money on engineering/infrastructure related to road safety than they had on road safety curricular projects (an average of £387,300 and £27,300 respectively).
- Local authority spending on curricular road safety projects represents between 3 and 6% of their total road safety budget.
- Nine local authorities reported having no budget for SRTS curriculum work.
- 20 local authorities reported providing literature and/or resources for schools for use in the classroom. Most of these were produced by other agencies.
- 18 local authorities reported that to some extent SRTS curricular projects complemented road safety engineering projects which they had undertaken. The average number of projects per authority was 13.
- Only six local authorities had conducted evaluations of their SRTS projects.
- Local authorities identified a number of examples of good practice. Key themes included pupil and parent representation and input to SRTS initiatives, and relating curricular work to local engineering work.

4.17 Interestingly, two authorities specifically mentioned that developmental training and simulation approaches were being used to improve children's road safety skills. In one case this was now preferred over diverse project-based programmes within classrooms.

CHAPTER FIVE ROAD SAFETY EDUCATION IN SCHOOLS

INTRODUCTION

5.1 The implementation of SRTS at school level was explored within six case study schools. These comprised four primary and two secondary schools in various geographical locations. Within each, we:

- Interviewed a teacher responsible for co-ordinating Safer Routes to School, a School Board or parent association representative, and the local road safety officer;
- Conducted two focus groups with pupils (one with P6 pupils and another with P7 pupils in each primary school, and one each with S1 and S2/3 pupils in each secondary school);
- Surveyed a sample of 30–50 parents from each of the six participating schools (the findings from which are reported in Chapter 6); and
- Analysed relevant documents related to the each school’s Safer Routes to School/travel to school/road safety measures.

5.2 This chapter draws on the case studies to present a picture of how SRTS is being implemented at school level.

THE RANGE OF SAFER ROUTES TO SCHOOL WORK

5.3 The case studies revealed that various SRTS initiatives had been conducted or were underway across the six schools. Overall, primary schools were more active than secondary schools. Although the Safer Routes to School programmes varied in their scope and complexity across the six schools, some similarities emerged. We believe that this results from a common underlying philosophy towards safety (particularly amongst Road Safety Teams), the existence of exemplars and guidance material, and the similarity of factors influencing the capacity of schools to conduct Safer Routes to School work. We now summarise the range of SRTS programmes and related work across the cases study schools.

PUPILS’ VIEWS ON SRTS

5.4 Pupils in upper primary and lower secondary school stages expressed very similar views about SRTS initiatives. These are reported below.

Modes of travel to school and risks

5.5 Most of the pupils walked or used the bus to travel to school; travel by car was the next most commonly used mode of transport. Cycling to school was rarely mentioned but was more likely to occur in those schools in which cycle proficiency and cycling initiatives had taken place. In one school travel by train featured. Generally, pupils recognised the benefits of walking and cycling and indicated that they preferred to travel to school by walking. Many thought that cycling was an ideal mode of transport but pointed out that it could be dangerous, and that finding a secure place in school to leave their bike was problematic.

5.6 Across all six schools pupils identified routes or parts of their route to school that they thought were dangerous. These included:

- Busy roads;
- School gates opening on to main roads;
- ‘Blind spots’;
- Cars accelerating from school gates too quickly;
- Car and bus drivers who ignored speed limits; and
- The poor state of repair of road crossing lights.

5.7 Primary pupils were more likely than secondary pupils to indicate that they would like to cycle to school but that the volume of traffic on certain roads deterred them. Very few secondary pupils cycled to school because:

You would have to cycle by yourself. You couldn't go with your friends.

The bikes would just get stolen.

It's difficult to cycle in a skirt.

5.8 Many pupils highlighted the social aspect of walking to school: ‘[you can] *meet up with your friends*’ and ‘*it keeps you fit*’. This demonstrates the extent to which social and peer processes influence the way pupils travel to school. However, pupils also identified some negative aspects of walking to and from school. Their main concerns related to personal safety, engineering work and public transport.

Personal safety

5.9 Some were concerned for their personal safety when walking through lanes, meeting strangers, or meeting other young people who may want to fight. As two pupils explained:

Sometimes you are worried about meeting stranger people who might want to fight when you are not walking with your friends... it helps when there are a lot of you.

There are some paths, which need more lights on dark winter nights.

(P7 Pupils at Case Study 5)

Engineering works

5.10 Pupils also criticised road-calming measures and crossing places which most believed did not deter speeding drivers. Many advocated speed cameras, which they believed, would be far more effective.

There are 20 mph road lights and signs that come on in the morning and when its home time but a lot of drivers just ignore these and speed by very

quickly...It would make a big difference if there were speed cameras on that long stretch of road. People would take notice of the cameras because they'll get flashed and fined.

(Pupils at Case Study 4)

5.11 Other suggestions for effective engineering work included:

It might be good if there were bigger speed bumps. Usually they are too small and get worn down quickly by all of the trucks and stuff.

More road crossings fences would help to keep people away from dangerous parts of the road spots and make them cross only where it is safer.

(Pupils at Case Study 4)

At crossings there isn't much time before the green man goes off. It seems that it's cars that are more important... Sometimes the crossings don't have a working 'bleeper' that's got to be dangerous for people who are blind.

A lot of drivers don't know how fast they're really going, that's why those solar-powered speed signs that show you how fast you're driving are a good idea.

(P7 Pupils at Case Study 3)

Those parts of the road that are painted red [raised surfaces] are a waste of money because drivers and some children don't understand what these are for...You need to make sure adults and kids know what these are for.

(P7 Pupils at Case Study 3)

Public transport

5.12 Some pupils suggested that bus stops should be relocated closer to their school so that they could avoid crossing a busy road. The frequency of buses was also a cause for concern, as was the increase in bus fares, particularly in families with more than one child.

The school bus stop is not right next to the school and cars speed past it. The school bus doesn't wait long either and if you miss that you've got to cross a busy road to get to the other bus stop.

(P6 Pupils at Case Study 4)

Over the last year there the bus fares have gone up a few times. Not everyone can afford that.

(P7 Pupils at Case Study 4)

Pupils' views on their road safety education

5.13 Pupils acknowledged that it was important to learn about road safety and thought that schools had an important role to play in this. However, most pupils believed that road crossing skills and road safety education topics should be taught in the lower primary school, with cycle proficiency training reserved for P6 and P7 pupils. They identified a number of ways in which road safety was currently taught in schools. These include:

- Puzzles, quizzes, lectures, and word searches, to stimulate learning and recall of factual information;

- Questionnaires, often with self-marking, to help pupils to assess their knowledge of road safety;
- Project work (eg looking at local maps to investigate risk areas and suggest action);
- General input at assemblies;
- Block of classroom work (usually between 2 and 5 one-hour sessions) with content ranging from risk awareness to safe cycling;
- Cycling proficiency training;
- Scottish Cycling Proficiency materials left with teachers to use;
- Events and walk to school days (with associated house points for those who walked to school);
- Leaflets and stickers;
- Various road safety campaigns;
- Police visits and lollipop person lectures; and
- Road Safety Unit input.

5.14 Typically, road safety education in secondary schools was offered in S1 and S2. In one secondary school this focused almost entirely on cycling proficiency and sustainable transport, while in the other pupils could not recall any road safety education. Interestingly, they did remember cycling proficiency testing in P6, road safety plays, and workshops on road safety at external venues. They believed that this was appropriate because ‘they [younger children] need it more than we do’. They could also recall a number of road safety advertisements on television, including promotion of safety on trains and warnings of the dangers of speeding for drivers. Overall pupils, particularly those in S1, felt that it was very important to learn about road safety at school, from parents, and from the media.

5.15 Most pupils thought that the content of SRTS education was interesting, appropriate and useful. However, lower secondary and upper primary pupils stressed that a lot of road safety education could be ‘patronising’ and possibly ineffective, because they are either ‘acting automatically’ when travelling home, or are aware of the risks but decide to ‘chance it’. As one pupil explained:

Everyone knows by P7 what you should do when crossing the road...you know you should stop, look and listen and use the crossing places...not cross between parked cars. The lessons do make you remember all of this but you are often acting automatically when going home and crossing roads...Also, you know the risks but you can decide whether to take a risk to chance it, if it seems worth it.

(P7 Pupils at Case Study 3)

5.16 Pupils held very definite views about effective teaching methods: they were highly critical of didactic approaches that relied on worksheets. Road safety booklets and folders were usually seen as ‘boring’ and less effective than practical work. Some explained that a booklet they had been given just lay in the bottom of many pupils’ school bags. Others criticised guest speakers for being ‘too preachy’. Overall, pupils particularly valued:

- Discussion
- Drama / role-play
- Theatre tour visits
- Experiential learning; and
- Project-based work.

5.17 Cycling proficiency training was also appreciated but pupils suggested that ‘refresher’ or top-up training would further enhance its impact. Pupils who had experienced Walking Buses praised their use with younger primary pupils. As one explained:

I learned that you shouldn't walk on the kerb because it is dangerous.

5.18 Generally, pupils believed that SRTS and road safety education raised their awareness of road safety issues and local danger spots. The ‘messages sticks in your mind’, was how one pupil put it. However, pupils also highlighted that from P7 onwards they might not always act in accordance with what they had learned and consequently take risks when crossing roads.

5.19 Pupils also raised a number of issues, which they believe influenced the effectiveness of the safety education that they had experienced at school. These included:

- Although pupils understood the importance of wearing safety clothes when cycling, P7 pupils boys pointed out that boys of their age felt that wearing so much safety gear made them appear ‘soft’ or that ‘it is too much bother to put on’. They would prefer close fitting, better designed protective clothes (‘more cool – like adult cyclists’) which they had had an input into designing.
- Most boys indicated that boys of their age often did not think that accidents would happen to them, even though they were more likely to take risks when crossing the road.
- Pupils believed that it was crucial that engineering and other measures were used to address hazardous routes and change the habits of most drivers. They thought that most car drivers were at best unaware of cyclists and often failed to indicate when they were about to turn.
- Pupils wanted more cycle lanes and better driver education to ensure that car drivers observed them. Some also suggested complete separation of cycles from other road traffic.
- Generally, the ‘red strips’ of raised road surface were seen as ‘a waste of money’ because pupils believed that drivers did not understand their purpose.
- Pupils also thought that local examples of ‘solar powered speed indicators’ were a good idea because these demonstrated to drivers the speed they were travelling. Pupils believed that many drivers under-estimate their speed and, therefore, need to be shown how fast they are actually travelling.
- Some pupils believed that more cycle locks were needed because the limited supply meant that pupils had to ‘double-up’ using one chain for two cycles, which could cause damage.

Pupils views on what else school or others could do to improve Safer Routes to School work

5.20 Pupils identified a number of possible ways in which SRTS could be improved. These were:

- More signs for road users to alert them to the presence of schools
- More cycle chains and secure storage
- More fences to keep vandals out of schools
- More videos; project work should 'be more fun'
- More information on how to deal with strangers
- More engineering work, eg bigger/more effective speed bumps
- More road crossing fences to channel pupils away from danger spots
- More speed cameras and lights to calm traffic
- Reduce or stop parents parking outside schools; and
- Provide education that clearly highlights the consequences of dangerous driving and poor pedestrian skills.

5.21 Pupils could recall a television advertisement which showed the injuries sustained by pedestrians:

There's that advert where they show you what happens when you don't fasten your seatbelt in the rear seat...where the son's head hits his mother's head. That shakes you up...makes you take it in.

(Pupil, Case Study 6)

TEACHER PERSPECTIVES ON SRTS WORK

5.22 Most teachers and headteachers thought that general road safety education was important and relevant for their pupils. However, many teachers stressed that lack of time and other curricular priorities limited the extent to which they could introduce road safety education into the curriculum. As one explained:

A school has so many other things to do, and it takes effort to get [SRTS] projects like this going.

5.23 Despite this limitation, some teachers were promoting road safety; especially those in schools located near busy roads. Teachers' views specifically about SRTS varied: in schools in which headteachers were committed to road safety and wider health issues related to SRTS, we found that teachers were usually more positive and also more likely to be actively pursuing SRTS in the classroom. For example, one primary school (Case Study 2) worked closely with the local Road Safety Unit to implement a cross-curricular SRTS programme that was designed to suit the needs of schools in a rural area. It also featured in the school's development plan. Ongoing monitoring helped the school and the local authority to evaluate the progress of the project. While the commitment of the headteacher and local Road Safety

Co-ordinator provided impetus to the project, it was designed and carried forward by committed teachers.

5.24 In another primary school (Case Study 3) parents and the School Safety Team provided the initial impetus for the work, while teachers supported its development by showing how SRTS could be integrated into the curriculum.

5.25 In other schools a range of factors limited the effectiveness of SRTS. For example, in one primary school (Case Study 1) teachers believed that it was largely the responsibility of the local Road Safety Unit to provide road safety education and that road safety within the curriculum could only be 'a passing topic' due to their other commitments. The assistant headteacher in one secondary school (Case Study 5) explained why the school had abandoned actively promoting cycling to school.

Cycling to school may be easier at other schools, where the roads are not so busy and there is a clearer route to school. Pupils come from so many different places and the school is at the edge of the catchment area, making it difficult to create a safe cycling route to school. If we don't feel that cycling to school is safe then we can't promote it.

He thought that alternative projects promoting walking to school and using the train had been successful and were likely to be repeated in the future. However, he pointed out that as timetables for pupils at secondary school were 'stretched', it was difficult to introduce road safety projects on an annual basis:

It's probably easier to do road safety projects at primary school, where the class has one teacher and they can work on a project together. Here we have so many different teachers and topics that it can be more difficult to organise.

5.26 Despite these difficulties, the school still intended to cover road safety with S1 pupils, possibly in the next academic year.

5.27 A primary school headteacher highlighted the importance of being able to draw on support from outwith the school. For example, Road Safety Officers, local Walking Bus Co-ordinators, and School Safety Teams had all helped her get SRTS projects started. As she explained:

Setting up a [SRTS] project like this, you do need a co-ordinator. Someone who is enthusiastic and focused, and that is their job. It's also someone to contact if there is a problem.

5.28 This could be a two-way relationship, as one Road Safety Officer described work with a headteacher:

She really is a road safety 'champion'. She is very motivated and has been a major factor in making this work so far.

CONCLUSIONS

5.29 The information gathered from the case study schools illuminates the ways in which schools have introduced Safer Routes to School projects, and the continuing challenges which road safety education faces. We found that:

- Schools have responded in a variety of ways to the challenge of integrating road safety into the school curriculum.
- Teachers report that road safety projects must compete for time in what they perceive to be a crowded curriculum with its own priorities.
- Teachers believe that the pressures of lack of time and parental support affect the efficacy of Safer Routes within the curriculum.
- Pupils report participating in a variety of road safety activities at school. These include: puzzles, questionnaires, project work, input at assemblies, cycling proficiency training, publicity events such as ‘Walk to school’ days, leaflets, stickers, and police/lollipop person visits.
- Generally pupils thought that the content of road safety education was interesting.
- Secondary school pupils thought that road safety was more relevant to younger pupils because ‘they need it more than we do’.
- Most pupils preferred interactive approaches to learning and teaching about road safety, such as discussion, drama, role play, theatre tours, experiential learning and project-based work, and were highly critical of didactic approaches.
- Teachers believe that the key success factors are: committed individuals, accessible and active support services (eg from Road Safety Officers/ Units), and clear local policies.

CHAPTER SIX

THE ROLE OF PARENTS IN ROAD SAFETY EDUCATION

INTRODUCTION

6.1 In Chapter 2 we saw that parents have a crucial role to play in the road safety education of their children. Not only do they make judgements regarding the age at which children can assess the speed of on-coming traffic (Dunne *et al*, 1992), but they also influence children's attitudes and their travel to school choices (Granville *et al*, 2002). In this chapter we report the perceptions of a sample of parents surveyed in our six case study schools, and explore the implications for road safety education.

WHICH PARENTS RESPONDED?

6.2 One-hundred and four (104) parents returned completed questionnaires on Safer Routes to School. These had been distributed to cover three pupil age groups: 8/9-, 10/11-, and 12/13-year-olds in four primary schools and two secondary schools across Scotland. Fifty-eight per cent (58%) of respondents were parents of primary school children, and 42% parents of secondary school pupils. Approximately 76% of parents had at least two school-age children and 68% lived within one mile of the school their child attended. Interestingly given the general decline in walking to schools, most (74%) reported that their child walks to school often, and another 17% that this happens sometimes. Public transport was reported to be used by few children (14% used buses often, and 8% the train); whereas a very small proportion (4%) cycle to school often. In contrast, 24% of parents reported that they drop their children off at school by car often, and 59% sometimes. These percentages are broken down in Table 6.1, below, to show the variations in the travel to school patterns of primary and secondary school pupils.

Table 6.1: Percentages of primary and secondary pupils who travel to school 'often' by various methods

	Primary pupils %	Secondary pupils %
Walk to school 'often'	73	75
Bus 'often'	16	12
Car 'often'	24	25
Train 'often'	0	18
Walk and bus 'often'	0	3
Walk and car 'often'	5	3
Cycle 'often'	4	3

WHAT ARE THEIR CONCERNS?

6.3 We have seen from the literature on road safety that child safety is a prime concern for many parents (Granville *et al*, 2002). This not only informs parents' attitudes towards road safety, but also influences the educational choices they make for their children. For instance, Howe *et al* (1999) found that safety was the major criterion in parental assessment

of pre-school establishments. It is, therefore, important to identify how parents view different methods of travelling to school, as these attitudes will undoubtedly influence their children's behaviour. As can be seen in Table 6.2 below, 48% of parents believe that travel by car is very safe, compared to only 14% for walking and 1% for cycling. They do, however, rate walking and using the bus as reasonably safe (70% and 75% respectively).

Table 6.2: Parental perceptions of the safety of different ways of travelling to school

Method	Very safe %	Reasonably safe %	Not very safe %	Quite dangerous %	(N=)
Walk	14	70	11	5	101
Bus	21	75	2	2	57
Car	48	55	1	0	75
Train	16	65	14	5	37
Walk and bus	9	72	15	4	47
Walk and car	13	72	13	2	54
Cycle	1	45	30	23	69

6.4 The overwhelming majority of parents (90%) think that busy roads and fast traffic are the most important problems faced by children travelling to and from school. In addition, 72% identify the lack of street crossings as an associated problem but only 34% think there are too few street-crossing wardens. It is interesting that only 22% point to the lack of public transport, and 25% to no supervision at school bus stops as problems. This may be related to parental lack of knowledge of public transport, given that only 14% report that their children travel often to school by bus. Although traffic causes parents most concern, it is clear that many parents are anxious about wider safety issues: over half (56%) do not believe their children have sufficient knowledge about road safety; 54% worry about assaults, and just over a third (35%) point to poor street lighting. By far the largest number of comments highlight the dangers which parents perceive are caused by traffic and other road users. Comments, typical of many, explain:

Car speed and volume are the biggest problems by far. Not much can be done about volume but much more could be done about reducing speed.

(Parent, Case Study 5)

I am concerned that even 'quiet' streets are used as rat runs in our area and should have speed reduction measures/blocked ends. In our street even with a lollipop man, cars often go too fast/don't stop or don't pay attention. I have seen many near misses.

(Parent, Case Study 6)

Bad car discipline at traffic lights. Delivery lorries – especially on pavements.

(Parent, Case Study 4)

Problems associated with slow moving congested traffic.

(Parent, Case Study 4)

At present cars, lorries and buses are ignoring the speed limit and the only way to stop this is to install speed cameras.

(Parent, Case Study 4)

6.5 Some indicated that the problems were caused by other parents:

The biggest hazard for my primary school-aged children is other parents driving their children to school and parking dangerously.

(Parent, Case Study 6)

Cars parked on pavements thus narrowing safe walking area and children have to walk on the road to get past.

(Parent, Case Study 6)

6.6 A number of parents had wider concerns:

At the moment my oldest child passes lots of building sites on the school route. There are obstacles, smoke from tar etc., temporary traffic lights and diversions. Very busy road. Sometimes my youngest has to cross on her own due to no crossing guide. We have no notice from school or other [authority].

(Parent, Case Study 2)

Bullying could be an issue for a child walking to and from school, stone throwing, name calling, intimidating behaviour from peers!

(Parent, Case Study 3)

6.7 One encouraged her children:

... not to talk to strangers and [gave them] permission to kick, shout or scream if strangers attempt to abduct them.

(Parent, Case Study 4)

6.8 Another thought that ‘walking through the park’ was an issue for personal safety and others regarded ‘abduction’ and ‘strangers’ as constant dangers. Some complained that schools occasionally sent children home during school hours, which consequently put children at risk. As one parent explained:

[My daughter had] no money for fares and was told that this was not the school’s problem. Thus she walked 2 miles on a busy road. On contacting the academy, I was told to take it up with the Education Authority.

(Parent, Case Study 4)

6.9 Ironically, this latter case is located within a local authority which is actively promoting road safety.

WHO SHOULD TAKE RESPONSIBILITY FOR ROAD SAFETY?

6.10 Parents expressed very definite views about where the responsibility for children’s road safety lies. Nearly all (98%) accepted the primacy of their role as parents to be responsible for their children’s safety. Seventy-seven per cent (77%) thought the council has

a very important role to play; 57%, the police; and just over half (55%) thought that schools were very important. One parent provides an insight into parental concerns:

I remind my children every time they go out to watch the roads and to be careful.

(Parent, Case Study 2)

6.11 Parents had also formed views about the measures which would improve their children's road safety. Almost all (94%) thought that teaching children about road safety was very important, and 80% believed that street crossings were also very important. There was significant support for speed bumps (63%) and speed cameras (54%). However, again the majority of parents underplayed the role of public transport: only 20% thought that more public transport was very important, and 28%, more supervision on buses. Individuals suggested some actions that might alleviate the situation:

Drivers passing the school should slow down and take care.

(Parent, Case Study 6)

Our Council continually cites financial pressures as constraints [for not slowing down traffic] and in my opinion this is unacceptable.

(Parent, Case Study 5)

Speed bumps approaching junctions. More signs around schools, ie 'School 20 mph'. Survey of children not using 'Authorised Crossings' and target the worst areas.

(Parent, Case Study 2)

Safety would be less of an issue if people had a higher priority in thinking about traffic planning, ie more 'twenty's plenty' zones, residential areas designed as 'home zones' where people especially children take priority over cars (as is done in Holland and Denmark I believe) More speed bumps and chicanes. For as long as the car and car usage is regarded as more important than people's safety then we will have tragedy on the roads.

(Parent, Case Study 5)

6.12 Others pointed out that:

Motoring organisations, media-motoring sections should stop being so car-centred and encourage walking, cycling, and public transport.

(Parent, Case Study 4)

6.13 But some thought that more children should be encouraged to walk to school and adopt safe habits:

I believe children should be actively encouraged to walk to school but feel this is an area not researched by local councils. At a time of increasing obesity levels in children, a walk to school in the morning and afternoon home is of concern.

(Parent, Case Study 4)

I can't understand why so few teenagers and adults wear helmets. Teachers don't.

(Parent, Case Study 4)

6.14 And another thought that all children in the school catchment area should be able to walk to school and those who are dropped off should do so at a safe distance from the school, but definitely 'not at the gate'.

WHEN SHOULD CHILDREN BE TAUGHT ABOUT ROAD SAFETY?

6.15 Responses from parents show that they are more than willing to assume the major responsibility for teaching their children about road safety. However, a crucial decision which faces all parents is determining at what age a child is ready for such education. There is a degree of unanimity in the responses: almost all (99%) thought that children should be introduced to crossing the road safely at age 5–7 years; 93% that car safety, such as seat belts, should also be taught at that age; 89% that 5- to 7-year-olds should learn about safe routes to school; and 84% that they should learn about local road risks. Parents were far less sure about the age at which cycling proficiency and driving safely should be introduced: 42% thought that 8- to 9-year-olds were ready for cycling proficiency, and 42% suggested that 16–18 was the most appropriate age for driving safely. The comments below illustrate parents' views.

6.16 One parent (Case Study 4) wanted to bring back the 'Green Cross Code' for young children. Another pointed out that waiting until primary school-age was too late:

Need to introduce Road Safety at nursery level – the police used to have 'tufty' lady visiting all schools – especially [the] term before the summer holidays when some pre-school children may be outdoors more. This service is no longer available.

(Parent, Case Study 6)

6.17 This was echoed by another parent who believed that:

Children should be told about road safety before starting school.

(Parent, Case Study 2)

6.18 Such comments illustrate a lack of parental awareness of the range of road safety education for nursery-aged children (eg Gym Cards³) developed by the Children's Traffic Club run by the Scottish Road Safety Campaign.

6.19 Other parents pointed out that age *per se* was not the issue:

It's not that the children don't know about road safety, It's that they don't understand the dangers or think they apply to themselves.

(Parent, Case Study 4)

³ Gym Cards are a teaching resource, which uses physical exercises and sounds to raise pre-school children's awareness of crossing roads, playing safely and the dangers of traffic. Children may also join the Children's Traffic Club in Scotland.

6.20 Again returning to the theme of overall safety, one parent wanted children to be taught:

Not to get into cars with strangers should be introduced at age 5 and 7 and reinforced throughout the age group.

(Parent, Case Study 4)

WHAT CAN PARENTS DO?

6.21 Not only did parents believe that their role in their children's road safety was very important, but they also identified the measures they take to help their children travel to school safely. Almost all (98%) reported that they always insist that their child wears a seat belt, and 95% that they always teach them about road safety. Forty-one per cent (41%) make sure that their children are always accompanied by a responsible adult, but clearly this is dependent upon the age of the child and the mode of transport. The figure drops to only 17% when the method of travel to school is walking, which seems to indicate the parents are more willing to use a car to accompany children rather than walk with them to school. The percentage of parents who always take their children to school on the bus drops dramatically: 7% report that they always do so, and 17% sometimes. Again, this is consistent with parental attitudes towards public transport.

6.22 Parents suggested a number of ways in which they could help their children by:

- Giving them road safety training at home (Case Study 4);
- Ensuring that their child was aware of their responsibility as a road and pavement user and how their behaviour affects others (Case Study 4);
- Reminding their children of the constant danger of roads (Case Study 2);
- Teaching them not to speak to strangers 'my children heard it from the pram' (Case Study 4);
- Encouraging 'healthy lifestyles by walking' (Case Study 4);
- Ensuring they always wear seat belts when in the car (Case Study 4);
- Not dropping their children off at the school gate (Case Studies 4 & 6);
- Ensuring that they and their children wear helmets when cycling (Case Study 4); and
- Cycling with them (Case Study 5).

CONCLUSIONS

6.23 In conclusion, we found that:

- 74% of parents report that their children walk to school often.
- 48% of parents thought that cars were a very safe mode of transport for children to use to travel to school: this was more than for any other way of getting to and from school.
- 90% of parents identified busy roads and fast traffic as the most important problems faced by children travelling to school.

- Over 50% of parents expressed concerns about wider safety issues related to assaults, bullying, street lighting and possible abductions.
- Nearly all parents (98%) accepted their responsibility to educate their children in road safety.
- 99% thought that road safety should be introduced when children were aged between 5 and 7 years.
- Some believed that children should be encouraged to take more responsibility for their own road safety by teaching them to walk or cycle safely to school.
- Finally, despite their general willingness to take the major responsibility for their child's road safety, it is clear that parents expect local authorities, the police, schools and other road users to play a part: in particular they want more active traffic management, and other parents to behave responsibly by reducing their driving speed and refraining from parking or dropping children off near the school.

CHAPTER SEVEN CONCLUSIONS AND IMPLICATIONS

INTRODUCTION

7.1 A number of important issues emerge from this research, which have implications for the way local authorities and schools implement SRTS. In this chapter, we summarise the main issues from the research and highlight areas in which further action could be taken.

PRACTICES VARY

7.2 Local authorities spend varying amounts of money on road safety education and locate responsibility for it within different departments. Local authorities and schools also employ a variety of strategies to implement road safety. The most successful appear to be based upon co-operation between roads/transport and education departments so that local engineering/infrastructural changes are linked to curriculum developments in schools, and curriculum projects inform engineering activities.

7.3 *Recommendation:* Local authorities should be encouraged to share examples of good practice in road safety education and ensure that their road transport and education departments co-operate in the further development of SRTS programme.

CERTAIN SCHOOLS ARE MORE INTERESTED IN ROAD SAFETY

7.4 It was generally reported that primary schools are more interested in road safety than secondary schools. As one local Road Safety Officer noted: 'Primary schools in general seemed to be more interested, and initially it was more rural schools that were keen to get involved'. Such schools appear to have parents' support and be located within a community which is generally more likely to participate in the school's activities and may have more time to get involved in promoting road safety. This focus on primary schools may be entirely appropriate given the need to introduce road safety to young children, but appropriate and targeted road safety education is required at all stages.

7.5 *Recommendation:* Schools should be encouraged to share good practice. More actions should be taken by schools and their School Boards to engage parents in SRTS.

PERCEPTIONS OF DANGER

7.6 There was some evidence to show that perceptions of danger vary according to the location of the school and the age and gender of the child. Those schools involved in School Travel Plans and SRTS were more interested in promoting walking and tended to ignore cycling. Fewer children cycle to school often because the roads are perceived to be dangerous due to the volume and speed of traffic and width of roads. In addition older children believe that road safety education is more appropriate for younger children. Many do not believe that they themselves will be involved in an accident.

7.7 *Recommendation:* Accident statistics could be used to engage children in discussions regarding their perceptions of danger.

COMMITMENT OF SCHOOLS

7.8 All the case study schools reported that they were fully committed to SRTS, and this view was confirmed by local Road Safety Officers and School Board personnel who strongly believed that the commitment of headteachers and their staff to SRTS was instrumental in the take up of School Travel Plans and the extent to which they could develop SRTS projects.

7.9 *Recommendation:* Headteachers should ensure that SRTS targets feature in their school development plans.

COMPETING PRIORITIES

7.10 Unfortunately, all informants indicated that road safety had to compete at school level with other curricular priorities and pressures. Lack of time in what was perceived to be an already crowded curriculum, and lack of support from parents, were frequently cited factors which affected the efficacy of road safety education. As one headteacher explained:

A school has so many other things to do, and it takes effort to get projects like this going.

7.11 *Recommendation:* The Scottish Executive Development Department should engage with the review of the school curriculum currently being undertaken by the Education Department in order to ensure that road safety education is embedded within proposed changes.

SUPPORT AND RESOURCES

7.12 Most local authorities supported SRTS projects. Teachers welcomed support from local authorities, well-designed resources, and expert input, eg from the police and Road Safety Officers. However, a number of informants felt that there was a need to provide teachers with appropriate training so that they can integrate SRTS within the 5–14 Curriculum, or Personal and Social Education in secondary schools. Headteachers and their staff gave examples of support they had received from Road Safety Officers, local Walking Bus Co-ordinators, and School Safety Teams. As a primary headteacher explained:

Setting up a project like this, you do need a co-ordinator. Someone who is enthusiastic and focused, and that is their job. It's also someone to contact if there is a problem.

7.13 The role of the local Road Safety Officers/Units and Co-ordinators was instrumental in developing the Safer Routes To School programmes in three of the case study schools. Increasingly, the Road Safety Units were following the steps detailed in the Scottish Executive guidance on how to run a SRTS programme. In two of the cases study schools a 'School Safety Team' was established to act as a working group to support the initiative. Usually the Road Safety Officer worked with the School Board to establish this group. Road Safety Officers also appreciated the presence of an enthusiastic and committed individual within the school's management team, School Board or School Safety Team. One pointed out:

She [the headteacher] really is a road safety 'Champion'; she is very motivated and has been a major factor in making this work so far.

7.14 *Recommendation:* Teachers should be provided with school-based training in SRTS so that they can make better use of the resources which have been developed by the SRSC and others.

CHANGING CHILDREN'S BEHAVIOUR IS DIFFICULT

7.15 The literature recognises that a complex set of factors affect children's and young people's ability to behave safely on their routes to and from school. All accept that changing children's behaviour is difficult, and is unlikely to be achieved by programmes which merely target awareness and attitudes, but should include developmental skills training opportunities that improve pedestrian skills. For example, one case study took a P2 class on a 'Walking Expedition' in the local area, to give them practical experience of crossing roads safely and identifying road safety dangers. The class teacher stressed the importance because:

Some of them [pupils] haven't really been taught this by their parents, so it is useful.

7.16 *Recommendation:* An experimental programme, which attempts to change pupils' behaviour, should be developed and piloted.

THE ROLE OF PARENTS

7.17 All agreed that parents have a crucial role to play in SRTS as educators and role models. Not only do they often determine how a child will travel to and from school but most also accept that they have the primary responsibility for their child's safety. It is imperative to engage with parents, demonstrate to them that integrated traffic management approaches are being taken to eliminate unsafe behaviour by other parents, and allay their fears about the speed and volume of road traffic, and the wider dangers of bullying, assaults and abductions which many fear. The role of the School Board was also important in schools' involvement with Safer Routes to School. For example, in one primary school, the School Board's desire to establish cycle racks led to meetings with the Cycling and Walking Unit and the Accident Investigation and Prevention Unit. Teachers and Road Safety Officers also believed that a high level of support from parents and pupils for projects such as the 'Walking Bus' helped them overcome initial objectives to the project. Consulting parents was also identified as a contributory factor to successful SRTS projects. Such consultation and participation was most effective when the School Board was actively interested in the issue of road safety and led to the development of School Safety Teams. For example, in one West of Scotland primary school, a survey of all parents was undertaken, which focused on how children currently got to school, the reasons for this, which routes were used, where they came from, and what would encourage them to walk or cycle.

7.18 *Recommendation:* Measures should be taken to encourage parents to observe 'no parking' and speed restrictions within school zones. Particular effort should be targeted at parents of pre-school children to engage them in SRTS.

INPUT FROM PUPILS

7.19 Most informants recognised that children and young people should be involved in the development of SRTS initiatives and in the peer education of younger children. Young people themselves indicated that they prefer interactive approaches to road safety education. In addition, an important feature of all the case study schools was that they had, to varying extents, consulted pupils as part of their Safer Routes to School work. This appeared to be more structured where schools had School Safety Teams in place, and gave credibility and relevance to the SRTS and related projects.

7.20 Junior Road Safety Officers are intended to raise awareness about local road safety issues, represent the views of pupils regarding road safety, get children directly involved, and influence road safety education. In two of the three case study schools that deployed JRSOs, there was consensus that they had played an important role in Safer Routes To School. However in one case, the Road Safety Officers stated that the impact of the JRSOs had been limited. This was primarily because the pupils who had been chosen were not as active or committed as had originally been hoped.

7.21 *Recommendation:* Particular attention should be given to encouraging a proactive/experiential learning and teaching style in order to engage pupils in SRTS.

SUSTAINABILITY

7.22 As with all initiatives, sustainability is a continuing problem. Our informants made little reference to the sustainability of SRTS projects. However, throughout the case studies, informants pointed to the time, effort and planning required to apply for funding to the Scottish Executive and others bodies. Some indicated that they would appreciate assistance from the local Road Safety Officer, School Board and other committed persons in order to maximise their chances of gaining funding. We think that consideration should be given to long- term funding of road safety in the curriculum.

7.23 *Recommendation:* Ways of mainstreaming SRTS into school and local authority budgets should be explored.

MONITORING AND EVALUATION

7.24 Finally, only six local authorities reported that they had conducted evaluations of SRTS projects. We believe that evidence should be collected to show which approaches are effective and, if possible, to assess their impact on local road accident statistics. Some case study schools recognised the importance of monitoring and evaluation and with the assistance of their Road Safety Officers/Units were beginning to collect evidence to assess the impact of SRTS. For example, one local Road Safety Officer noted that improvements made to areas close to primary schools often also had an impact on the school route taken by secondary school pupils.

7.25 *Recommendation:* All local authorities should evaluate their SRTS programmes and identify the impact on accident statistics.

CONCLUSIONS

7.26 In conclusion, we felt that efforts to improve road safety education for children were paradoxical. On the one hand most of our informants recognised:

- The importance of the topic;
- The need to ensure that children were able to travel safely to and from school;
- The need for appropriate resources and training materials;
- The need to engage actively with pupils, teachers and parents; and
- The need to adopt a co-ordinated approach.

7.27 Yet on the other, many identified obstacles to the implementation and maintenance of effective road safety. These included:

- Lack of an integrated road transport system, which will deal with the volume of road traffic;
- Disaggregation of responsibility and funding for road safety education at local authority level;
- An overcrowded school curriculum;
- The poor image road safety education has amongst some children; and
- The difficulties inherent in changing their behaviour.

7.28 There is now an urgent need to address these, so that the efforts being made by enthusiastic individuals/organisations are not dissipated.

BIBLIOGRAPHY

- AA (2003) *The Facts About Road Accidents and Children*. London, The AA Motoring Trust. <http://www.aapolicy.com/aamotoringtrust/pdf/child_safety.pdf>
- Assaily, J. P. (1997) 'Characterization and Prevention of Child Pedestrian Accidents: An Overview.' *Journal of Applied Developmental Psychology*. 18: 257–262.
- Bagley, C. (1992) 'The urban environment and child pedestrian and bicycle injuries: Interaction of ecological and personality characteristics.' *Journal of Community and Applied Psychology*. 2 (4): 281–289.
- Bendavid, N. and Rice, R. (1994) 'The role of the physical environment in child pedestrian accidents.' *Journal of Advanced Transportation*. 28 (2): 171–187.
- Buchanan, C. (2002) *Child Accidents en route to and from school*. Edinburgh, Scottish Executive Central Research Unit. <<http://www.scotland.gov.uk/cru/kd01/blue/caer.pdf>>
- Burns, A., Johnstone, N. and Macdonald, N. (2002) *20 MPH Speed Reduction Initiative*. Edinburgh, Scottish Executive Central Research Unit.
- Cross, D., Stevenson, M., Hall, M., Burns, S., Laughlin, D., Officer, J. and Howat, P. (2000) 'Child Pedestrian Injury Prevention Project: Student Results.' *Preventive Medicine*. 30: 179–187.
- Demetre, J. D. (1997) 'Applying Developmental Psychology to Children's Road Safety: Problems and Prospects.' *Journal of Applied Developmental Psychology*. 18: 263–270.
- Derek Halden Consultancy (1999) *Review of Safer Routes to School in Scotland*. Edinburgh, Scottish Executive Central Research Unit.
- Derek Halden Consultancy (2002) *Review of Research on School Travel*. Transport Research Series. Edinburgh, Scottish Executive Central Research Unit. <<http://www.scotland.gov.uk/cru/kd01/blue/rrst.pdf>>
- Dunne, R. G., Asher, K. N. and Rivara, F. P. (1992) 'Behavior and Parental Expectations of Child Pedestrians.' *Pediatrics*. 89 (3): 486–490.
- George Street Research (2002) *Why Do Parents Drive Their Children to School?* Development Department Research Programme Research Findings. Edinburgh, Scottish Executive Central Research Unit. <<http://www.scotland.gov.uk/cru/resfinds/drf143.pdf>>
- Graham, T. (2000) *Road Safety Education in the Scottish Curriculum*. Edinburgh, Scottish Executive Central Research Unit. <<http://www.scotland.gov.uk/cru/kd01/blue/road-01.pdf>>
- Graham, T. (2002) *Road Safety and Social Inclusion*. Edinburgh, Scottish Executive Central Research Unit.
- Graham, T., McCallum, F. and Duff, P. (2000) *Road Safety Education in the Scottish Curriculum*. Research Findings. Edinburgh, Scottish Executive Central Research Unit.
- Granville, S., Laird, A., Barber, M. and Rait, F. (2002) *Why do Parents Drive their Children to School?* Transport Research Series. Edinburgh, Scottish Executive Central Research Unit. <<http://www.scotland.gov.uk/cru/kd01/blue/pdcs.pdf>>
- Granville, S., Rait, F., Barber, M. and Laird, A. (2001) *Sharing Road Space: Drivers and Cyclists as Equal Road Users*. Edinburgh, Scottish Executive Central Research Unit.
- Kniveton, B. H. (1986) 'An Investigation of Parental Protectiveness of Young Children Travelling to School.' *British Journal of Sociology of Education*. 7 (3): 287–292.
- McWhannell, F. and Braunholz, S. (2002) *Young People and Transport*. Edinburgh, Scottish Executive Social Research.

- Osbourne, P. (1998) 'Safe Routes to School.' *British Journal of Physical Education*. 29 (4): 39–40.
- Pringle, S. (2002) *Research into Road Safety Education in S3 to S6 in Scottish Secondary Schools*. Edinburgh, Scottish Road Safety Campaign. <http://www.road-safety.org.uk/resources/final_report.pdf>
- Reid, S., Laird, A. and Fawcett, J. (2000) *Evaluation of Scottish Road Safety Campaign Travel Packs*. Edinburgh, Scottish Executive Central Research Unit.
- Rivara, F. P., Booth, C. L., Bergman, A. B., Rogers, L. W. and Weiss, J. (1991) 'Prevention of Pedestrian Injuries to Children: Effectiveness of a School Training Program.' *Pediatrics*. 88 (4): 770–775.
- Ross Silcock Limited and Social Research Associates (1999) *Community Impact of Traffic Calming Schemes*. Development Department Research Programme Research Findings 68. Edinburgh, Scottish Executive Central Research Unit.
- Sawyer, B. (1998) *The Young Teenager and Road Safety: A Qualitative Study*. Research Findings 61. Edinburgh, The Scottish Office Central Research Unit. <<http://www.scotland.gov.uk/cru/resfinds/dr61-00.htm>>
- Scottish Executive (2002) *Scottish Transport Statistics*. Edinburgh, Scottish Executive National Statistics publication. <<http://www.scotland.gov.uk/stats/bulletins/00184.pdf>>
- Scottish Executive (2002) *Road Accidents Scotland 2001*. Scottish Executive National Statistics Publication. Edinburgh, Scottish Executive. <<http://www.scotland.gov.uk/stats/bulletins/00220.pdf>>
- Scottish Executive (2003) *A Walking Strategy for Scotland: Consultation Document*. Edinburgh, Scottish Executive. <<http://www.scotland.gov.uk/consultations/culture/wsfs.pdf>>
- Sharples, J. M. and Fletcher, J. P. (2001) *Pedestrian Perceptions of Road Crossing Facilities*. Edinburgh, Scottish Executive Central Research Unit.
- SRSC (1999) *Guidance How to Run a Successful Safer Routes to School*. Edinburgh, Scottish Road Safety Campaign. <<http://www.scotland.gov.uk/library2/doc08/srs.pdf>>
- SRSC (no date) *Road Safety Education: A Strategy for Scotland*. Edinburgh, Scottish Road Safety Campaign.
- SSTAG (2003) *Scottish School Travel Advisory Group Report*. Edinburgh, Scottish Executive. <<http://www.scotland.gov.uk/library5/education/sstag.pdf>>
- Thomson, J. A. (1997) 'Developing Safe Route Planning Strategies in Young Child Pedestrians.' *Journal of Applied Developmental Psychology*. 18: 271–281.
- Thomson, J. A., Ampofo-Boateng, K., Lee, D. N., Grieve, R., Pitcairn, T. K. and Demetre, J. D. (1998) 'The effectiveness of parents in promoting the development of road crossing skills in young children.' *British Journal of Educational Psychology*. 68: 475–491.
- Tonucci, F. and Rissotto, A. (2001) 'Why do we need children's participation? The importance of children's participation in changing the city.' *Journal of Community and Applied Psychology*. 11 (6): 407–419.
- Van Schagen, I. and Rothengatter, T. (1997) 'Classroom Instruction Versus Roadside Training in Traffic Safety Education.' *Journal of Applied Developmental Psychology*. 18: 283–292.
- White, D., Raeside, R. and Barker, D. (2000) *Road Accidents and Children Living in Disadvantaged Areas: A Literature Review*. Edinburgh, Scottish Executive Central Research Unit.

Zeedyk, M. S., Wallace, L., Carcary, B., Jones, K. and Larter, K. (2001) 'Children and road safety: Increasing knowledge does not improve behaviour.' *British Journal of Educational Psychology*. 71: 573–594.

APPENDICES

APPENDIX 1: CASE STUDIES

Case study:	1
Type:	Primary school
Location:	City
School roll:	304
Staff interviewed:	Headteacher, 2 teachers, School Board representative, Road Safety Officer
Pupils interviewed:	Two focus groups – one P6 and one P7 (equal proportion of male and female)

Examples of SRTS activities

- Established a ‘School Safety Team’ comprising School Board members, local authority representatives, teachers and two pupils.
- Junior Road Safety Officers (JRSOs) formed part of the School Safety Team and aimed to represent the views of pupils regarding road safety at the school.
- Parents consulted on their views on road safety through a survey and discussions at a parents’ evening.
- School Safety Team developed options for improving road safety, including developing: one safe cycle route; two safe walking routes; a walking bus; and installing bicycle sheds. The bicycle sheds have been provided and are already in use and potential is being explored for establishing a safe cycle route and installing road safety measures such as speed tables.

Local issues and key factors influencing SRTS

- Pupils indicated preference for walking or cycling to school, but felt that some parts of their route were not safe, and hence that the school should have more projects and activities on road safety.
- Teachers felt that local Road Safety Unit was responsible for road safety education, and that within the curriculum other demands on pupil and teacher time only allowed for passing coverage. Therefore, pupil education on any new road safety measures will most likely be provided by the Road Safety Unit.
- JRSOs had initially been reticent in coming forward with ideas and views of their peers. May require careful selection and training.
- This case study highlights the importance of committed and enthusiastic partners (in this case – teachers, School Board and the local Road Safety Officer) working together with shared aims.

Case study:	2
Type:	Primary school
Location:	Rural area
School roll:	32
Staff interviewed:	Headteacher, Walking Bus Co-ordinator, parent group
Pupils interviewed:	Two focus groups – one P6 and one P7 (equal proportion of male and female)

Examples of SRTS activities

- School Travel Plan developed with parents, teachers and local community.
- Walking Bus established in February 2002, and route chosen to maximise participation. Road Safety Officer checked the route and small physical improvements were made.
- School then became interested in broader teaching of road safety and encouraging walking and cycling to school, including adapting its Cycle Proficiency programme conditional on certain physical improvements to the entrance to the school.
- Speed limit of 20 mph has been introduced outside the school between 8.40 and 9.10am, and 2.55 and 3.15pm.

Local issues and key factors influencing SRTS

- School became involved in the Safer Routes to School programme following concern about heavy traffic on the main road, and parents and teachers parking on the main road.
- Lack of volunteers to supervise the Walking Bus meant the Co-ordinator had to act as supervisor (or conductor). However, once established, response from parents became more positive and enough volunteers emerged for the Bus to continue beyond pilot phase.
- Pupils very enthusiastic about the Walking Bus. Enjoyed talking to their friends, walking with a large group, getting fresh air and feeling healthy. Also reported learning about road safety on their way to school.
- Parents also supportive of the Walking Bus due to children's enjoyment and increased awareness of road safety. Reported that their children were getting more exercise and were keener to go to school.
- Enthusiasm of children and commitment of headteacher seen by the local Road Safety Officer as key factors in keeping the project running after the pilot period.
- Walking Bus Co-ordinator believes that school has been successful in establishing a walking bus but still requires ongoing support from a Co-ordinator and regular effort to maintain interest of children to sustain the project.
- Turnover of personnel can be a problem: Walking Bus Co-ordinator has moved to a different post within the council. Has taken with her some of the responsibility for running the project.
- Road Safety Unit and Community Safety Unit have applied for Safer Routes to School funding, which would enable them to continue work on developing and implementing School Travel Plans and Walking Bus projects.

Case study:	3
Type:	Primary school
Location:	City
School roll:	348
Staff interviewed:	Key teachers, School Safety Team, Road Safety Officer, parent group
Pupils interviewed:	Two focus groups – one P6 and one P7 (equal proportion of male and female)

Examples of SRTS activities

- School Safety Team created in 2000, comprised of School Board members, local Road Safety Officer, local authority engineering department representative, headteacher, school janitor, and local police. Also received input from Junior Road Safety Officers. Team co-ordinates innovations and helps to maintain coherency in line with SRTS targets.
- Current emphasis of Team on engineering measures to promote safety. Curriculum based SRTS work does occur but this is mainly general road safety awareness and cycling proficiency training with complementary classroom work.
- Safer Routes To School seen to articulate with wider health promotion efforts, hence efforts made to further promote walking to school and cycling for P6 and older pupils (eg Walk to school week).
- Working with local engineering department, School Safety Team has developed a series of action points addressing road safety and engineering around the school. These included: alterations to local road signs; vehicular access to the school; safety fencing along side roads. Team also eager to consider speed cameras, but local police said to be reluctant to introduce them.
- Team intends to bid for Cycling, Walking and Safer Streets (CWSS) funding for two Pedestrian Skills Co-ordinators to teach P1 and P2 pupils key skills concerning Safer Routes to School. This development is being informed by Sustrans innovations and findings of the Scottish School Travel Advisory Group (SSTAG) report. An expansion of volunteers to support the work of the Team is also sought.
- Pupil and parent questionnaires used to assess impact of initiatives, but would also like to evaluate the impact of recent developments in a more systematic and robust way (ie pre- and post-intervention studies), to introduce more cost-effective ways to develop Safer Routes to School.
- Road Safety Officer stressed that all future work would be informed by local needs and operate within Scottish Executive guidelines.

Local issues and key factors influencing SRTS

- Recent pedestrianisation of town centre has increased volume of traffic along roads around school and routes used by children to travel to school.
- Ninety per cent of pupils walk or cycle to school and school is focusing on remainder transported by car, to encourage parents (mainly of nursery children and younger pupils) to avoid congestion at school gate and entrance to car park. The local RSO believes that it is important to use education to challenge the culture of car use among those families that lived close to the school.

- Compared to other schools the proportion of pupils who cycle to school was felt to be relatively high.
- Initially, responsibility for much of road safety education rested with the education department but School Safety Team saw these efforts as ‘not effective and not based on consultation with other departments and schools’. Team also feel that building SRTS into curriculum is ‘time-consuming’, faces competing priorities, and requires continual support of teachers.
- Raised red-coloured right-of-way road markings indicating ‘safer’ locations for pedestrians to cross busy roads now felt to be creating a ‘false sense of security and confidence among children’. Also ‘many car users were not aware of the significance of such markings’.
- School Safety Team stressed the importance of gaining co-operation of school and teachers, and of building links with other councils to look at good practice elsewhere. Team, and the local Road Safety Officer in particular, stressed need for more communication, given the range of organisations and bodies involved.
- Road Safety Officer believed that the expansion of SRTS work had management implications for her post given that the range of projects would increase. Future management should be the responsibility of more than one department.
- Road Safety Officer noted that take-up of Cycling, Walking and Safer Streets (CWSS) funding across the Authority was good, with many schools showing an interest in SRTS work. However, such funding would have to continue if current developments were to be successful.
- Team believed that a key component of road crossing measures at busy times needed to be the presence of a supervising adult such as a ‘lollypop’ person.

Case study:	4
Type:	Primary school
Location:	Small town/village
School roll:	156
Staff interviewed:	Headteacher and key teacher, SRTS Co-ordinator/Road Safety Officer, School Board representative
Pupils interviewed:	Two focus groups – one P6 and one P7 (equal proportion of male and female)

Examples of SRTS activities

- Road Safety Charter Award built into school's development plan, and requires school to implement content to a satisfactory standard. Wanted Awards to be a sustained programme built into year plans and run as appropriate over the long term.
- Award programme articulates with 5–14 Curriculum and also aims to improve pupils' overall physical activity, by promoting walking and cycling.
- Award programme design is negotiated with the school and is integrated into curriculum, particularly health. Adaptations to 'suit what happens in the village and reflects their experiences and any local accidents that happen' have already been made, with local accident statistics, local traffic and road issues used to inform the content of the schools' road safety teaching. For example:
 - Not wearing seatbelts when travelling to and from school
 - Horseplay and disorder on school buses, influencing pupils' general safety
 - Fast moving traffic on the main road adjacent to the school
 - Young male pupils more likely to take risks around roads – 'playing chicken'.
- Range of teaching approaches used, including quizzes, poster designs, project work with local maps, etc, to involve pupils.
- Teachers use links with local Road Safety Team to investigate other resources. Tailored resources from the award programme are used, along with specific guidance documentation.
- School notice boards keep everyone informed of initiatives/developments.
- School has provided cycling proficiency training, both in lesson time and as an after-school activity with the assistance of parents.
- 'Peddle and Park' scheme implemented, to enable pupils to secure their bikes at school – bike locks were provided by the local authority to pupils who passed their cycling proficiency test.
- Junior Road Safety Officers being trained to provide peer tutoring and input to the school's efforts to promote road safety.

Local issues and key factors influencing SRTS

- Main road through village passes directly in front the main entrance to the school, and is extremely busy.
- Limited parking space for parents and school buses means they use space along the road side.

- Role of Road Safety Team in providing advice is seen by teachers as a facilitating factor in the Award's success.
- Parental education is seen as a key aspect for developing pupils' safety. Parents are seen as part of safer routes homework, and are targeted with literature and school events.
- Teachers note that as some pupils get older they think that the road safety topic is not 'cool', although they still actively engage with the interesting lessons and activities.
- Pupils critical of reflective cycle-safety clothing provided by projects. These are seen as "too baggy and not cool". Pupils would prefer adult styles and want an input into the design of these garments.
- P7 males recognise the importance of safety helmets and clothing but some feel it is "not cool to wear these".

Case study:	5
Type:	Secondary school
Location:	City
School roll:	2176
Staff interviewed:	Assistant Headteacher, Road Safety Officer, School Board representatives
Pupils interviewed:	Two focus groups – one S1 and one S2 (equal proportion of male and female)

Examples of SRTS activities

- As a result of busy main roads and accidents in the immediate vicinity, the school has participated in various campaigns and initiatives designed to promote road safety awareness among parents and pupils.
- Promotion of cycling as a safe and healthy way of getting to school. Campaign included pupils sending questionnaires about road safety to parents, surveying parents outside the school, and producing their own road safety newsletter and leaflets. Pupils recommendations from their research were presented to the council, and included:
 - The positioning a nearby pedestrian crossing be altered.
 - ‘Keep Clear’ markings were introduced outside the school.
 - New crossings be installed to accommodate bicycles.
 - Cycle racks should be provided at the school.
- Work with local Road Safety Unit to promote walking to school as a healthy and safe option. This led to a project for fifteen S3 pupils in which they walked to school for a school term and met up on a weekly basis for fitness testing. Accompanied by the development of a ‘Walking Pack’ which promoted walking to school as a way of improving health.
- High proportion of pupils who travel to school by train has led, in the past, to a major initiative to raise awareness of train safety issues both within the school and in the wider community: a group of S6 pupils worked with the Transport Police to look at train safety, produce a magazine for pupils, and presented their findings to Transport Police and Chamber of Commerce.
- Road safety education provided within the curriculum, as part of the Personal and Social Development/Education.
- No current initiatives to promote road safety to pupils and parents. The work undertaken over the past few years has taken place on a project basis, and in the 2002/03 school year projects have been focussed on other issues. In the next school year (2003/04) the school will promote a range of healthy activities to pupils, and it is anticipated that this will include a focus on the way in which pupils travel to school.

Issues and key factors influencing SRTS

- Despite physical improvements recommended by pupils as part of cycling campaign, cycling not actively encouraged, since many teachers “not particularly happy encouraging cycling to school” because of busy local roads. As a result, very few pupils cycle to school.

- School feels it would only be possible to promote cycling if cycle routes were physically separated from the road.
- However, teachers still concerned about road safety and healthy ways of getting to school and worked with Road Safety Unit to promote walking to school instead.
- Initiatives can be difficult to sustain: while teachers viewed a walking to school project as successful it has not been followed up in subsequent years due to the time commitment required of teachers and pupils.
- Assistant Head Teacher believes that the requirement for all schools in the Authority to become 'Health Promoting Schools' will have an impact on the way in which road safety is promoted to pupils.

Case study:	6
Type:	Secondary school
Location:	City
School roll:	1456
Staff interviewed:	Assistant Headteacher, Road Safety Officer
Pupils interviewed:	Two focus groups – one S1 and one S2 (equal proportion of male and female)

Examples of SRTS activities

- In 2000, pupils designed/conducted a major project to assess road safety and travel issues facing their school. Included surveys and interviews with key informants in the school, council, local police, relevant organisations (including Friends of the Earth Scotland) and the wider community, Also considered options for safer and healthier travel with peers, local police, local authority engineering and other departments.
- Local Safe Routes organisation which promotes cycling in the area provided guidance on cycle racks: for example, how to make them secure, how to set up a cycle club, how to contact their local councillors.
- Pupils liaised with other young people conducting similar initiatives, linking to other websites to encourage cycling and safer routes to school.
- In 1999, small group of pupils put together a Green Transport Plan as part of entry for a major national competition. Pupils' project work identified potential solutions to the cycle and road traffic issues, and won second prize.
- Competition prize money plus local authority funding (available for the installation of cycle racks in any council properties) enabled complete refurbishment of bike sheds.
- Other activities arising from programme included:
 - Lobbying local councillors and Scottish Executive concerning action on local area road safety and traffic calming work (cycle lanes, road markings to discourage parking and speeding, a 20mph speed limit, speed bumps, etc).
 - Establishing a cycle club in the school.
 - Launching an education and information campaign in the school, and associated primary schools to inform pupils, parents and teachers.
 - Promoting developments to others, via the Internet, the local authority's schools intranet, and the press.
- Other than work focusing on promoting cycling there has been little other road safety and SRTS input.
- Local police have provided railway safety education, postcode security marking of bikes, information, and advice.

Local issues and key factors influencing SRTS

- Since 2000, new campaign members have been recruited, but drive to promote cycling and other school-based/ school-led, SRTS projects has tailed off.
- Pupils felt there was a need for 'safer driving' education for S4 and older pupils, and were aware that another of the City's schools did something similar.

- Prior to 2000, very few pupils travelled to school by bike, in part because existing bike sheds were run down: pupils saw them as having “wheel-twister racks...are out of view, vandalised and used by smokers”. They were also wary about bringing bikes to school because of tyre slashing incidents. Additionally, in the past, school had also actively discouraged cycling for 'road safety' reasons.
- Many pupils still see local roads as too busy and too dangerous to cycle to school: pupils stressed that separate cycle lanes would be needed with some sort of raised curb to prevent vehicles driving or parking on them.
- Pupils found that while local Council was willing to create 20mph zones without 'traffic calming' measures, police were reluctant to enforce these speed limits unless measures were in place to encourage motorists to observe them. They have also had limited impact in encouraging parents not to park outside the school.

APPENDIX 2: INFORMANTS

The following informants were interviewed:

- A representative from the Scottish Road Safety Campaign
- A local authority Safer Routes to School Co-ordinator
- Two representatives from Sustrans; and
- A representative from the Scottish School Board Association.

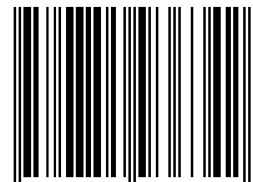
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