

# “It makes you feel how it is”

**ROSPA**  
The Royal Society for the  
Prevention of Accidents

An evaluation study of “S’Cool to be Safe: On the Road” -  
a Theatre-in-Health Education project

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sponsored by



**Catalyst**  
Theatre in Health Education



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# Introduction

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**The aim of this study is to evaluate a touring Theatre in Health Education (TIHE) project for pupils aged 9–11 years. The project was funded by Toyota, designed and managed by RoSPA, with the programme itself being devised and delivered by a TIHE company, ‘Catalyst’. Local Authority Road Safety Officers targeted the schools in their areas to receive the programme.**

The aims and objectives of the TIHE project were to:

- Provide an interactive learning experience to assist Key Stage Two (pupils) develop their knowledge, skill and understanding of attitudes needed in order to assess and manage risk
- Reduce the number of accidents and casualties.

The project was a three-year programme with a different TIHE programme each year. The programme being evaluated in this study is ‘On the Road’ and there is a detailed programme outline in Appendix 4.

The ‘On the Road’ programme aimed to address the aims of the overall project by:

- Helping children to explore what hazards pose a risk to their safety, and how risk can be eliminated, reduced or managed
- Exploring behaviour that contributes to, or reduces risk
- Enabling children to explore reasons why people take risks
- Equipping children with the skills needed to resist peer group influence and individual justification to take unnecessary risk
- Placing risk and safety within the wider context of children’s lifestyles.

The programme has a specific focus on road safety, but also includes references to derelict buildings, misbehaviour and peer pressure.

This evaluation did not attempt to evaluate the long term outcomes of the programme in terms of accident reduction, focussing instead on the intended learning outcomes incorporated in the first aim:

- To help children develop their knowledge, skill and understanding of attitudes needed in order to assess and manage risk.

# Introduction

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## Accidents and young people

It is not the purpose of this report to give a detailed epidemiological justification for safety education. However, approximately one third of deaths of young people aged 10–24 years in the UK are caused by accidents of various kinds. In 1999, 137 young people aged 10–14 died as a result of accidents, 62% of which were described as transport accidents rising to 68% in 15–24 year olds (Markowe, 2001). Safety education has been an established part of the school curriculum for many years.

## Risk education and young people

Traditionally education aimed at preventing accidents has focussed on enabling pupils to learn safety rules and skills in specific contexts such as road safety or water safety. Since 1995, however, there has been an attempt to introduce risk education through the National Curriculum, with an emphasis on a generic process of hazard recognition, risk assessment and risk management, mirroring that in use in the world of work (SCAA, 1995 and QCA, 2001).

There has been little research into the effectiveness of this approach, although several studies of young people's perceptions of risk suggest that there may be barriers to understanding which need to be taken into account when planning educational interventions (McWhirter, 1997). It is not known whether these barriers are developmental or educational. For example Piaget and Inhelder, (1975) demonstrated that young people's understanding of probability developed in stages while Fishbein (1975) has argued that educational strategies counter young people's intuitive grasp of probability. Certainly, risk is a complex abstract concept which many adults find difficult to understand (Slovic, 1992).

Recent studies by McWhirter and others have shown that pupils in Key Stage 2 (8–11 years) have difficulty understanding 'risk'. Illuminative research using the draw and write technique revealed that pupils in the target age group often associate risk with events which are both improbable and have self evidently severe outcomes, such as falling from a very high place into deep, rocky and shark infested waters (McWhirter and Weston, 1994). A similar study with 9–11 year old pupils found that incidents on the road (road safety) was the second most frequently drawn scenario (McWhirter, King and Bryant, 1997). Pupils in this age group also increasingly associate risk with behaviour which brings them into conflict with authority, whether parents, teachers or the police (McWhirter, 1997). By the age of 13 years, misbehaviour dominates young peoples' perceptions of risk with road accidents ranking only 5th behind 'high places', misuse of illegal drugs and smoking (McWhirter, 1998). It has also been shown that pupils in Key Stage 3 (11–14 years) find it difficult to articulate what risk means to them, suggesting this linguistic ability is relatively slow to develop.

In contrast to this, adult populations perceive risk very differently, describing complex scenarios with a range of outcomes both moderate and severe and with short, medium and long-term consequences. Adults also recognise the consequences for others in risky situations and identify a variety of social and emotional consequences. (McWhirter, Wetton and Mortimer, 1997).

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In order to understand risk fully, it is necessary to recognise two important elements, severity and probability (Barnett and Ross, 1997). It is common amongst the lay population to pay greater consideration to the severity of outcomes at the expense of the likelihood of the event, particularly where these outcomes are more widely publicised (known as the availability heuristic). This may help to explain why there is a greater fear of air travel than road travel, despite the fact that there are more deaths and injuries on the roads than result from air crashes in any given period. Failures due to human error or engineering are catastrophic for all involved if they happen even 100 feet off the ground. As a result numerous checks and safety measures are put in place so that such accidents are rare. However, when such accidents occur, headlines are made. In road travel we experience more errors, and are more often exposed to those errors making the probability of being involved in an accident greater. While the outcome can be fatal, it can also be minor and even fatal road accidents rarely make national headlines.

## Theatre in Health Education

Theatre in Health Education has become a popular approach to raising awareness of health and safety issues. TIHE differs from drama as an educational tool in Personal, Social and Health Education (PSHE) and from the use of video, whether specifically devised for health education/health promotion or using clips from popular TV programmes. Theatre in Health Education refers specifically to interventions which are based on a performance, usually by professionally trained actors.

In TIHE the performance is frequently supported by interactive workshops, facilitated by the performers, or by various techniques also used in drama teaching such as hot-seating, where participants can question the actors whilst they remain in character. These techniques derive from the work of Boal (1979) and the Theatre of the Oppressed. In using these techniques the actors facilitate learning amongst members of the audience, encouraging them to explore the context and motivation of the characters and relate this learning to their own experience through active participation. Actors and participants work together to challenge attitudes, think through and enact alternative (usually less severe) outcomes.

Thus, TIHE provides an ideal opportunity for development of the language of risk, thorough articulation of questions for the characters, development of scenarios and group discussion.

The objectives of TIHE are often less concerned with imparting factual knowledge than with the exploration of social and personal responses to sensitive issues. The educational aims and objectives of the performance are usually made explicit in materials available to funding bodies and participating schools. Such materials may include suggestions for preparatory or follow up work to be carried out by teachers with pupils at a later date.



*Pupils perform 'still pictures' during the TIHE performance.*

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Despite the popularity of this approach to health education there appear to have been few well designed evaluation studies. One deals directly with road safety and this was carried out with secondary school pupils aged 14–18 (Powney, Glissov and Hall, 1995). It appears that there has not been an evaluation of a TIHE approach to risk in the context of roads with primary school pupils or their teachers.

The objectives of the study are, therefore, to:

- Review the evidence for TIHE as an effective tool for health education for primary school pupils
- Collect evidence from adult stakeholders about the potential of TIHE to deliver risk education
- Collect evidence from pupils about the impact of their involvement in TIHE on their perceptions of risk and their ability to articulate their understanding of risk.

## Rationale for the use of TIHE

This section of the report considers the rationale for using TIHE and the value of TIHE from the perspective of consumers (pupils) and teachers. The evidence for effectiveness of TIHE is also examined.

The rationale for TIHE was set out in an article by Ball (1994). Ball, the founder of the Catalyst Theatre Company, claimed that Theatre and Health Education have many common features, and described their relationship as a ‘meeting of minds’ rather than ‘a marriage of convenience’ (p222). He explained that this relationship is based on common values and philosophies, which include:

- The involvement of affective and cognitive learning components
- Use of active learning
- An exploration of attitudes and values
- Role taking
- An emphasis on self empowerment
- A concern with ‘what it is to be human’
- A community dimension.

Firmstone and Jenkins (1999) have considered the rationale for TIHE as a medium for reducing risk. Firmstone et al developed a matrix with which to review the contribution to risk reduction offered by TIHE. The matrix is related to a model of sexual risk taking behaviour put forward by Levitt, Selman and Richmond (1991) and is underpinned by a psycho-social decision making model of risk behaviour. While the model proposed by Levitt et al has not previously been applied to accident prevention, it is worthy of exploration in this context. Levitt et al, propose that risk behaviour is characterised by five factors:

- Genetic predisposition
- Lack of knowledge, or an inadequate understanding of risk and its prevention
- Inadequate risk management skills
- Socio-cultural factors
- A lack of awareness of personal meaning of risk.

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Firmstone et al (1999) argue that excluding genetic predisposition, the remaining categories are susceptible to educational intervention using TIHE as a medium by providing opportunities to:

- Increase knowledge
- Provide sources of further information and support
- Develop self esteem, assertiveness, communication and negotiation skills
- Raise awareness of social conditions, peer pressure and to explore attitudes
- To discuss the personal meaning of risk.

These sources suggest that TIHE is an appropriate medium for risk education.

## Effectiveness of TIHE

There has been a widespread call for more evidence for the effectiveness of health education or health promotion interventions. However, the nature of the evidence collected has often been weakly related to the expectations of funding bodies e.g. statistically significant reductions in deaths from road accidents or sexually



*Pupils create what is happening at the time of the crash.*

transmitted diseases. Equally, those evaluating intervention studies have often measured proximal indicators of change, such as knowledge gain. However, there is poor evidence of links between such simple quantitative indicators and behaviour change. Measurable changes in health outcomes such as accident statistics require sustained behaviour changes in large populations over long periods of time where other variables, such as road conditions, have not changed. Inevitably in many health education

interventions, the measurement of health behaviour change or health outcomes is frequently confounded by other events or interventions (McWhirter, Collins, Wetton, Bryant, and Newton Bishop, 2000). It is important, therefore, to be aware of the limitations of any evaluation study in the context of health promotion.

No studies of TIHE have reported direct evidence for health outcomes, such as changes in rates of injury or death on the roads or sexually transmitted diseases. Similarly, few studies of TIHE claim to have changed pupils' health risk behaviour. Most quantitative evaluation studies have therefore attempted to measure the impact of the TIHE intervention on the more readily accessible intermediates such as knowledge, skills and attitudes.

Bury, Popple and Barker (1998) in their evaluation of a TIHE project to raise awareness of child protection issues have made a strong case for qualitative evaluation of TIHE, focussing on the meaning of the experience for the pupils, rather than knowledge or other changes. This approach was adopted by others including Orme and Salmon, (2002) and Blakey and Pullen, (1991). Several studies have combined quantitative and qualitative approaches to gain insights from pupils and teachers (Denman et al 1995; Denman et al 1996) or from pupils (McEwan, Bhopal and Patton, 1991 and Powney et al, 1995).

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## ***Knowledge and skills and TIHE***

Authors frequently emphasise that knowledge gain is not the main objective of TIHE, and that knowledge change does not guarantee behaviour change. Nevertheless, Denman et al (1995) have provided evidence for important knowledge gains amongst pupils aged 13–14 years with regard to transmission routes and risk factors for HIV. McEwan et al, however, found no significant changes in knowledge after a performance and workshop about HIV/AIDS. Elliott, Gruer, Farrow, Henderson and Carrow (1996) also found that TIHE was not a particularly good medium for imparting knowledge about HIV/AIDS.

However, in the study of TIHE to raise awareness amongst 5–6 year old pupils of inappropriate touching, teachers reported that pupils gained a wide range of knowledge and related skills, including identification of different types of touch, voicing objections and respecting the feelings of others (Orme and Salmon, 2002).

In addition Orme and Starkey (2001) used a draw and write technique to evaluate pupils' knowledge and understanding of drugs before and after they had participated in a TIHE project. Significant differences were noted in the extent of pupils' knowledge of drugs, including knowing that cigarettes and alcohol are drugs. Pupils were also less likely to refer to drug users in stereotypical ways. This study also provided evidence that pupils' problem solving skills were enhanced by their involvement in TIHE.

## ***Attitude change and TIHE***

Several studies have explored attitude change using qualitative (Blakey et al, 1991) or quantitative approaches (McEwan et al, 1991; Denman et al, 1995). Denman et al (1995) described significant changes in attitudes to HIV/AIDS, compatible with the programme's objectives. McEwan et al (1991) reported positive changes in attitude through the use of a questionnaire survey (quantitative) and focus group discussions (qualitative). However, McEwan et al (1991) also reported increases in pupils' anxiety about their personal risk of catching HIV, or of meeting someone who was HIV positive. In contrast to this, Denman et al (1995) drew attention to evidence which suggested that pupils who had participated in TIHE may be distancing themselves from the possibility of personal risk.

## ***Behaviour change and TIHE***

Several interventions examining TIHE suggest potential effects on behaviour. Thrush, Fife-Shaw and Breakwell (1999) used a quasi-experimental study design to examine the impact of TIHE on pupils' smoking behaviour. Saliva samples taken over a period of 2 years showed that the actual levels of smoking were lower amongst the girls in the intervention group, whilst self-reported intention to smoke was lower amongst boys.

Similarly confusing results emerged from a study published in the journal *AIDS Care* (Elliott, Gruer, Farrow, Henderson and Cowan, 1996). In this study there was little evidence for knowledge or attitudinal change as measured by self administered questionnaire, but some evidence for a longer term effect on self reported purchase and carrying of condoms by young people who had experienced the TIHE intervention. The authors were careful to emphasise that this did not constitute evidence for safer sexual behaviour, however.

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Orme and Salmon (2002) provided evidence of behaviour change amongst pupils who had participated in a TIHE project to raise awareness of inappropriate touching. In this study, teachers reported observing children using strategies learned as part of the TIHE to deal appropriately with 'rough play' in the playground.

## **Road safety and TIHE**

While all the studies involving TIHE were aimed broadly at risk reduction, only one published study examined the impact of TIHE of risk in the context of roads. This study was also unique in that it compared the impact of TIHE with two other interventions about drinking and driving (Powney et al: 1995). In interviews pupils aged 14–18 year olds in 9 schools in Scotland and Wales and their teachers expressed a clear preference for the TIHE intervention. Quantitative elements suggested there was evidence for short and long term attitude changes amongst the TIHE group, and some evidence that participants, especially older girls, were more likely to report having refused lifts offered by drivers who had been drinking, or advising those who had been drinking not to drive. However, because of the small numbers concerned it was not possible to demonstrate that this was different in the three intervention groups.

## **What is successful TIHE?**

Teachers, actors and other adults concerned with health and safety education in schools have identified factors important to successful TIHE which include:

- Relevance of the scenario to the audience (Powney et al, 1995)
- Being a trusted outsider (Denman, Davis, Pearson and Madeley, 1996)
- Having expert knowledge or skills not available to the pupils' usual teachers (ibid)
- Sound preparation and follow up (McEwan, Bhopal and Patton, 1991 and Powney et al, 1995)
- Stimulation of memory (Orme and Salmon, 2002)
- Creating a non-threatening environment in which to explore sensitive issues (ibid).

## **Value of TIHE to pupils**

Pupils have identified factors which are important in TIHE, including:

- Having their opinions valued
- Being entertained
- Being able to identify with the actors
- The use of familiar language in the performance
- Being able to discuss sensitive issues openly with a trusted outsider.

*(Denman, Pearson, Moody, Davis and Madeley, 1995)*

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Interviews with pupils also suggest that success is facilitated in schools where openness has been encouraged in PSHE lessons (Blakey and Pullen, 1991).

## **Value to teachers**

Denman et al (1996) Powney et al (1995) and Orme and Salmon (2002) reported that teachers' confidence in the subject matter was enhanced by TIHE and could provide the basis for further cross curricular work. Those commissioning TIHE have recognised its usefulness in achieving other objectives for working with teachers. For example, Power (1995) states that she used a TIHE tour to increase teachers' awareness of the need for policies about HIV/AIDS in secondary schools. In this example, in-service training for teachers was linked to the TIHE, enabling each school to appoint an HIV co-ordinator. In addition Local Education Authority staff, educational psychologists and welfare teams were also trained as a result of the TIHE initiative.

Blakey et al 1991 (whose study pre-dated the introduction of the National Curriculum) pointed to the organisational issues for teachers, including ensuring sufficient time was available for the pupils to attend the performance and workshops, concerns about the technical requirements and funding. The latter raised further concerns about equity. Teachers also expressed the wish to preview the performance, although this seemed more related to the sensitivity of the subject matter, rather than a desire to assess the educational value of the initiative. However, Orme and Salmon (2002) claimed that when the concerns about organisation, and the sensitivity of the subject matter are addressed TIHE can offer opportunities to tackle issues teachers themselves find challenging.

## **Summary**

Theatre in Health Education, as described in the studies reviewed here, consists of a performance by trained actors followed by an interactive workshop. The provision of preparation and follow up materials is recommended but is rarely reported. TIHE shares many features with health education and can be related to a psycho-social decision-making model of health promotion.

TIHE has been shown to enhance knowledge amongst pupils and to change attitudes to health risk behaviours in some, but not all studies. Some evidence has been found for short-term health related behaviour change, although this is mostly based on self-report. There is evidence for some unintended consequences including increases in anxiety. No evidence is presented for measurable changes in health outcomes, as might be expected for a brief, one-off intervention.

The major obstacles to TIHE in schools are related to funding and timetabling issues.

TIHE is popular with pupils, teachers and education advisors who perceive the benefits to be related to novelty and relevance to young people and the power to engage the young people's emotions as well as their minds. The expertise of the actors in working with the young people and being 'trusted outsiders' is of particular benefit when TIHE is dealing with sensitive issues such as sexual health or drinking and driving. One study suggests that schools where PSHE encourages pupils to express their views openly may benefit particularly from TIHE.

The majority of the studies cited above have been concerned with sexual health education. This suggests that 'sensitive issues' are more likely to be addressed using TIHE than areas of the curriculum with which teachers may feel more confident, such as road safety.

# Methodology

## **The objectives of this part of the report are to:**

- Collect evidence from adult stakeholders about the potential of TIHE to deliver risk education
- Collect evidence from pupils about the impact of their involvement in TIHE on their perceptions of risk and their ability to articulate their understanding of risk.

RoSPA, the theatre company and Toyota have previously evaluated the project in different ways. RoSPA used a before and after, 'true/false' road safety behaviour quiz with pupils and a satisfaction survey with teachers, while Catalyst have used actor's diaries to meet their evaluation needs. Toyota have collected media reports, letters of appreciation from schools. In addition Toyota received the Prince Michael of Kent Road Safety Award.

This evaluation aims to explore the value to the TIHE project in terms of the stated objectives from the point of view of teachers and other adult stakeholders, and pupils.

The methods adopted in this evaluation study are both qualitative (individual and focus group interview and 'draw and write') and quantitative ('draw and write').

## **Interviews**

Interviews, either with individuals or groups provided an opportunity to explore the relevance and meaning of their experiences relevant to TIHE. A number of adult stakeholders were consulted by interview as part of the preparation for this study. These included:

- Staff at RoSPA road safety unit involved in the commissioning and organisation of the TIHE programme
- A member of Toyota responsible for funding the study
- Road Safety officers, involved in identifying participating schools across the UK
- The director of Catalyst, the theatre company responsible for devising and delivering the TIHE programme
- Teachers in participating schools.

The interviews with adult stakeholders sought to establish the aims and objectives of the project from their perspective and the relationship of these aims and objectives to the various organisational aims. These interviews also helped to clarify the roles of the different organisations in commissioning, devising and managing the project. Interviews with teachers also focussed specifically on the opportunities presented by the TIHE to develop pupils' understanding of risk. Interview schedules for teachers can be found at Appendix 1.

Pupils were involved in the evaluation by taking part in focus group discussions (see Appendix 2) and in a draw and write activity (Appendix 3). Focus groups were conducted by an interviewer and an observer, with small, single sex, groups of pupils as recommended by Vaughn, Schumm and Sinagub (1996).

## **Draw and Write Technique**

Draw and write has become popular as a research tool for use with children from 4 years old, and combines many of the advantages of a qualitative research tool with some of the advantages of a quantitative approach. In draw and write investigations participants are asked open ended questions which gradually focus in on specific aspects of a health related topic. Responses are not predetermined as in a questionnaire, but response categories can be derived from the data using an iterative process. The number of responses which fall into each category may then

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be counted. In large studies descriptive and non-parametric statistics can be used to examine the data for trends (Williams, Wetton and Moon, 1989a,b; Wetton and McWhirter, 1998).

The draw and write activity has been used previously to find out how young people perceive and explain risk (McWhirter and Weston, 1994; McWhirter, 1997; McWhirter et al, 1997; McWhirter, Wetton and Mortimer, 1997; McWhirter, 1998). It is an illuminative research tool, in which participants are asked to draw and write about someone their own age, doing something risky, to describe what makes the activity risky and what they would do, say or think if they were there (Appendix 3).



*An example of the Draw and Write Technique.*

## Research design

A number of factors are known to influence the responses to open ended questions which feature strongly in qualitative approaches. These include the social context of the participants, recent salient events and location (Backett-Milburn and McKie, 1999; Gabbahain and Kelleher, 2002). Repeat questioning may also elicit variations in response unrelated to the specific objectives of the study (Wetton and McWhirter, 1998). For these reasons it was decided not to compare pupils in different schools who had or had not participated in the programme nor to collect pre and post intervention data from the same pupils on the same day. It was also considered inappropriate to ask schools to divide pupils into two groups, only one of which would experience the TIHE programme. The following design, while less robust than quasi-experimental designs considered above, offered an opportunity for some evaluation of the impact of the TIHE programme on pupils.

Pupils who had participated in the TIHE programme were asked to complete the draw and write task and a sample of these pupils were selected by teachers to participate in focus group discussions. These pupils are referred to as 'experienced' pupils in this report. Pupils of the same age and from the same school who could be assumed to have had a similar educational experience and come from a similar social background acted as a reference group. These pupils carried out the same research tasks as the experienced pupils before participating in the TIHE programme and are referred to as 'inexperienced' pupils. This design afforded some opportunities for comparison, and the use of two different methods with pupils provided an opportunity for triangulation (Cohen and Manion, 1994).

## Ethical issues

Pupils and teachers were informed about the reasons for the study and asked if they were willing to participate. It is recognised that it is difficult for pupils to respond negatively to a request from a teacher or other authority figure. However, the research tasks and focus groups were carried out by researchers from RoSPA, who emphasised the importance of pupils being able to withdraw from participation at any stage. All responses were anonymised.

# Results

## Interviews with adult stake holders: Management side

### Aims and objectives

All stakeholders had clear ideas about the aims and objectives of the project. However, these differed from one another to some extent. The head of road safety for RoSPA and the manager of the theatre company both identified aims very similar to those given at the beginning of this report, with a strong emphasis on pupils' understanding of risk. The initial response of the Toyota staff member focussed more on company objectives such as 'showing the company's human face' and 'commitment to local communities'. However when asked to describe the learning outcomes for pupils, she articulated these in terms of children's safety, especially road safety, 'in-vehicle safety' and peer pressure.

Two road safety officers from different local authorities each identified different learning outcomes. RSO1 clearly identified the broader concept of 'risk in the context of children's lifestyles' as an objective. However, she expressed concern that this was too subtle for some of the less able pupils. RSO2 perceived the programme's aim was to promote the sponsor, and to enable more schools to have access to TIHE to stimulate drama work within the schools. When asked about specific learning outcomes for pupils, RSO2 identified safety rules such as the Green Cross Code and identifying safe crossing places. She placed a strong emphasis on pupils learning specific vocabulary such as 'safe', 'dangerous', 'pavement', 'kerb'.

### Relationship of programme aims to organisational aims

Each stakeholder was clearly able to identify how the TIHE programme related to the aims of their organisation. The aims of RoSPA were described as 'improving quality of life, acting as a powerful influence for accident prevention'. In terms of road safety this was expressed as identifying the contributory factors to road accidents and setting priorities for action based on the number of incidents and their severity. Thus RoSPA actively seeks ways to contribute to reducing the number of road accidents.

The aims of the theatre company were to 'inspire and excite young people and use the arts to enable them to make sense of the world they live in'.

The aims of Toyota corresponded to the need to be perceived as a good 'corporate citizen', through promoting the safety and well being of children.

RSO2 identified the aims of the local authority to include supporting schools to develop their approaches to road safety. RSO1 identified a major aim for the local authority to be able to target schools where the risk of road accidents was higher than average.



*Pupils show how the scene would look 10 seconds after the crash.*

# Results

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However, both reflected that RSOs did not know the precise content of the TIHE before booking, making it more difficult to target schools with specific needs and expressed a wish for RSOs to be more involved in the planning of the content of the programme. In addition the limited number of places for schools in their authority, made it difficult for RSOs, working to a local agenda, to select the schools to participate, or to support them in incorporating the programme into the curriculum.

## Project management

Management structures for the project were described in similar ways by all organisations involved. Toyota approached RoSPA, a national organisation with a view to sponsoring a safety education programme for school age pupils. Risk education was identified as a generic concept underpinning safety education and theatre companies were invited to bid for the funds to create three programmes to be delivered over a three-year period, with risk education as the core theme. Copyright for the materials created was vested in the sponsor, but day-to-day management, including quality control was vested in RoSPA. Creative control remained the right and responsibility of the theatre company.

Both Toyota and RoSPA, had a national focus to their work. Road safety officers acted as local agents, identifying schools which would benefit from the TIHE experience. RSOs were each asked to target 2 schools in their local authority where accidents statistics suggested there was a high risk for pupils in the target group.

## Interviews with adult stake holders: Teacher interviews

Six teachers who had observed their classes during the performance and workshops were interviewed.

### Aims and objectives

The teachers had mixed impressions of the aims and objectives of the TIHE project. All identified better knowledge and understanding of road safety as intended learning outcomes.

*"I would say it was to heighten the children's awareness of road safety."*

Teacher 4

However, three teachers observed the learning could go beyond this:

*"Well not just purely on a road safety level, but to think before you do things. Not to be in places you shouldn't...And be more aware."*

Teacher 2

*"...to educate the children about road safety issues and, on areas to prevent accidents happening by getting them to understand and learn about safety issues."*

Teacher 3

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*“And I think it has a number of layers to it. i.e. there was the safety aspect, road safety, but then there was also the thing about peer pressure...there was the dangerous building, being on their own somewhere, where nobody knew [where] they were...There was a thing about telling the truth. [And] to talk things over with your parents.”*

Teacher 5

Having been prompted that the common theme behind the different aspects of the programme was risk, this teacher re-articulated the aims of the project as:

*“...they were trying to make them think about other situations, where they might take risks and how could they stop an accident happening.”*

Teacher 5

Another teacher expressed the view that the aims included:

*“...to make the kids think clearly and positively and give responsibility.”*

Teacher 1

## Appropriateness of TIHE for the educational aims

There was general agreement that TIHE is an effective means for teaching and learning in road safety. One teacher expressed it thus:

*“Especially from the fact that some [pupils] were asking, “What does the driver think, how do they feel?” I think that is good.”*

Teacher 1

Another explained that TIHE was effective because:

*“...it is interactive and also it is making it a real experience...It’s not something they are just having to visualise, it is something they are going to act.”*

Teacher 4

Pupils’ involvement was seen as key to the learning:

*“Where children can be involved and participate...”*

Teacher 6

Advantages of TIHE over other teaching methods included having fun, and having an opportunity and alternative way for pupils to express themselves (Teachers 1 and 2). TIHE was also seen as developing confidence in the pupils. Other teachers spoke of the advantages of having an outsider to stimulate interest and motivate the pupils (Teachers 3 and 5).

*“It’s fresh because it’s not their same old teacher, time and time again.”*

Teacher 5

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However one teacher expressed the view that TIHE would not be effective as the only method for teaching about road safety:

*"I don't think it would do that just on its own. I would say that it highlights it, but doesn't focus just on that."*

Teacher 2

This was seen as an advantage, because there could be a focus on other aspects such as:

*"Relationships and friendships, things like that. That is a good thing, because it is not ramming it down their throats."*

Teacher 2

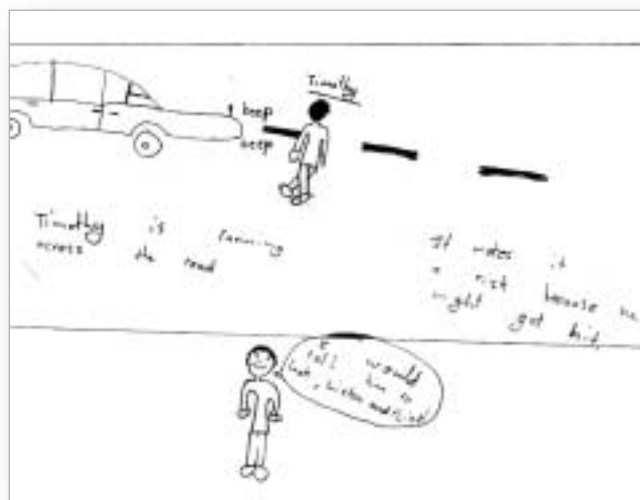
Another teacher felt TIHE provided opportunities for reinforcement of messages already learned:

*"I think the children were able to crystallise things they already knew. The rules they already knew."*

Teacher 4

*"They often know what they should do, it is a question of whether they put it into practice at the time."*

Teacher 6



*A pupil draws themselves giving road safety advice.*

## Other approaches to risk education

All teachers were asked how they incorporate risk education into their work with pupils. There was general support for an approach that encouraged pupils to reflect on day-to-day activities around the school. However, some clearly associated risk education with drug education.

Interviewer: *"So do you usually incorporate risk education into your teaching?"*

Teacher 2: *"No... Obviously we do the curriculum. We would probably highlight it, especially in PSHE. We talk about smoking and stuff like that."*

Another associated risk education with specific activities such as swimming, school rules, physical education and educational visits; 'the old chestnuts' as they were described by Teacher 6. However, this teacher also identified the potential of Citizenship as part of Curriculum 2000, to provide a specific 'slot' for risk education, over and above the regular reminders.

# Results

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Some teachers appeared to make a distinction between safety education and risk education:

*“There are certain things that... risk things that happen every day in the playground that we have to talk about. And yes, OK that is to do with safety, but that – safety is a separate issue.”*

Teacher 5

In addition what teachers perceived as ‘safety education’ seemed to be a lower priority than education about drugs and alcohol or bullying. Teacher 4 perceived road safety education to be more appropriate for younger pupils, reflecting what had already been done in school through contacts with other agencies e.g. the police while another suggested that safety was the norm for younger children:

*“They grow up being told to be safe.”*

Teacher 3

Some teachers suggested that safety education may be more reactive than proactive:

*“If someone has an accident on the way to school, that probably brings it to the front burner.”*

Teacher 1

*“It [safety education] is not something that is highlighted in their lives particularly, unless they have an accident and then they become more vigilant.”*

Teacher 2

However teacher 6 felt strongly that safety education had equal weighting with other aspects of PSHE.

## Draw and Write

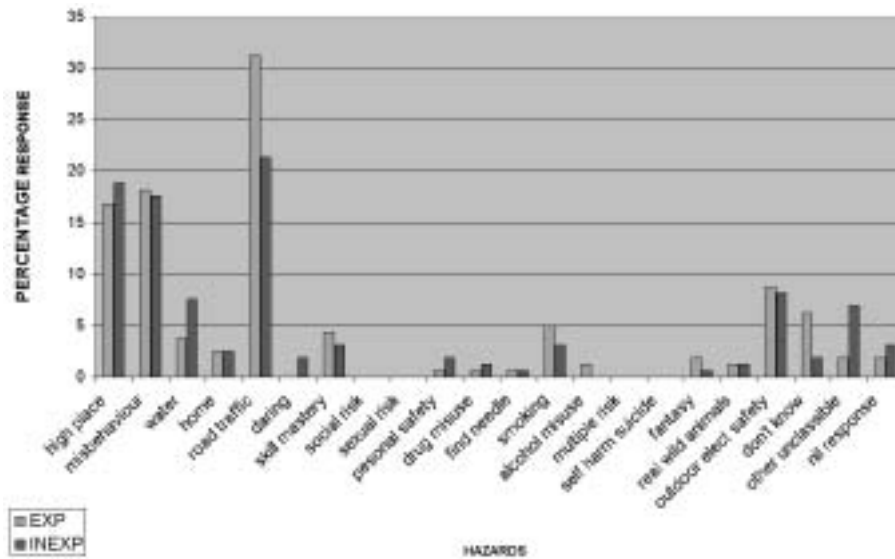
A total of 160 experienced and 159 inexperienced pupils aged 9–11 participated in the draw and write activity and 72 experienced and 78 inexperienced pupils from 8 schools took part in the focus groups.

In response to the draw and write task, pupils identified a range of ‘things people their own age do which are risky’. The highest scoring category for both experienced and inexperienced pupils were associated with road safety (see Fig 1). Experienced pupils were more likely to associate road accidents with risk if they had experienced the TIHE (31%) than if they had not (21%) reflecting the dominant theme of the TIHE. These ‘road safety’ risks were examined further for qualitative differences.

Pupils identified a wide range of activities on the roads which were risky. These mostly involved pedestrians coming into contact with cars. However, a few involved cycle safety, or driving under age. In some incidents those involved were not following road safety rules such as ‘stop, look and listen’, or using crossings correctly. Other scenarios were connected with misbehaviour such as placing obstacles in the road or playing ‘chicken’. Some scenarios depicted children being dared, while others were examples of accidents caused by inattention, such as running after a ball. Approximately a third of the risks described by experienced and inexperienced pupils in the ‘road safety’ category were ‘running across the road’. There were no systematic differences between the road risks described by the two groups of pupils.

# Results

**Fig 1 Hazards depicted by pupils when asked to draw someone their own age, doing something risky.**

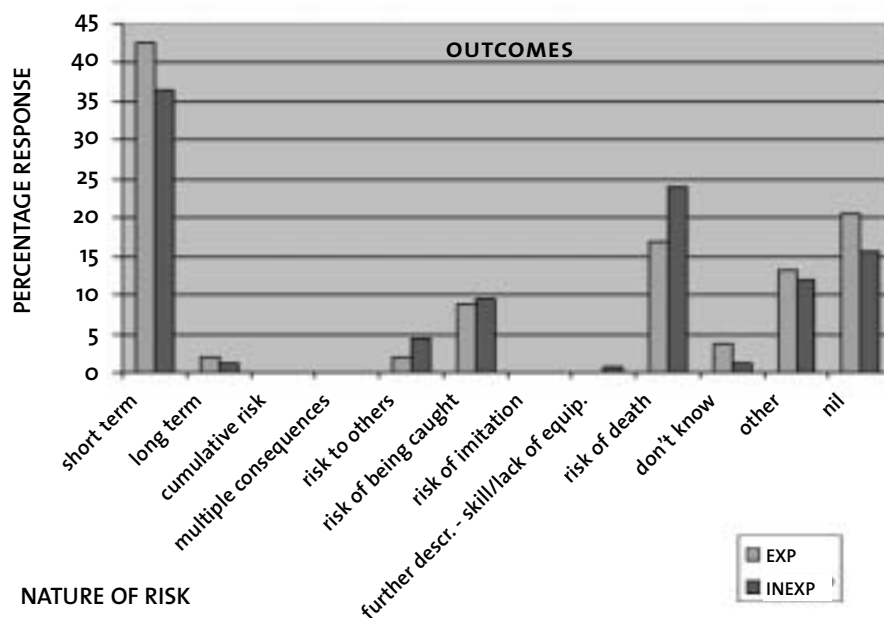


A secondary theme of the TIHE programme was misbehaviour and building site safety. The frequency of these categories did not vary significantly with TIHE experience (see Fig 1). Amongst the experienced pupils there was a small overall reduction in the frequency with which water hazards were identified and in the sum of the non-specific categories of 'don't know', 'other', or 'nil response'. However a higher percentage of experienced pupils wrote: 'I don't know what risky means' on their response sheets than the inexperienced group.

As part of the draw and write activity pupils were asked to write about what made the activity they had drawn 'risky'. The purpose of this question is to clarify the risk involved. For example the young person may perceive the risks associated with smoking to be short term such as being caught or told off, or may identify longer term health outcomes. Findings suggest that in this sample pupils were most likely to identify short-term outcomes, many of which were associated with death or serious injury (Fig 2).

**Fig 2 Pupils' responses to 'what makes it risky' as a percentage of the total number of respondents.**

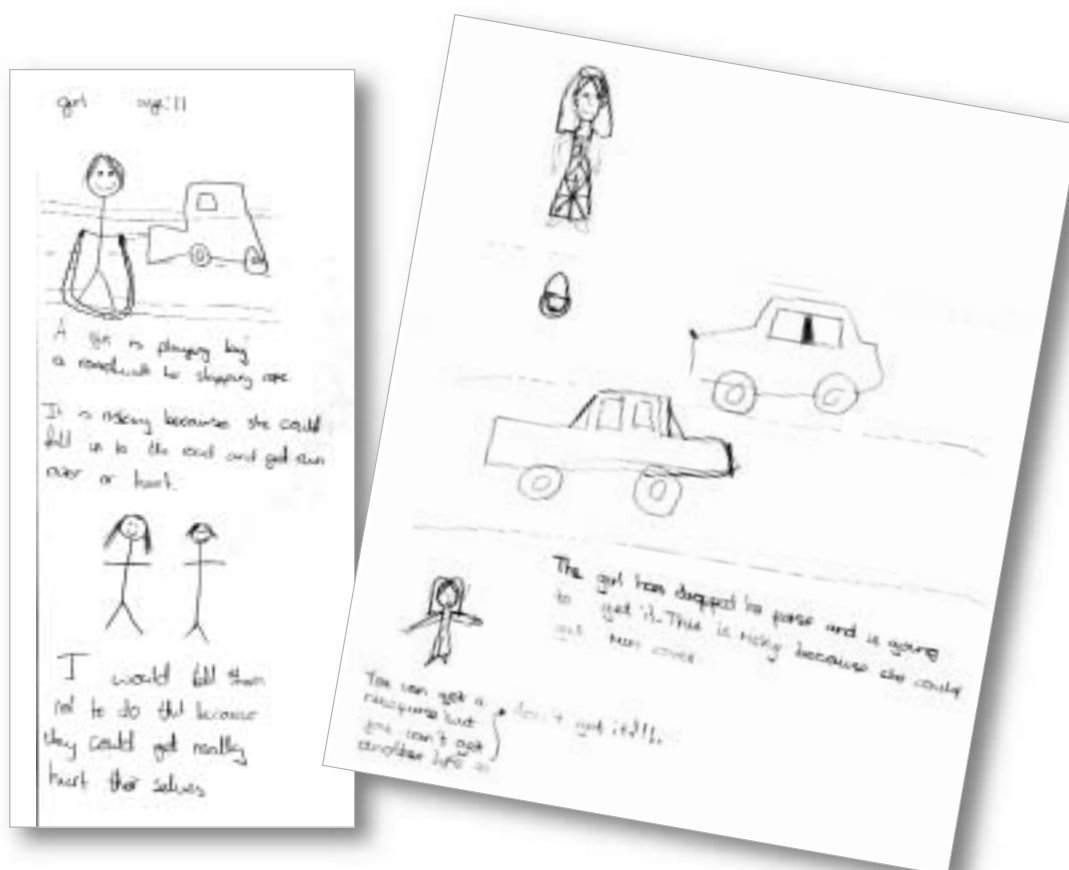
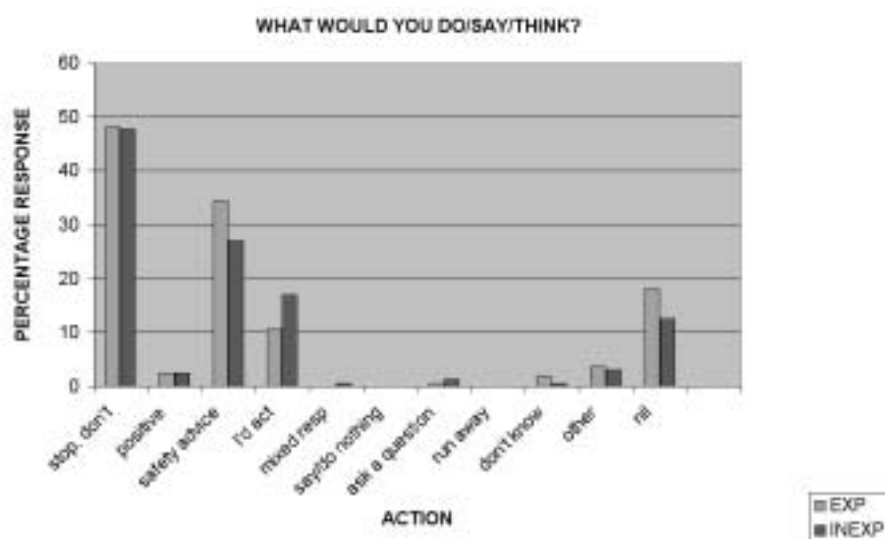
**Note:** Responses could be counted more than once – e.g. 'short term' and 'getting caught'.



# Results

Finally pupils were asked what they would do if they were present during the risky activity they had described (See Fig 3). Experienced pupils more frequently responded with safety advice (34%) than inexperienced pupils (27%), but also were more likely to give a nil response (18%, 13% respectively). Conversely inexperienced pupils were more likely to write about taking action to intervene than experienced pupils (17% inexperienced, 10% experienced).

**Fig 3: Pupils' responses to 'what would you be saying, thinking or doing if you were there. N.B. Responses could be counted more than once e.g. 'stop, don't' and 'safety advice'**

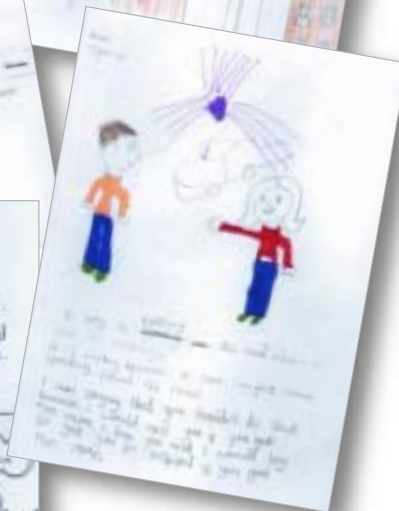
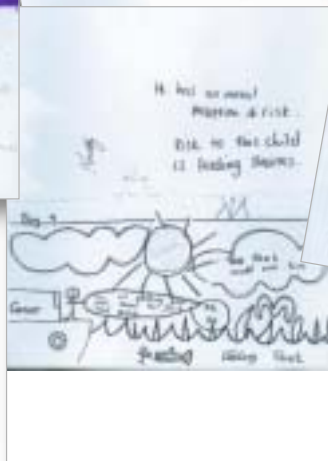


# Results



It is dark outside and my friend is riding her bike without wearing a helmet and without light.

This is risky because if she hurts herself her head is not protected and a car might hit because she has no lights on her bike.



A number of examples from the Draw and Write exercise.

# Results

## Focus groups

In the following section pupils are identified by gender and school code and whether they were part of an experienced (E) or inexperienced (I) group. In addition some transcript subsections pupils are referred to by number to indicate the sequence of the discussion.

The aim of the focus groups was to explore the pupils' understanding and language of risk. The focus groups began with pupils describing their pictures, and moved on to put them in the position of experts on risk and how they could learn more about risk. They also spoke about what risk meant to them and whether risk was always 'bad'. Finally pupils were asked to think of a name for the performance which had been the starting point for the day's activities.



*Students perform a 'still image' during a workshop.*

## Pupils as experts

The interviewer encouraged pupils to think of themselves as possible experts to facilitate open discussion of the topic of risk. However, some pupils denied they were experts on risk, either because they lacked experience, or knowledge, or courage:

*"I think I am too scared."*

(Girl, ASE)

One child from the experienced group asserted:

*"I think you can't really be an expert on risk."*

(Girl, ASE)

However, others claimed their prior experience or knowledge made them experts:

*"Because we know what we shouldn't do, or what we should do. That is really it."*

(Girl, SAE)

Another implied her involvement in the TIHE had helped her to become an expert:

*"Because we have learnt a lot about being safe and not being stupid on the road, and I know a lot about it now."*

(Girl, BDE)

The role of parents in educating young people about risk was described by another girl, from an inexperienced group.

*"My dad talks to me every single day about risks. I think I am an expert because I hear about it every day."*

(Girl, ASI)

Public safety signs and campaigns were also influential:

*"There are lots of signs as well...lots of signs saying 'don't do stuff'"*

(Boy, YFE)

# Results

There were few differences between the boys and girls on this. However, boys were more likely than girls to appear to take the idea of being an expert lightly:

*"I was a risk expert since I was born."*

(Boy, SAE)

## Learning about risk

Inexperienced pupils were asked how they might learn more about risk. A wide range of opportunities were included, some formal, such as schools and clubs, some informal such learning from their own or others' experiences and holidays abroad. Specific media such as books, videos, leaflets and posters were mentioned, but also drama series, cartoons and news programmes. Learning from family and friends was also frequently included in the pupils' lists of ways to learn about risk.

As might be expected many different opportunities in school were identified, including assemblies and specific lessons such as science. As one child put it:

*"When you learn about risks it is like learning a normal subject like maths or English."*

(Girl SCI)

A boy in another group gave this possibility some thought:

*"You are not going to say, like maths, risk equals danger (Pause) ...Actually you could. You do that actually."*

(Boy, SAI)

Outside speakers or visitors to schools were also mentioned, specifically police, fire personnel and road safety officers. One pupil addressed the concept broadly:

*"You can learn from other people. You can learn from the whole school.... in assemblies. There could be safety officers. There could be risk officers."*

(Boy, SAI)

A boy may have been referring to TIHE when he spoke about 'plays' (SCI) and a girl suggested drama classes would be a good way to learn about risk (CPI).

Experienced pupils were asked specifically if they had learned anything about risk from their TIHE experience. All pupils could describe the activities in which they had been involved e.g. watching a play, still images, hot seating and performing, and many related the narrative of the performance in detail. Fewer could articulate the way these activities had helped them to learn about risk. However in one school a discussion amongst the boys brought out the following issues:

Boy 1: *"We took part. We had to act as well."*

Boy 2: *"And it is naughty going into a building when they are breaking it down."*

Boy 3: *"It makes you feel how it is."*

Boy 4: *"It makes you wonder, if you do it, what could happen."*

(Boys, YFE)

# Results

Other pupils' discussions focussed on the simple rules and messages learned:

*"Not to run across the road and look both ways before you do it."*

(Girl, YFI)

*"It taught us not to play on the roads and to stay on the pavement."*

(Girl, YFI)

Others recalled messages conveyed in discussion with pupils:

*"We were talking and saying...a man who said it is really hard to say no to a friend. That is what he said.*

*There was a boy running across the road, because his friend told him to."*

(Girl, ASE)

## The meaning of risk

All pupils were asked to explain what the word risk meant to them. While approximately 7% of pupils responded with "I don't know what risky means" to the draw and write activity, all pupils in focus groups were able to offer a single word or phrase to express the meaning of risk. Common explanations were 'danger' or 'dangerous', with this being the first word which came to mind in many groups. Other negative associations included 'harmful', 'deadly' and 'warning'.

Some frequently used words seemed to imply that the person involved was at fault, for example: 'silly', 'stupid' or 'naughty'. One girl used the phrase 'thrill seeking'. Pupils also often spoke about 'getting into trouble' or 'getting caught'. Some pupils used the word 'daring', sometimes associated with the level of excitement, but more often 'being dared to do something you shouldn't'. Other adjectives included 'crazy' or 'confused'.

Some pupils used words which evoked the feelings which had led to the risk, such as 'angry' or 'vicious', while others used words which suggested the impact of the risk on feelings such as 'sad', 'frightened', 'scary' or 'worried', or words that implied physical harm such as 'pain', 'hurt', 'death'.

Some words reflected the level of courage or skill involved in managing risk, such as 'being brave', or doing something 'complicated' or 'hard'. As one pupil expressed it:

*"Practice makes perfect."*

(Girl, SCI)

Most pupils' explanations of what risk meant were based on further examples of risky activities such as running across the road, or occasionally of the risks associated with particular jobs, for example doctor or firefighter.



*Pupils create a tableau to show the audience the moment of the crash.*

# Results

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Others explained risk in terms of the consequences:

*"They are putting their life in danger."*

(Girl, SAI)

Sometimes these consequences included others:

*"They could hurt someone else."*

(Girl, SAI)

*"You could get into serious trouble, or get other people into serious trouble."*

(Girl, SAI)

Only two pupils in either experienced or inexperienced groups used the language of probability such as 'chance' or 'luck'.

*"Taking a chance, but if it goes wrong you could get dead or injured."*

(Girl QFE)

*"Taking chances"*

(Girl CPI)

One girl from an experienced group (ASE) used the word gambling to explain risk and others tried to suggest the uncertainty of risk in other ways:

*"If you are not sure of it don't do it."*

(Girl, SAE)

*"What about something you are not sure of?"*

(Boy, SAI)

*"Uneasy."*

(Girl, ASI)

Girls seemed more able to articulate the meaning of risk, whether they were in experienced or inexperienced groups. When the interviewer tried to prompt further suggestions from a group a girl made the following comment about the complexity of the language of risk:

Interviewer: *"Anybody got anything else? It is a hard word to understand."*

Girl (SAE): *"Not really, but it is hard to find definitions about it."*

# Results

## Can risks be good?

While pupils spoke and wrote readily about negative aspects of risk, they had to be prompted to consider if risks could ever be good. Some groups began by asserting that risks could never be good, but once one example had been elicited, all pupils could think of situations where risks might be 'good'. Good risks fell into a range of categories including avoiding the consequences of the activity:

*"When someone jumps off a building and survives."*

(Boy, SCE)

And:

*"A good risk is like when you plan to do something and you do it and you don't get caught."*

(Girl, SCI)

Or when you learn from the experience:

*"When it teaches you things."*

(Boy, QFE)

Or when a greater good was served, e.g. saving the life of another:

*"If someone was trapped and somebody went to help them."*

(Girl, SCE)

However, as this extract shows the pupils were aware of the dilemmas associated with these risks:

Boy 1: *"If somebody was in a fire and locked in a room and somebody went into save them. You are taking a risk. You are risking your life to save them. It could be a baby."*

Boy 2: *"It is half good and half bad. If it was a baby you could risk your life for the baby's life. It is a good idea, but if it fails and the baby dies then it is a bad idea."*

(Boys, YFE)

Another example of a 'good risk' was one where the potential benefit outweighed the risks for the same individual e.g. hospital treatment:

*"Because if you were in hospital you could die. If you didn't take a risk like a heart operation or something like that you could die."*

(Girl, YFE)

There might also be risks for the individual in the pursuit of a good cause:

*"If you are picking up some glass, it is a risk because you can hurt your hands, it is a good risk because you are doing good for the environment, by cleaning it up."*

(Boy, SAI)

# Results

Two girls mentioned risks associated with social or moral situations:

Girl 1: *“When a new person starts in the class or something and you want to make friends with them and you are not sure if they are going to be nice to you.”*

Girl 2: *“When you know someone that is doing something bad or you have seen them do something bad. You see someone doing or taking something. It is a risk to go and tell the police or go and tell someone.”*  
(Girls, ASE)

The same group of experienced girls had an extended discussion of risk, reaching the conclusion that:

Girl 1: *“Everybody has to have danger, don’t they, or it would just be boring. You wouldn’t live.”*

Girl 2: *“Everything in the world is risky.”*

Girl 3: *“You could read a book and get a paper cut, it is still quite risky.”*  
(Girls, ASE)

One boy felt that taking risks could be fun:

*“It is all right to take risks. Sometimes risks can be fun. Because you can ...water skiing, you can break your leg or you can have a good time.”*

(Boy, ASI)

Overall there seemed to be few differences in content between boys and girls or between experienced and inexperienced groups when it came to discussing ‘good risks’.

## Performance titles

This final closing activity gave experienced pupils an opportunity to use their language skills to describe the performance they had seen earlier in the day. In five of twelve focus groups the word risk was incorporated into a suggested title. Some groups came up with more than one title incorporating the word risk. Examples include ‘road risk’ (Girls, ASE), ‘risk takers’ (Boys, BDE and Boys, SAE) and ‘the risky day’ (Boys, SAE). Many other imaginative or remembered titles emerged from other groups, including some which incorporated the general instructions to ‘be safe’; ‘stop, look and listen’; ‘look, listen and learn’ (Girls SCE) and ‘be safe, be seen’ and ‘be sensible and think’ (Girls, SAE). Others were more specific such as ‘remember the road code’ (Girls, QFE). Some titles include a warning or advice e.g. ‘safety first, fun last’ (a quote from the performance) (Girls, BDE). One group of boys focused on a character in the story with their titles: ‘Always listen to your Dad’ and ‘Never doubt Dad’. (Boys, ASE). Once again girls contributed more than boys and the titles suggested by boys tended to be more humorous.

# Discussion

**In this section of the report the results will be discussed with particular reference to the first objective of the TIHE programme.**

To provide an interactive learning experience to assist Key Stage Two (pupils) develop their knowledge, skill and understanding of attitudes needed in order to assess and manage risk.

**In collecting these data concerning the programme objective, evidence has emerged concerning the following key factors:**

- **The clarity of the programme objectives**
- **The relationship between the aims of the supporting organisations and the objectives of the programme**
- **The appropriateness of the learning outcomes and approach for the target group**
- **The extent to which pupils developed their knowledge, skills, understanding and attitudes to risk.**

## **Clarity of the objectives**

It would appear that that most of the adults interviewed were aware of the objectives of the project, although one RSO was somewhat cynical about the aim of Toyota. Not all were in agreement that the objectives could be achieved with the target age group, however. One RSO felt that 'understanding risk in the context of children's lifestyles' was too subtle for less able pupils, and her colleague from another local authority (interviewed separately) felt that the learning outcomes were more concerned with simple road side language and rules.

Most teachers recognised that the project had a wider focus than road safety but were less aware of the underpinning concept of risk than any of the personnel from organisations responsible for managing or delivering the programme. Teachers' perceptions were that pupils were rehearsing well-learned rules in more complex and challenging situations than can usually be provided in school. They perceived many benefits of pupils being able to work in this way including having the opportunity to see an incident from different points of view. The teachers also recognised many key features of TIHE identified in previous studies such as working with trusted outsiders, developing pupils' confidence and reflective skills.

## **The relationship between the aims of the supporting organisations and the objectives of the programme**

Where different organisations work together in partnership to achieve an educational outcome there are inevitable conflicts of interest. In this case these seem to have been minimal, achieved largely by having clear boundaries within the management structure, and relative autonomy for the creative partners. However there was some conflict between the aims of the organisations with a national focus (RoSPA and Toyota), who both wished the project to reach a 'good spread' of schools nationally, and RSOs who felt that the programme would be more effective if it was available to more schools in a smaller area. RSOs considered they would then be better able to target and support schools and monitor outcomes in terms of accident statistics.

# Discussion

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## **Were the learning outcomes appropriate for the target group?**

It is clear that pupils in the target age group are vulnerable to accidents and that parents, teachers and other professionals have sought ways to reduce the number and severity of these accidents through 'safety education'. Recently there have been attempts to help pupils understand risk in order to help them to keep themselves safe in a variety of contexts, including on the roads.

The literature review has shown that pupils in Key Stage 2 (8–11 years) have difficulty understanding risk, and frequently equate risk with extreme danger, where there is a high probability of a severe outcome (McWhirter, 1997). It has also been shown that pupils in Key Stage 3 (11–14 years) find it difficult to articulate what risk means to them and often associate risk with misbehaviour (McWhirter, 1998). It has been proposed (McWhirter, 1997; 1998) that approaches to risk education which start where children are and develop the pupils' language of risk have the potential to enhance their knowledge and understanding, and to help them to consider their attitudes to risk.

There is an extensive literature examining the effectiveness of TIHE in a variety of contexts. The work of Ball (1994) in identifying common features of TIHE and health education and the review of TIHE in sexual health education by Firmstone and Jenkins (1999), both support TIHE as an appropriate approach to education for risk reduction.

'On the Road' was developed by members of an experienced TIHE company who understood the educational objectives of the project. 'On the Road' is a typical forum theatre production based on a multi-layered scenario, taking into account accident statistics and developmental characteristics for the age group. While there was focus on road safety, the performance also involved misbehaviour and peer influence, factors which are known to be associated with risk taking and risk perception for pupils in Key Stage 2. It would therefore appear that both the learning outcomes and the pedagogical approach are appropriate for the target group.

## **To what extent did pupils develop their knowledge, skills, understanding and attitudes to risk?**

Firmstone and Jenkins (1999) applied a psycho-social decision-making model of risk reduction in their study of sexual health and TIHE. This model relates well to the objectives of this study. The following aspects of the model have been explored with the pupils in this study:

- Knowledge, and understanding of risk and its prevention
- Risk management skills
- Awareness of personal meaning of risk.

In addition evidence has been collected with regard to pupils' attitudes to risk.

### **Knowledge, and understanding of risk and its prevention**

Pupils' knowledge and understanding were explored in two ways: through a draw and write activity, and focus group discussions.

# Discussion

Results of the draw and write survey conducted here differed from those found in studies of pupils of similar age groups. In previous studies with pupils aged 9–11 years, the highest scoring category was 'being a in a high place', with 'road safety' as the second most frequent category (McWhirter, King and Bryant, 1997). However, in the present study, road safety was the highest scoring category for inexperienced and experienced pupils, with 'high places' and 'misbehaviour' almost equal in second place.

It is known that as an illuminative research tool, draw and write can be sensitive to the context in which it is carried out (Backett-Milburn and McKie, 1999; Gabbahain and Kelleher, 2002). In the study of pupils' perceptions of risk (McWhirter et al 1997) described above, the responses from pupils in one particular school differed markedly from the others. In this school, the highest scoring category of response to 'draw a person your age doing something risky' was indeed 'road safety'. This was attributed by teachers at the school to a recent focus on road safety in school assemblies and PSHE lessons.

In the present study inexperienced pupils were anticipating their involvement in a TIHE programme (perceived by teachers to be broadly about road safety). It is not surprising, perhaps, that these pupils related open ended questions about risk to 'road safety'.

However, the proportion of experienced pupils who related risk to road safety was higher than inexperienced pupils. Somewhat unexpected was the finding that 'I don't know' responses are higher amongst experienced pupils.

Increasing the association for pupils between 'risk' and road safety' is a welcome but perhaps unsurprising finding, since pupils completed the draw and write activity on the same day that they were involved in 'On the Road'. Whether or not this demonstrates pupils' knowledge and understanding of risk per se has increased is debatable, however. Indeed raising the frequency of association of risk with a particular activity could be said to reflect a narrowing of the pupils' understanding of risk. Countering this possibility is the finding that the road safety incidents depicted by experienced pupils were no more likely to be about 'running across the road' (the incident involved in the performance) than those drawn by inexperienced pupils. This suggests pupils were still capable of

thinking about risk beyond the specific context, and were not simply mimicking the scenario presented to them earlier in the day.

The increase in the proportion of experienced pupils who responded 'I don't know what risk means' may reflect the possibility that pupils were challenged to think more carefully about the meaning of risk as a result of their experience. This would need to be explored further, however.

Evidence was sought for pupils' understanding of risk in the focus groups, where there were several opportunities for pupils to talk about the meaning of



*A teacher joins in with with 'still picture' exercise.*

risk. While many pupils spoke confidently about consequences of risk, few experienced or inexperienced pupils used the language of probability during the focus group discussions. This suggests that the activities involved in the TIHE did not help pupils to understand the duality of ideas underpinning risk: severity and probability of a particular outcome.

# Discussion

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## Risk management skills

In the draw and write activity pupils were invited to 'put themselves in the picture' by writing about what they would do or say if they could observe the risky activity. When asked what they would say or do if they were present, experienced pupils were more likely to give advice, whereas inexperienced pupils were more likely to act to intervene, even though this may place themselves at risk.

This evidence supports the view that the TIHE programme has enhanced pupils risk management skills, enabling them to identify strategies for reducing risks.

## Awareness of personal meaning of risk

Focus group discussions have the potential to reveal something of the personal meaning of risk to the pupils, how they articulate this and how their understanding of risk is constructed.

The focus group discussions suggest that pupils of this age group are best able to talk about risk when they can use concrete examples, either from their own experience or fictionalised in the form of the draw and write activity. When discussing concrete examples pupils demonstrated that they were aware of the consequences of the risks they chose to describe, could recognise different kinds of consequences, many of which were severe, and weigh these against the potential benefits. Some pupils recognised that some actions were potentially risky for others.

Nevertheless when they were asked to talk about the meaning of risk, they continued to use examples rather than abstractions, such as 'chance' or 'luck', 'possible' or 'probable'. Generally speaking the girls in this study spoke with more sophistication about risk and consequences for themselves and others, a finding which is similar to previous studies using focus groups (McWhirter, 1998).

Pupils could identify a wide range of opportunities for learning about risk, at school and in the wider community. School based examples included specific lessons, drama and 'plays'. However pupils who had experienced the TIHE found it difficult to say how TIHE had helped them to learn about risk, focussing instead on the activity or the simple messages, rather than the more complex and abstract concept of risk.

Overall, pupils found it difficult to articulate the meaning of risk except through concrete examples. For this age group risk appears to be defined by the severity, rather than the likelihood of the outcome. The TIHE experience did not seem to have influenced this construct.

## Attitudes to risk

In both the draw and write activity and focus group discussions pupils described many examples of risks where the consequences were severe and when asked to put themselves in the picture the majority of their responses were negative i.e. included an instruction to stop or advice which would reduce the severity of the outcome. Very few examples suggested that risk could be fun, or an opportunity to learn.

In focus group discussions pupils had to be prompted to think of examples of risk which could be positive. This suggests that pupils' attitudes to risk were largely negative. This is in keeping with the findings of other studies with adults and children. Indeed many definitions of risk incorporate negativity in referring to harmful outcomes. However in one group of experienced girls, pupils volunteered the idea that risk was an inescapable part of life, suggesting that pupils of this age could take a more balanced view of risk.

# Conclusion

Teachers and pupils appear to have gained much from the opportunity to participate in the 'On the Road' project.

The teachers felt that the pupils were able to rehearse well-learned rules in more complex and challenging situations than can usually be provided in school. They felt it was an appropriate way to reinforce important messages about road safety ("I think the children were able to crystallise things they already knew") and for pupils to reflect on an incident from different points of view ("...some were asking "what does the driver think, how do they feel?"). Teachers also recognised the benefits of the participatory nature of TIHE ("It is interactive and also making it a real experience ... it's not something they are just having to visualise, it is something they are going to act").

Pupils enjoyed the experience and remembered details of the performance and of their involvement. Pupils who had experienced the programme were more aware of the association between road accidents and risk. They were aware that the consequences of risk taking on the road could be severe and could make useful suggestions for ways to reduce the risk in a variety of road safety scenarios ("It makes you feel how it is" and "It makes you wonder, if you do it, what could happen").

In this respect, pupils appeared to be able to apply the risk assessment process in relation to a familiar context. However, pupils were best able to talk about risk when they could use concrete examples, either from their own experience or fictionalised in the form of the draw and write activity. In these cases, they demonstrated that they were aware of the consequences of the risks they were describing, could recognise different kinds of consequences and weigh them against potential benefits.

Neither experienced or inexperienced pupils were able to identify or articulate the steps in the risk assessment process, a stage which would be necessary if they were to encounter an unfamiliar hazard or set of circumstances. They were also unable to construct a meaning of risk which incorporated ideas of probability as well as severity of outcome. To these pupils 'riskier' meant 'more severe', rather than 'more likely'. For this age group risk appears to be defined by the severity, rather than the likelihood, of the outcome.

There are many possible reasons for this. It is unlikely that pupils will have had the meaning of 'risk' taught to them prior to the TIHE experience. Indeed, many teachers and parents, like the general public, use 'riskier' to mean 'more severe'. The programme did not specifically target the issue of probability by comparing 'common' and 'uncommon' risks, and may have been considered to be more concerned with road safety than the generic concept of risk. For pupils, the dramatic road safety content may have obscured the more subtle message about risk.



*Actors and students make a still image during a workshop.*

# Conclusion

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It is also possible that there are developmental barriers which prevent pupils of this age group from understanding abstract concepts, or related linguistic difficulties which make it more difficult for them to explain what risk means. Thus, the question remains whether other pedagogical strategies can be more effective in helping children to extend their understanding of risk. The alternative approach to reducing the accident statistics for this age group would seem to be further surveillance and control of children, a measure which is likely to be counterproductive in terms of their general health and well being.

It may be that pupils lacked prior educational experience of handling this important concept and that TIHE was not the most appropriate form in which to introduce such a complex idea. Rather it has served to reinforce previously well-rehearsed rules in a fresh and stimulating way.

It is clear from the epidemiological evidence that young people of this age are vulnerable to accidents.

The literature suggests that enhancing pupils' knowledge and understanding of risk could help young people to keep themselves safe in a wide range of contexts.

This project has been successful in re-inforcing road safety messages and in providing opportunities for pupils to try out situations from different points of view. To enable pupils of this age to develop a deeper understanding of the relative probability of different hazards causing harm could require a wider programme specifically targeted at this issue.

# Appendix 1

## Interview schedule for teachers

1. Were you present when Catalyst Theatre Company presented their performance?
2. Were you there when they did the workshop activities with the children?
3. What was your general impression of the performance?
4. What was your impression of the activities?
5. How did you think the children responded to the performance?
6. And the activities? (Prompt: did you see any learning taking place in the performance?)
7. Have you been involved in TIE before? – From your knowledge of TIE, how effective is Theatre in Education generally as a teaching method compared to other teaching methods at your disposal? (Prompt: why? Advantages/Disadvantages)
8. After seeing S2BS do you think TIE is an effective method of teaching road safety? How? (Prompt, why may it be more effective?)
9. What do you think the overall aim of this Theatre in Education project was?
10. What would you say were the specific aims and objectives of the teacher/actors? (Prompt: learning outcomes) (Tell them – either... as you have identified or another objective was to help children to recognise, assess and manage risk).
11. How do you usually incorporate risk education into your teaching? (Prompt: distinctive from safety education?)
12. Have you any plans to use any of S'cool to be Safe resources, which encompass drama activities, in the future?
13. In PSHE as a whole how does safety education compare with other PSHE topics such as bullying, drugs education, keeping healthy?

## Round up...

As you are probably aware this project is sponsored – are you aware which company sponsors the project?

If necessary prompt – Toyota – why do you think Toyota would sponsor this project? How does this sponsorship change your impression of this company?

The project was managed by RoSPA, and organised via your local Road Safety officer. Has this project encouraged you to make/continue contact or use with either of these organisations?

# Appendix 2

## Question routes for pupils taking part in focus group discussions

### Children who have seen the performance

Thank you for coming to this group to tell me more about what you have drawn. The group is called a focus group and is one way of finding out from people what they know or feel about something. Again, it is not a test and there are no right or wrong answers, we are really interested in your opinion.

Before we start we should have some guidelines:

- First I will be recording this conversation so I don't have to remember what you have all said or make a lot of notes while you are talking.
- (Corrie/Karen) is going to help me by writing down who is talking as some voices sound very similar on the tape.
- Please write your first name in large letters on the label so she can see it.
- You should know that although we will use your ideas for the booklet we are writing we will not use your names, neither will I report back to your teachers who said what.
- The school will get a copy of the booklet but I am going to more than one school so you will not be able to tell who came from which school.
- Please do not tell other pupils about the subject of the discussion before they come into the focus group, as you may, without meaning to, change how they feel about the subject.
- The idea of a focus group is to get different ideas and opinions, whether you agree with what someone else has said doesn't matter.
- You don't have to speak in order but try not to speak when someone else is speaking. I will try to notice if you want to speak.
- If you don't agree with what someone has said please say so without putting them down.
- Because we only have a short time together, I may need to stop you and move on to another part of the discussion.
- Does anyone have any questions?

### Children who are experienced

1. Tell me about what is happening in the pictures you have drawn. What makes it risky? (Prompt – why did you draw that? Why did the person in the picture stand so close to the edge, jump in the water...etc?)
2. You seem to know a lot about risk; in fact I think you are all quite good experts on risk. Do you think you are an expert on risk? (How/Why?)
3. As a risk expert, how have you put yourself in the picture you have drawn? What would you do or say to help reduce the risk to the person?

# Appendix 2

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4. Did anything you see or take part in today help you to be an expert on risk? (Prompt – which part of the performance did you learn the most from? The performance, the Still images, or the risk activity)
5. Since you know so much about risky situations for your age group, perhaps you can help other children to understand what risk means – so what does risk mean to you? (Flip chart – paper brainstorm.)
6. All/most of the risks you have drawn about are bad. Do you think a risk is always bad? Can it ever be good to take a risk?
7. Round Up: You have told me a lot of interesting things about risk today. Some things you already knew and some things which you learned from the performance and activities. Is there anything else you think you have learnt today?
8. If you had to think of a title for the performance you saw today – what would you call it?

## Children who have not seen the performance

Thank you for coming to this group to tell me more about what you have drawn. The group is called a focus group and is one way of finding out from people what they know or feel about something. Again, it is not a test and there are no right or wrong answers, we are really interested in your opinion.

Before we start we should have some guidelines:

- First I will be recording this conversation so I don't have to remember what you have all said or make a lot of notes while you are talking.
- (Corrie/Karen) is going to help me by writing down who is talking as some voices sound very similar on the tape.
- Please write your first name in large letters on the label so she can see it.
- You should know that although we will use your ideas for the booklet we are writing we will not use your names, neither will I report back to your teachers who said what.
- The school will get a copy of the booklet but I am going to more than one school so you will not be able to tell who came from which school.
- Please do not tell other pupils about the subject of the discussion before they come into the focus group, as you may, without meaning to, change how they feel about the subject.
- The idea of a focus group is to get different ideas and opinions, whether you agree with what someone else has said doesn't matter.

# Appendix 2

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- You don't have to speak in order but try not to speak when someone else is speaking.  
I will try to notice if you want to speak.
- If you don't agree with what someone has said please say so without putting them down.
- Because we only have a short time together, I may need to stop you and move on to another part of the discussion.
- Does anyone have any questions?

## Children who are in-experienced

1. Tell me about what is happening in the picture you have drawn. What makes it risky? (Prompt – why did you draw that? Why did the person in the picture stand so close to the edge, jump in the water...etc?)
2. You seem to know a lot about risk; in fact you are all quite good experts on risk. Do you think you are an expert on risk? (How/ Why?)
3. As a risk expert, how did you put yourself in the picture? What would you do or say to help reduce the risk to the person?
4. Since you know so much about risky situations for your age group, perhaps you can help other children to understand what risk means, so what does risk mean to you? (Flip chart – paper brainstorm.)
5. How could you learn more about risk? (Use flip chart – paper brainstorm again) (Prompt if necessary – lessons from your teacher, lessons from expert visitors, films, videos, plays, activities which are risky organised by school or out of school groups.)
6. Round Up: You have told me a lot of interesting things about risk today. – all/most of the risks you have drawn about are bad. Do you think a risk is always bad? Can it ever be good to take a risk?

# Appendix 3

## Guidelines – Draw and Write Technique

- I am here today to do something very special which will help some people write a booklet. The booklet is about young people like you and it is important that the people writing the booklet use words and ideas which young people or children like you understand
- As this is a special activity we are going to work in a special way. I would like you to think for yourselves and then work on your own, without sharing your ideas with anyone. This means that the people writing the booklet will find out all the different ideas you have, not just one idea from the whole class
- This is not a test, there are no right or wrong answers
- Please write on the top of your paper if you are a girl or boy and your age in years. Please do not put your name.

## Is everyone ready?

1. I would like you to think about someone your own age – it could be a boy or a girl, but it should be someone about your own age. I'd like you to think about that person, doing something risky. Pause. I don't want you to talk to anybody else about your ideas. OK.
2. Now I would like you to draw a quick picture of that person, who is about your own age, doing something risky. It can be a stick person if you like – it doesn't have to be a perfect drawing. Try not to let anyone else see what you are drawing.
3. It does not matter if you do not know what risky means. If you don't know what risky means just draw a picture of yourself.

Pause and give them time to start drawing. You may have to remind them not to share their ideas with each other and that it should be a quick picture. (Don't be tempted to give an example)

4. When you have finished your picture I would like you to write under the picture what is happening. This does not have to be your best writing or spelling – just a quick line or two to explain what is happening in the picture.
5. Again it does not matter if you don't know what risky means – you can write 'I don't know' under the picture you have drawn.

Pause while they do this.

6. Now I would like you to write about what makes it risky for the person in your picture. Just a quick line or two to explain what makes the activity risky/ what the person is doing risky. (Don't be tempted to give an example)

Has everyone done that – written what makes it risky for the person? Good. We are nearly finished now.

7. Last of all I would like you to find a space in your drawing to draw yourself. It can be another stick person if you like.
8. Beside this picture I would like you to write what you would be doing or saying to help the person in the picture. Does everyone understand?

# Appendix 4

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## Programme Outline

'On the Road' is a ninety-minute participatory theatre-in-education programme about road safety for nine to eleven year olds. The programme is led by three teachers/actors for a maximum of thirty-five pupils and takes place in the school hall.

The programme begins and the pupils are immediately swept into the imaginary superhero world of the two principal characters: Tanya, aged 10 (also known as The Ice Queen) and Simon, aged eleven (also known as The Slayer). From their superhero fortress hidden beneath the stage of a disused church hall, The Ice Queen and The Slayer fearlessly defend the world from imminent destruction at the hands of the evil warlords of Zargon.

Risking their lives to save the rest of us, the dynamic duo defeat the enemy and still manage to get home in time for tea. Away from their secret den, Simon and Tanya are classmates and close friends committed to keeping their fantasy world private. However, Simon's father, John, does not approve of Simon's friendship with Tanya who he considers to be an absent-minded dreamer and a danger to herself and those around her.

At home, the pupils watch John preparing for his first road safety talk on behalf of Road Aware, which he is due to give to Simon's class next week. To Simon's acute embarrassment, his father is dressed in fluorescent clothing with a flashing cycle helmet and is firing off safety mottoes. Simon tells his father he will be treated as a joke, and besides, what can anyone tell his classmates about road safety that they haven't heard before?

The next day after school, Tanya tells Simon the church hall has been sold and that their den is in grave danger of demolition. They return to the den to try and salvage their belongings, but while they are there they cannot resist one final adventure as The Ice Queen and The Slayer. Suddenly, disturbed by voices they hear in the hall and still caught up in their fantasy world, they fear capture at the hands of the evil warlord and so flee from their den.

When Simon arrives home, his father is trying to comfort Linda, his Road Aware colleague who has just witnessed a road accident involving a child pedestrian. Despite Simon's best effort to conceal it, his father discovers that Simon has torn the sleeve of his new coat and injured his arm quite badly. When asked to explain the cause, Simon claims that he has hurt himself playing football.

The pupils are then told that a traffic surveillance camera has captured the accident witnessed by Linda. They are asked to work in groups using image theatre techniques to recreate the accident. Their resulting 'still images' are then shared with the whole class. The pupils then watch a short scene, which shows that Simon and Tanya were involved in the road accident witnessed by Linda.

Through discussion and 'hot seating', the pupils explore why Tanya and Simon failed to cross the road safely that day. The 'hot seat' allows pupils to directly challenge the characters' attitudes and actions and enables the pupils to explore whose responsibility it was to keep Simon and Tanya safe.

Returning to the drama, the pupils are reminded of John's classroom road safety speech and they are asked to work in groups to prepare safety campaigns of their own, targeting child pedestrians, cyclists and playing safely.

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