



ROSE 25

Inventory and compiling of a European Good Practice Guide
on Road safety education targeted at young people



BOOKLET

GOOD PRACTICE GUIDE ON ROAD SAFETY EDUCATION

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INVENTORY AND COMPILING OF A EUROPEAN GOOD PRACTICE GUIDE ON ROAD SAFETY EDUCATION TARGETED AT YOUNG PEOPLE

ROSE 25 [PROJECT FUNDED BY THE EUROPEAN COMMISSION]

COORDINATION AND PROJECT MANAGEMENT

KARIN WEBER (KFV, AUSTRIA)

CORE GROUP MEMBERS

ANNITA VAN BETUW (TRAFFIC TEST, NETHERLANDS)

EVELINE BRAUN (KFV, AUSTRIA)

ARMAND CARABEN (PAU EDUCATION, SPAIN)

NILS PETTER GREGERSEN (VTI, SWEDEN)

HELENE HELLSTEN (VTI, SWEDEN)

NICOLA NEUMANN-OPITZ (BAST, GERMANY)

EWALD POHLMEIER (BAST, GERMANY)

BERNHARD SCHAUSBERGER (OIR, AUSTRIA)

SABINE SCHUMANN (PAU EDUCATION, SPAIN)

JOANNE SENTINELLA (TRL, UNITED KINGDOM)

GUNILLA BERG SÖRENSEN (VTI, SWEDEN)

JAN VISSERS (TRAFFIC TEST, NETHERLANDS)

COUNTRY EXPERTS

Jean-Pascal ASSAILLY (INRETS, France), Lara BALDACCHINO (Malta Transport Authority, Malta), Evangelos BEKIARIS (CE.R.T.H./H.I.T., Greece), Carla BENTO (PRP, Portugal); Lydie CRUCHTEN-KAIFFER (Sécurité Routière Luxembourg asbl), Maria DABROWSKA-LORANC (IST, Poland); Ingrid ENGELS (IBSR/BIVV, Belgium), Miklós GABOR (KTI, Hungary), Peter HOLLO (KTI, Hungary), Minna-Maija HUOPALAINEN (Liikenneturva, Finland), Anastasia KOSTOULI (CE.R.T.H./H.I.T., Greece), Stefan Lehm (RFSF, Denmark), Mateja MARKL (SPV, Slovenia); Michael MC ALEER (Nifast, Ireland), Isabelle MEDINGER (Sécurité Routière Luxembourg asbl), Karin MEJDING (RFSF, Denmark), Tiia ROIVAS (University of Tartu, Estonia), Milla VÄHÄKAINU (Liikenneturva, Finland), Justyna WACOWSKA (IST, Poland); Jan WEINBERGER (CDV, Czech Republic), Vlasta ZABUKOVEC (University of Ljubljana, Slovenia), Neophytos ZAVRIDES (Cyprus Technical Chamber)

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Preamble

This page is reserved for the preamble of EC.



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Introduction

This booklet is the final result of the project 'Inventory and Compiling of a European Good Practice Guide on Road Safety Education Targeted at Young People' (Acronym: **Rose 25**, which stands for Road Safety Education in all 25 EU Member States). The project has been financed by the European Commission, Directorate General for Transport and Energy. The investigations in the member states have been carried out in the year 2004.

All road safety education actions mentioned in this booklet, as well as the totality of data collected in the course of Rose 25, can be found as questionnaires **on the European web site ##**. These questionnaires include a detailed description and a contact address. Each example has a reference number, which is indicated in [brackets]. In addition, the final report is also available on the web site. This report includes a list of all actions and media with the reference number, the file name, title in the native language and in English, as well as a short description of the example. Furthermore, the web site contains 25 country reports and the questionnaires on RSE curricula for all Member States.



Definition of Road Safety Education (RSE)

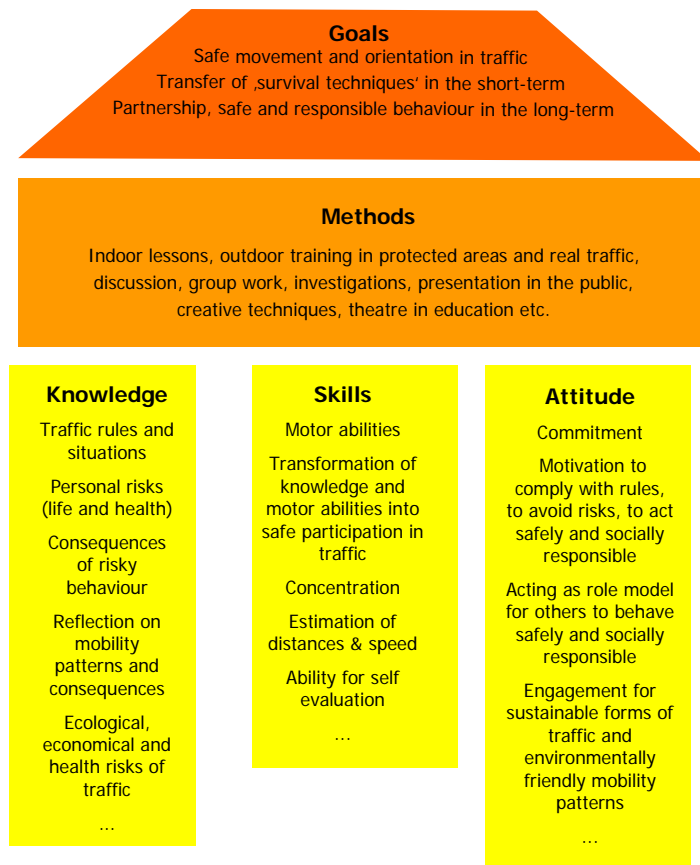
Road Safety Education (RSE) is – next to engineering and enforcement – a key pillar of traffic safety work. RSE summarises the totality of measures that aim at positively influencing traffic behaviour patterns¹. RSE emphasises on:

1. Promotion of **knowledge** and understanding of traffic rules and situations,
2. Improvement of **skills** through training and experience
3. Strengthening and/or changing **attitudes** towards risk awareness, personal safety and the safety of other road users.

Our study is focused on interventions or actions that include face-to-face contact with the target group. This type of RSE is mainly delivered through educational institutions, such as kindergartens and schools. Nevertheless, our survey has also targeted actions implemented outside the school system. Interventions aimed at mere dissemination of information and messages without actual interaction (e.g. campaigns) are not covered.

The following graph highlights the most important objectives and methods of RSE and outlines relevant topics concerning knowledge, skills and attitudes.

Graph 1: Definition of Road Safety Education



Source: Core group discussion

Purpose of the Booklet

In the course of our study it became obvious that RSE is at risk of being marginalised compared to other aspects of road safety, such as engineering and enforcement, or the development of new safety devices for vehicles. Thus it is important to raise awareness for RSE on a European level, as well as on a national and down to a local level. On the one side, our inventory has shown that in all 25 Member States, interesting examples of actions and media exist, but on the other side, in practically all countries deficiencies exist in RSE systems, as well as RSE delivery. Promoting exchange of experience among RSE experts in the EU can contribute to an improved position of RSE.

Part 1 of the booklet highlights in 10 steps possibilities and key success factors for the implementation of RSE with regard to:

- an effective operational and well co-ordinated institutional framework,
- an important intermediate goal: to involve parents and teenagers in RSE as important, but frequently neglected, target groups, and
- a long-term vision: RSE as an element of a continuous concept with clear goals targeting all road users, and not only children.

Part 2 is based on the analysis of the RSE actions collected for the overall project. The classification of actions along the modes of traffic participation was agreed upon as the most practical approach. A short review of key issues and recommendations concerning RSE is provided for:

- car passengers,
- pedestrians,
- cyclists,
- public/school transport, and
- moped users and pre-drivers.

The recommendations are illustrated by examples from our data collection.



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Ten Steps Towards Successful Implementation of RSE

The following part is the result of the analysis of 25 country reports and 25 questionnaires on RSE school curricula. Additionally, several discussions and exchange of experience in a working group of experts from six member states has taken place. In brief, the ten steps are:

1. Acknowledgement of the role of Road Safety Education,
2. Prioritisation of RSE and strengthening its role in public,
3. Strong co-ordination of all potential partners,
4. Prioritisation of RSE in schools and kindergartens – making RSE visible in curricula,
5. Promoting synergies and combinations between Road Safety Education and Mobility Education,
6. Addressing teenagers as a risk group,
7. Promoting the involvement of parents,
8. The long-term vision: reaching all road users by concept-based continuous RSE with clear goals,
9. Promoting synergies and combinations of education with enforcement and engineering, and
10. Strengthening research, evaluation and quality control.



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Acknowledgement of the Role of Road Safety Education

Historically there is no clear evidence that RSE has been effective in reducing rates of road traffic crashes, whereas such evidence exists for enforcement or engineering measures². Thus, RSE often suffers from a lack of prioritisation in traffic safety work in general, and specifically in educational work in schools. However one has to keep in mind that effective RSE includes a key element which none of the other road safety interventions, like engineering, enforcement or licensing training covers. This key element is *creating and changing attitudes towards safe and socially responsible behaviour in traffic*.

Besides the long-term perspective of developing attitudes, RSE must also contribute to an important immediate goal. One has to be aware that traffic accidents are the main cause of fatality for teenagers, ranking before disease. Traffic accidents also rank second as the cause of fatality for children after disease³. This underpins the importance of RSE as the only form of road safety intervention that offers children and teenagers tools for self-protection. This – the more traditional understanding of RSE – should be seen as *transfer of 'life-skills', or in other words, as a basic survival technique*.

Recommendation

Road Safety Education has to be regarded as a main pillar in traffic safety work, delivering basic survival techniques, as well as building and changing attitudes towards safe and socially responsible behaviour. RSE should change its image of an old-fashioned topic, which addresses only children. It should be regarded as an instrument of self protection offered to children, teenagers and all road users.

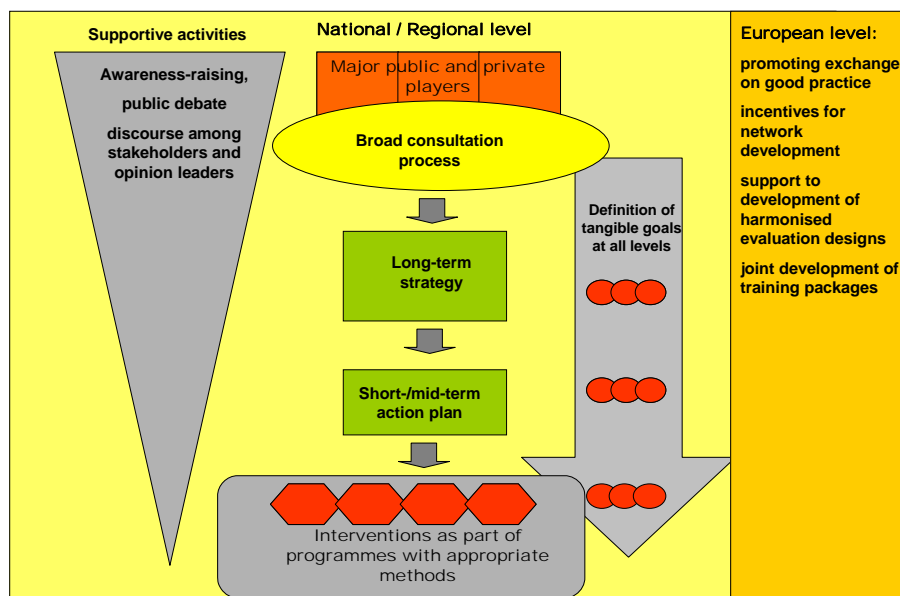
Prioritisation of RSE and Strengthening its Role in Public

An obvious pre-requisite for effective RSE is public awareness of its role and function. This is the major pre-condition for negotiating and maintaining public budgets, as well as for gaining support from the private sector. This leads to two major strategies to prioritise RSE:

- Support and inputs for broadly based awareness-raising and public debate: RSE needs to be marketed at the level of the decision-makers in order to become visible. It needs to be an important aspect in public debate on road safety issues. For example, the issue of attitudes and the need to develop social responsibility and self-evaluation is hardly part of public discourse. In order to launch and provide visible inputs to public debate, it is key to gain the support of prominent stakeholders from various sectors, such as police or public health officials. If such persons with first-hand experience in the field of road safety due to their involvement from a professional background contribute to awareness-raising activities, it will enhance the position of RSE.
- Anchoring of RSE in National Strategy Documents: Additionally, it is important to place RSE in National Strategy Documents and, at the same time, to support a clear notion of RSE in such documents. The best cases are clearly defined goals and objectives from a short-term to a long-term perspective. Furthermore, such plans should outline the division of tasks and the main responsibilities of major public bodies that form the core of the national/regional RSE system. Joint and participatory consultation processes during the elaboration of such plans will strengthen the position of RSE in decision-making processes.
- Partnership development: A step-by-step approach in partnership development is needed, which can be launched either from the top-down (initiated by public institutions at the national level) or bottom-up (through networking between RSE players in various institutions). A key step towards success is the development of partnerships between public bodies and public-private bodies. Broad partnerships, which act under a common label, will promote visibility and thus also assist with fundraising in terms of sponsorships.

The following graph illustrates the major elements of strategies to prioritise RSE.

Graph 2: Strategies to Prioritise RSE



Examples of good practice: Road Safety Education Labels for Schools in the Netherlands [177, 178]

In the Netherlands, an example of an intelligent combination of incentives has been developed:

- to broaden the position of RSE at school,
- to promote networking among stakeholders,
- to improve public visibility of RSE.



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BRABANTS VERKEERSVEILIGHEIDSLABEL

Noord Brabant, one of the 12 provinces of the Netherlands, has developed a programme that integrates continuous RSE throughout the entire school career of children (4 to 16 years). Schools that participate in this programme have an option to achieve a certificate, the so-called 'RSE label'. This is a logo that can be placed prominently on the school building. An independent commission visits the schools in a two-fold function: on the one hand, in an advisory capacity, and on the other hand, as quality controllers. Together with the community, the province develops strategies to involve as many schools as possible. A total of 6 persons are engaged at the province level to promote this programme within the entire province and to engage in pro-active networking among the local authorities. Five other provinces have joined this programme, all of them applying the same standards. Schools that take part in this programme receive financial support from the province.

Recommendation

- RSE needs marketing at the level of decision-makers in order to become visible and to be an important aspect in public debate on road safety issues.
- It is important to place RSE in National Strategy Documents and, at the same time, to support a clear notion of RSE in such documents.

A step-by-step approach in partnership development is needed which can be launched either from top-down or bottom-up. Broad partnerships which act under a common label will promote visibility and thus also possibilities of fundraising.

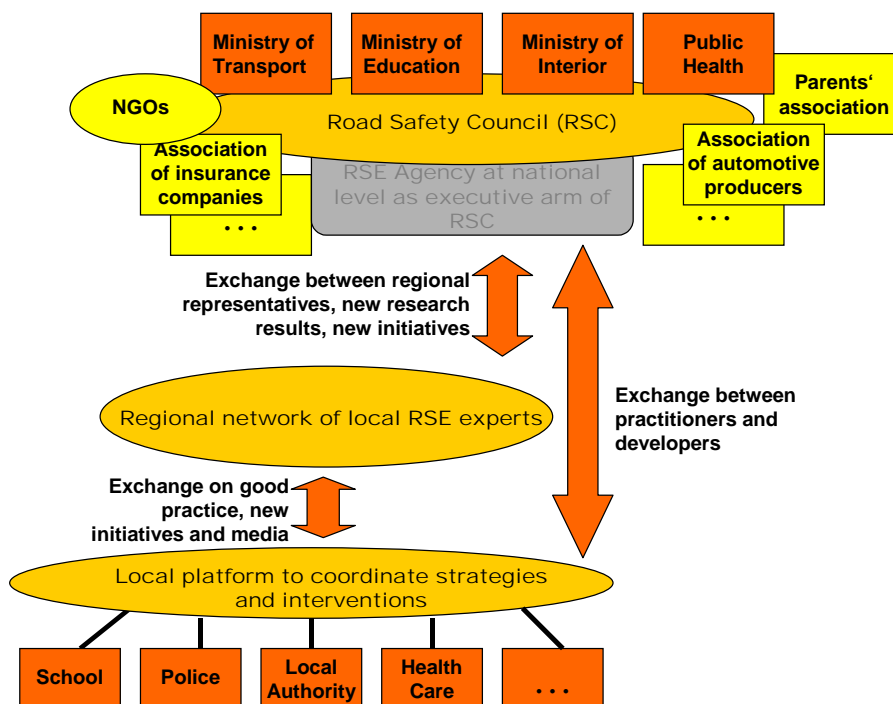
Strong Co-ordination of All Potential Partners

RSE is not a clearly defined competency that is the responsibility of one ministry, such as transport or education. RSE is a multidisciplinary task that involves several 'traditional' competencies. The relevant public bodies have often not developed stable routines of co-operation. Furthermore, RSE on its own is a weak incentive to launch and foster co-operation. It might be easier if co-operation focuses on a broader policy issue, such as road safety in general, also involving enforcement bodies and other players. In several countries, this has led to the evolution of a high-capacity body at a national level, which has furthermore developed its executive arms. Such broadly based bodies will have higher lobbying capacity and better options to obtain public and private sponsorships. However, such institutions should work on the basis of a sound mix between in-house capacities and outsourcing of activities to other institutions that have developed expertise in specific fields. In order to optimise synergies and to create a climate of coop-competition, i.e. co-operation rather than competition, the system has to be based on a clear-cut division of tasks between individual public players. Otherwise there is a serious risk for duplication of efforts.

Generally speaking, there is a need for the establishment of co-ordination bodies, networks or platforms and the identification of active contact persons at all levels in all institutions involved. Good practice in co-ordination relies on several factors:

1. It is important to define anchor points for knowledge transfer among key players. A system of representatives or delegates from all institutions involved is needed to have groups of a manageable size; the groups have to represent different interests in order to be able to develop operational solutions.
2. Each co-ordinating body should have a specific role in the overall system. This should be reflected in coherent work programmes for a limited period, i.e. two to three years.
3. The key client should be, in all cases, the practitioners working on the ground: an important aspect is to organise regular events that promote face-to-face contacts and exchange of experience, as well as targeted dissemination activities, for persons working on the ground.
4. A focus on two-way flows of information is needed to improve learning ability and reaction time of the system; this means co-ordination, research and management should communicate with practitioners on the ground and vice versa.

Graph 3: Coordination in RSE



The most frequent form of RSE delivery for children and teenagers in the EU-Member States is through educational institutions, such as schools, kindergartens and pre-schools. Only a few countries have undertaken serious efforts to enhance RSE apart from educational institutions. In particular, Finland and the Netherlands promote RSE as a life-long learning process. Some other countries are also working along this RSE orientation. Within this concept, RSE is no longer only a school-based activity, but rather necessitates the active involvement of several other organisations, such as health care, youth centres and sport associations.

Another aspect of co-ordination and partnership development is the role of **local action networks**. Examples from the United Kingdom, Sweden and Finland emphasise the need to strengthen local road

safety networks in general. The development of local programmes involving the three E's (Engineering, Enforcement and Education) seems to offer considerable potential, while at the same time safeguards a high cost-effectiveness.

Example of good practice for local networking

The graph above reveals that at a local level, effective RSE has to rely on co-ordinated efforts of several institutions. Thus it is important to nominate persons who are active in networking and co-ordination at the local level. Obviously such persons need incentives to fulfil this function. In the United Kingdom and Ireland, Road Safety Officers (RSOs) act as local co-ordinators. RSOs are normally employed by the local authorities. Germany and Denmark have established RSE Contact Teachers who have either a formalised or mediating role and are empowered to provide some incentives for co-operation. These persons:

- raise awareness of RSE at their schools in order to prevent the marginalisation of RSE as an "extra task" of minor importance,
- have an overview on qualification and training offers to increase knowledge and skills among teachers,
- are informed about new approaches and teaching resources,
- take care of provision of inputs for increasing parent involvement.

In Finland, the inclusion of traffic issues in health care services gives a positive example of joint responsibility for children's well being. The traffic safety education of pre-school and school children is closely linked to the traffic safety plans of several municipalities and to the effort of co-operation work groups of different administrations, which promotes systematic traffic safety work.

Recommendation

- It is important to define anchor points for knowledge transfer among key players.
- Each co-ordinating body should have a specific role in the overall system.
- The key client should be, in all cases, the practitioners working on the ground.
- A focus on two-way flows of information is needed to improve the learning ability and reaction time of the system.
- RSE as part of the life-long learning process necessitates the active involvement of several other organisations, such as health care, youth centres and sport associations.
- Local action networks with sound co-ordination and management offer significant potential for effective RSE.

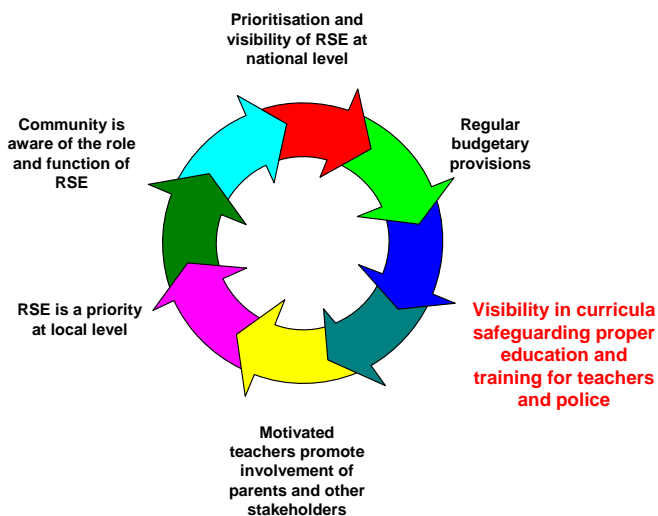
Prioritisation of RSE at School and Kindergarten – Making RSE Visible in Curricula

Education and training of RSE staff

The discourse on the necessity for compulsory RSE and its position in curricula is difficult and we cannot provide a solution in this booklet. Still, there is one important fact to be considered: only for those subjects which are part of the curriculum is adequate training provided for teachers and other key players, such as police officers, and maintained in the long run!

A sound RSE engine can only start with the provision of well-educated and trained teachers (and police officers etc.). In many countries the quality and scope of RSE delivery in school and kindergarten depends to a high extent on the engagement and individual interests of teachers. This may even occur in countries where RSE is an obligatory part of the curriculum with defined content and scope. The interest and engagement of teachers will increase when they are well educated in RSE, whereas a lack of education and training leads to a lack of interest and engagement, which subsequently induces a lack of RSE at schools. In our view, currently teachers and police officers are the major players in RSE delivery. Through motivation, which includes inter alia provision of education and training, this group of stakeholders has to be turned into a driving force for the overall RSE system.

Graph 4: Elements of a Sound RSE Engine



This anchoring of RSE in education of teaching staff is a mid- to long-term process. However, the lack of adequate training and motivation for teachers is a serious deficiency, which has to be addressed also in the short-term. Our inventory includes some ideas for support of teachers in the short-term.

Example of good practice: Yearly traffic safety week at schools in Finland [38]

One of the main targets of this yearly traffic safety week at schools and day care centres in Finland is to raise engagement and interest of education staff and parents in RSE. During one week, daily RSE events are launched at schools and day care centres. Due to the support of a broad partnership, including the National Road Safety Council, the Red Cross, police and youth workers, these visible and comprehensive interventions can be launched annually.

Training for RSE Contact Teachers in Denmark [102, 103]

Every school in Denmark has nominated a so-called contact teacher who is responsible for RSE guidance and provision of initiatives and materials. Many contact teachers have attended 3-day courses about children and traffic, which are regularly offered by the Danish Road Safety Council. The course is open to teachers, as well as to interested police officers, at the national level. The comprehensive programme includes several key elements, such as presentation of active partners and networks in traffic safety work, as well as practical RSE elements, such as bicycle training, or presentation of recent research works, accident statistics and new legislation.

Recommendation

A definition of scope, content and context of RSE in curricula is an important pre-requisite to safeguarding certain standards in RSE. This development and adjustment of curricula should be embedded in a broad and open strategic discussion. In fact curriculum development/adjustment – similar to the definition of RSE in national plans or programmes for road safety- should be understood as one of the rare opportunities to launch a broader discussion among potential stakeholders.

Teachers and police officers are in a key position; this group of stakeholders should be turned into a driving force for the overall RSE system. Thus RSE should be integrated into their basic education, being offered like any other subject. The scope should correspond to the amount of a subject offered during one semester (approximately 20 hours). Additional training, including methodological up-date and recent research results, should be offered regularly.

Context of RSE

RSE risks getting lost in the large amount of topics in school. One of the reasons is that RSE is treated as a 'horizontal subject' or so-called 'educational principle', which is not a subject on its own, but an element to be taught as part of other subjects. This position reveals pros and cons:

- On the one hand – with RSE being a separate subject or being linked to one sole subject – teachers may think it consumes too much time in crowded schedules and they would prefer to combine it with other contents in order to save resources by creating synergies.
- On the other hand – with RSE being integrated in several other subjects – there is the risk that nobody feels responsible for delivery and RSE might become marginalised in competition with other horizontal topics, such as health education, environment education, and peace education.

Recommendation

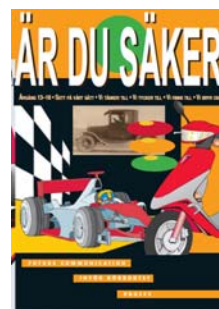
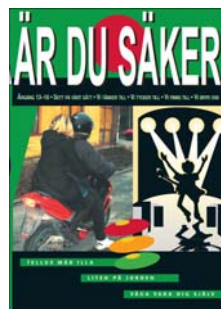
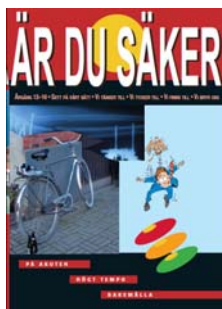
A clear preference is given that RSE should be linked either to one clearly defined subject or, in case of integrated RSE, an operational co-ordination mechanism has to be installed in order to avoid that RSE is 'squeezed out' of the system. Actions of good practice should provide possibilities of teamwork among teachers of different subjects in order to enhance the result of RSE interventions.

Example of good practice: Avoidance of the RSE vacuum – Teamwork-Teaching in Sweden (City of malmoe – Traffic Safety at Schools for Classes 6 to 9 – Are you safe? [121])

This approach may help make RSE visible in schools and prevent its marginalisation due to lack of responsibility. It encourages teamwork and co-ordination of teachers in terms of RSE. Based on a set of three booklets⁴, selected traffic safety themes are integrated into different subjects at school. The important and interesting pre-condition is that teachers act as a team; usually 4 to 6 teachers are involved. They discuss and develop a scheme on how they intend to integrate the selected themes into their subjects and what the output should be. This teamwork process is documented and presentations are given. The basic design of the interventions, as indicated in the comprehensive guidance for teachers, also leaves room for the involvement of other stakeholders, such as police, traffic victims or experts from first aid stations. Students are encouraged to engage actively and to create role-playing activities, exhibitions etc.

Example of good practice: RSE linked to one subject

If RSE is clearly linked to one subject, and therefore to one teacher – such as in German primary schools where RSE is part of 'Sachkunde' (which could be best translated as social studies) – the phenomenon of the RSE vacuum is less likely to occur since RSE in such cases is embedded in a well-defined context and the teaching responsibility is clear.



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Scope of RSE in the school curricula

Finally, concerning the question of the definition of scope of RSE in the school curricula, the following issues should be considered:

As in every other subject, only repeated contents will have longer lasting effects. It can easily be demonstrated that sound interventions in RSE do require sufficient time, in particular when considering the importance of going out into real traffic in order to do e.g. roadside pedestrian training. Looking at examples of good practice, these trainings should consist of a sequence of modules over a longer time period (see Road Safety Education for pedestrians in this booklet). Taking different training designs into account, an absolute minimum of 10 hours per year should be envisaged, being aware that this scope is the absolute minimum for provision of basic intervention.

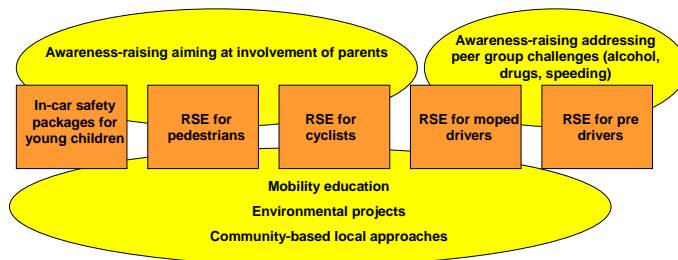
Recommendation

The scope of RSE should be defined in school curricula of all levels with an absolute minimum of 10 hours per year.

Promoting Synergies and Combinations of Road Safety Education and Mobility Education

In several European countries, RSE in school is combined, or could be combined, with Mobility Education. This approach – which is also labelled as an environmental project or a community-based approach – focuses on changing the traffic environment instead of teaching how individuals should adjust their behaviour to traffic. The ultimate goal of Mobility Education is that, in the future, traffic should become safer due to the reduction of motorised traffic. Mobility education is closely linked to building active citizenship, promoting social awareness and developing interaction skills.

Graph 5: Main Pillars of RSE – Combination of Approaches



In ideal cases, RSE includes elements of Mobility Education and vice versa. Tendencies towards competition between these two approaches should be avoided, but synergies should be promoted. Both approaches are heading towards important goals for the younger generation: RSE intends to provide basic life skills and to promote safety-oriented attitudes, whereas mobility education seeks to stimulate changes in mobility patterns towards more ecological and economical risk-awareness, i.e. heading towards more sustainable forms of transport.

Example of good practice: RSE linked to mobility education

These two approaches involve a useful combination when, for example, changes in the built traffic environment are promoted through the active involvement of children. Several examples in our data collection highlight this type of intervention: 'Secure Route to School for Children-mapping dangerous spots'/FI [31], 'Routes to School'/NL [174] and 'Do Research and Learn'/SE [122]. Other forms of synergies emerge in actions like 'Bicycle Pooling'/BE [146] or 'Walking Bus'/EE [159], which target awareness for healthy and environmentally friendly forms of transport, while at the same time seeking to create safer conditions for walking and cycling through social interaction. In the Austrian example 'Mobility Management on Route to School' [73], a research institute in co-operation with a road safety council supports schools in developing their own safe and environmentally friendly routes to school, as well as the corresponding surroundings of the school. This long-term project addresses mainly teachers and parents to become aware of their function as role models for children and to change their mobility patterns.



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Recommendation

RSE should be linked to Mobility Education, which means it should be implemented in a broader context of health, environment and social education. RSE should not be restricted to mere traffic skills training.

Addressing Teenagers as Risk Group

Our investigations for ROSE 25 have revealed that in nearly all countries RSE offers for children clearly outweigh those for teenagers. In secondary schools, RSE has to compete strongly with other curricular priorities. Teachers and pupils are challenged by an already-crowded curriculum, but a second major problem is the frequent lack of attractive or innovative project ideas in RSE.

In particular, for teenagers it is a pre-condition or success to change the image of RSE. This might even mean using another term than RSE, because RSE is too strongly linked with an old-fashioned and child-centred approach. As mentioned in the introduction, teenagers have the highest amount of traffic accidents and should be a main target group for RSE. For this target group, there is a gap between actual needs and the availability of attractive offers. RSE for teenagers is, in most countries, restricted to 'one-off' events at irregular intervals, if implemented at all.

RSE concepts for teenagers have to rely on additional or other channels than school because frequently teenagers are in conflict with, or oppose, school as an authority. Many young people leave school at 15 or 16 years of age, and RSE should be continued as part of the life long learning process as described above.

Media campaigns are an important additional element, but cannot replace face-to-face contact that is a crucial aspect of RSE in our opinion. With a reference to the three pillars of RSE, i.e. knowledge, skills and attitude, influencing attitudes becomes particularly important at this stage. To encourage reflection on attitudes, strengthening of capacities for self-evaluation, as well as to develop the commitment to safe and responsible behaviour, there is a clear deficiency in many steps that shape future mobility patterns, such as most traditional forms of training for the driving license.

Contents, methods and the means of communication have to be well designed and based on modes of interaction that attract teenagers' interests if interventions are to be successful. One has to keep in mind that at a certain age, peers often take over the function of role model, whereas the influence of adults rapidly and significantly decreases. This critical issue makes it clear that passive teaching (by an authority/adult) may easily be counterproductive. Active involvement and (peer) group work is an important element. In the box below, some ideas for the encouragement of active involvement are presented. However, one has to be aware that these are examples of isolated projects, which should be embedded in a continuum of RSE.

Example of good practice: additional channels for RSE apart from school

A private civil initiative in Slovenia has launched an action called 'With Diligence to a Party – You Choose: Win or Lose' [61]. The action is supported by the Slovene Road Safety Councils. In our understanding, this action is considered borderline RSE since, by its character, it is more of a show or campaign. The face-to-face character has become less prominent. It is presented here because the intervention is built on efficient ways to address the 'right' target group in time at the 'right' place with a solid message presented by credible 'instructors'.



A multimedia performance by the band Generacija Nula Nula (Generation Zero Zero) is presented in popular pubs, at public events and at traditional school events. It is a show with music, animation and a chance for the audience to participate. The main message is to have fun without drugs and alcohol. The sale of soft drinks is promoted and breath tests are performed.

A similar approach is provided in the Polish example 'Responsibility, Partnership, Kindness- Pedestrians, Bicyclists and Car Drivers on the Road' [130]. Volunteer teenagers organise open-air picnics in parks in order to promote partnership towards vulnerable road users.

Example of good practice: enhancing social awareness and responsibility of teenagers

A series of actions collected for ROSE 25 is aimed at older pupils actively taking the responsibility for the safety of fellow pupils. This approach appears to be very efficient in terms of raising teenagers' awareness for more vulnerable road users, promoting active partnerships, and providing assistance to others. In Belgium 'Traffic Coaches' [137] observe and promote safety for others in the immediate surroundings of schools. In Germany and Austria, so-called 'Bus Guards' [18] assist those in getting on and off buses safely, as well as guiding and intervening in the interest of fair and compliant behaviour during the ride. In the United Kingdom, the 'Junior Road Safety Officers' [192] promote the importance of RSE throughout the whole year. German and Danish examples show older pupils acting as teachers and trainers for younger pupils as pedestrians, cyclists or inline-skaters: 'Pupils' Mentors'/DE [13] and 'Big Pupils Teaching Small Ones'/DK [44]. In an Austrian example named 'Older Kids Help Younger Kids' [72], teenagers pick up children at home and escort them to school.

Example of good practice: round tables with experts and persons having first-hand experience

Actions, like the Danish 'Survival Team' [99], the German 'Traffic Court in Session' [19] and 'Alcohol and Drugs at the Wheel' [93] from Austria, are examples of facilitated group discussions with RSE professionals, traffic victims or other persons having first-hand experience. Such discussions provide important and credible insights into implications and consequences of accidents, and thus stimulate teenagers' reflection on attitudes. As a best example, such incentive events form the beginning of a broader learning process for road safety. 'One-off' events have only limited potential to trigger sustainable reflection on road safety, or even changes in attitudes.



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Recommendation

Teenagers should be a main target group for RSE due to their high accident risk! The development of a pedagogical programme based on a continuum would mean a tremendous improvement in RSE for the age group from 12 to 16 and older. The strategy for this age group has to include diversified communication channels in addition to schools, such as youth centres, sport clubs, and driver licensing schools.

Promoting the Involvement of Parents

Parents have a crucial role in RSE for children up to the age of twelve. Graph 5 shows that 'in-car safety', 'pedestrians' and 'cyclists' are the main topics for active involvement of parents. At a later stage, parents' involvement may lead to counterproductive results since orientation on peer groups and conflicts with authorities might become dominant motives in interaction with teenagers.

As a major result of our investigations, the overwhelming majority of the country experts stated that stronger involvement of parents in children's RSE is needed and that basic guidance and information for parents is often missing. On the other hand, it is a common experience that it is difficult to raise the interest of parents. For obvious reasons, informational events in the form of one-off events are insufficient to achieve greater interest and sustainable changes in parents' attitudes. A key challenge for successful RSE is a minimum of information exchange between teachers and parents in order to raise awareness for corresponding strategies. This challenges schools, which serve as the mediating institution, but also parents, who should be aware of the need to receive information on school activities. The content of information is a sensitive topic: such information has to motivate joint efforts of teachers and parents since otherwise it might be counterproductive, i.e. leading to reduced involvement of parents.

The reasons to stress the importance of increasing involvement of parents are evident:

- in most cases, parents are the first persons teaching RSE,
- parents are role models – children learn by imitation and careful observation of adults and begin developing road safety skills well before they reach school age,
- parents make important decisions about traffic safety and mobility patterns of their children relating to level of exposure, levels of accompaniment and independent travel and the use of safety equipment (e.g. child restraint systems, helmets, clothes).

An ideal sequencing of measures for the involvement of parents starts at an early stage and should include several strategic elements.

- **Information and advice for parents-to-be and parents of newborns:** this includes comprehensive briefing on child restraint systems and motivation to use this advice in their driving. This might go as far as to include feedback on driving habits through observation. It is certainly useful to promote and facilitate the access to safety devices. Child restraint systems could be offered for rent or for a subsidised price. The offer should be hosted or developed by a network of institutions, such as drivers' associations or hospitals, like it is offered in the Slovenian action 'First driving- Safe driving', [65]. The optimal situation is that the institutions are subject to certification. The staff should be trained in demonstrating the correct use of safety devices in clients' cars. Certification could be limited and linked to regular quality control. Another example of good practice is 'Child Restraints in Dalarna'/SE [168].
- **Guidance for parents when their child makes its first independent outings in a traffic environment:** as soon as the child leaves the buggy and starts to explore the world on its own feet, parents should receive relevant information. Generally speaking, such information should not aim at exercising mechanical behaviour patterns, but the first aim should be to raise the awareness of parents. Such information could include messages such as: train yourself to mind the child's limited ability to watch traffic when cars are parking near crossings, encourage your child to train judgement of the speed of approaching cars, or do not apply scare tactics when introducing your child to traffic participation. Being scared of vehicles tends to make children unsure and this might result in anxiety; anxious children do

not behave safely (examples of good practice: 'Promotion of Children's Traffic Safety as part of Child Health Centres Education'/FI [35] and 'Children's Traffic Club'/UK [123]). These initiatives should motivate parents and relatives to reflect their own behaviour as pedestrians and to check if their habits comply with safety needs of children. This is also very important at an early stage, i.e. before pedestrian skills training at school has started. One useful format is informational events in the evening (examples of good practice: 'Child and Traffic'/DE [9], 'Step, Sidewalk, Bicycle'/NL [176] and 'Hard/Heart for your Child'/NL [172]).

- **Involvement of parents in RSE via kindergartens and schools:** kindergartens and schools should provide possibilities to integrate parents in traffic safety issues. Efforts should also be made to target those parents who are less inclined to engage themselves, since their children frequently are most in need of advice and guidance. A motivational approach could be the signing of a charter that stresses – in the form of a mutual agreement between parents and the school board – the willingness to participate in joint efforts for RSE. Such an approach has been practised in Hertfordshire/United Kingdom⁵. In the Netherlands, parents are invited to act as 'Traffic Parents' [179]. These parents have an initiating and coordination role, as well as more operational tasks, such as assisting in pedestrian roadside training of the pupils. In the United Kingdom, parents also assist in pupil's roadside training in the action 'Kerbcraft' [124]. In Belgium, parents are involved intensively in the action 'Bicycle Pooling' [146], where parents and teachers volunteer to escort a group of up to seven children on their route to school by bicycle.



Recommendation

Parents are key stakeholders in children's RSE. They should be made aware of their role in RSE and should be motivated to act. Offers and possibilities in this sense have to be reinforced, developed and implemented. Approaches might range from informational events to volunteering for active RSE work at school.

The Long-Term Vision: Reaching all Road Users by Concept-Based and Continuous RSE with Clear Goals

It is important to acknowledge that single RSE actions or one-off events – even if labelled as best practice – will not lead to convincing and sustainable results. Successful RSE needs to be based on continuous interventions. Several countries in the EU, such as France, Finland and the Netherlands, have entered a process of strategy development, which aims at an educational continuum. This concept of an educational continuum – also called a life-long learning concept or permanent road safety education – includes all age groups and road users into RSE, not only children, teenagers and parents!

An educational continuum in RSE has to be founded on clear definitions of:

- target groups and goals for each target group,
- contents, methods and didactical approaches appropriate for the target groups,

- conditions that are necessary for the implementation of the concept,
- responsibilities and tasks of institutions involved.

Example of good practice: Concept of Permanent Road Safety Education (PRSE) as a current process in the Netherlands

The main objective of PRSE is that every traffic participant receives know-how, skills and attitudes that are necessary for safe participation in traffic. PRSE does not focus only on children, but includes all traffic participants. This concept necessitates the implementation of a coherent framework of RSE measures, which guarantee continuity and proper sequencing of interventions.

Key-elements of the PRSE-concept⁶

- Definition of clear goals based on the Gadget matrix⁷. The matrix offers a structured perspective on traffic safety in a broad context and from different levels.
- The focus has to be not only on improving knowledge and skills, but also on improving attitudes and motivation⁸.
- In order to reach goals related to knowledge, skills *and attitudes*, active involvement of the pupils is essential. Thus interactive approaches, such as training skills, discussion with fellow-students or practising assessment of traffic situations, are required.

Table 1: Gadget matrix

	Knowledge and skills	Risk-increasing factors	Self evaluation
Goals for life and skills for living (general)			
Driving goals and context (journey-related)			
Mastery of traffic situations			
Vehicle manoeuvring			

a filled-in matrix for the age group 12 to 16 is provided in the Final Report in Part 3 – Policy Recommendations: Chapter: RSE needs standardisation

Main steps for implementation of PRSE

- First, the definition of target groups according to age is necessary. In the Netherlands, the following groups are used for PRSE: 0-4 years, 4-12, 12-16, 16-25, 25-60 and persons older than 60 years. Additional subgroups can be defined, e.g. lorry drivers or persons with disabilities.
- In the second step, 'learning-targets' for each age group are defined: what are attainable goals for the target group, what could be pedagogical targets, what are the main implications for the legal framework. These 'learning-targets' are structured according to the so-called Gadget matrix.
- Subsequently, an inventory and assessment of current RSE-products and projects on regional and provincial levels has to be carried out: which learning targets are covered by the current RSE products and where are gaps? Can these gaps be solved by adjusting the current products and/or by developing new products?
- The final stage of the PRSE concept is the development of RSE products and projects in order to bridge current gaps.

In parallel to the elaboration of the PRSE concept, the development of policy strategies is needed. The current process in the Netherlands has clearly shown that the 're-structuring of RSE' at the national level should be led and facilitated by an independent office, which is linked to a national organisation with an existing large network. This office co-ordinates the whole implementation process, in particular:

- to steer and observe the assessment of existing products/projects as an independent and neutral body,

- to act as a centre for exchange of information, know-how and networking (e.g. implementation of a database),
- to steer and guarantee uniform standards in implementation and quality control of PRSE.

Recommendation

RSE needs continuous, concept-based interventions. This means:

- clearly defined goals for clearly identified target groups,
- well-defined contents and methods, and
- strategies to implement the concept.

RSE should not be a topic of sporadic single events. In a long-term perspective, RSE should be implemented as a lifelong learning process targeting all road users, not only children.

Promoting Synergies and Combinations of Education with Enforcement and Engineering

Many road safety experts argue in favour of combinations of measures along the so-called three E's, i.e. Education, Enforcement and Engineering. Isolated interventions cannot be expected to produce the same sustainable results as combinations of measures⁹. The findings in our study reveal that, in practice, effective combinations are hardly found. Only a few actions in our data collection are explicitly linked to engineering or enforcement. For the combination with engineering measures, it is evident that the anchor points are locally or community-based actions – competencies for changes in the built environment will be in most cases in the hands of local authorities. To induce such processes, a set of strategies and tactics to raise awareness of local policy-makers is a crucial success factor. These could include surveys among the residents and subsequent interviews with local policy makers and reporting to local and regional media, or events designed by children to attract the attention of residents. Examples of linkages between education and engineering have been provided in section 8 (see action 'Secure Route to School for Children'/FI [31], 'Routes to School'/NL [174] and 'Do Research and Learn'/SE [122]).

In addition, there are a few examples that are based on a combination of education and enforcement activities. These parallel intervention strategies have been implemented for in-car safety of children and moped users. Again, the key element for planning and developing such actions is an operational RSE network that includes, in this case, the education and enforcement competencies.

Example of good practice: education linked to enforcement

The Slovene action 'Child in a Car' [62] combines informational events for parents on the use of seatbelts and child restraint systems with subsequent police control on the use of these safety devices. The action is implemented at several different locations, such as schools, kindergartens, shopping malls and local health centres. The timing of the action is well planned; it is launched at the beginning of the school year in autumn.

The Belgian action 'Safe Use of Mopeds' [149] also consists of an educational element with subsequent control activities. The police give lectures in secondary schools for pupils aged 16 and older, focusing on the compliant and socially responsible use of mopeds. The intervention particularly targets the aspect of speeding on a moped. In Belgium, two categories of mopeds with different speed limits are permitted. Tuning of mopeds to higher speed allowances is widespread. After the lectures at school, the pupils have one week to adjust their mopeds to the legal level. After this period, enforcement activities begin, and in extreme cases, vehicles are confiscated.

Recommendation

Besides more sustainable effects, the combination of education with enforcement and/or engineering contributes also to a broader basis of RSE in the community. Combined actions will result in higher awareness. The key point is the motivation of stakeholders at the local level to participate in these efforts.

Strengthen Research, Evaluation and Quality Control

Evaluation is essential to further the development of effective interventions, as well as for the adjustment of existing actions in order to improve their effectiveness. Nevertheless, our study has shown that several countries have underpinned the need to develop transparent and pragmatic evaluation designs for the most frequent types of actions. An obvious problem is that policy makers tend to focus on the development of new actions and visible campaigns, whereas the need for evaluation tends to be neglected. It is frequently seen as a costly exercise that might result in a less favourable assessment of the outcomes of RSE policy.

It is also important that there are different layers of evaluation. An obvious aspect is the evaluation of actions that might range from in-depth observance and analysis of behavioural changes to small-scale feedback studies in the test phase of programmes. But there is also another important evaluation perspective that aims at a systematised overview of all relevant RSE interventions in a country. This process has been launched recently in those countries that are targeting RSE as part of an educational continuum.

A pre-condition for evaluation is the definition of clear goals from the level of programmes to interventions: it is important to develop a coherent set of goals at all levels, i.e. starting at the level of national plans and coming to the concrete level of RSE intervention types. The different levels should also represent different planning periods. One could envisage a longer-term strategy or vision at national level, which is combined with short-term action plans. A set of quantified goals that indicate inputs, outputs, and intended impacts of the policy interventions, is helpful to strengthen visibility of RSE. Furthermore this helps to enter into an honest debate about funding since it is impossible to define outcomes of interventions without corresponding information about inputs in terms of budgets, for example.

For evident reasons **evaluation introduced at an early stage of new programmes** can significantly improve the effectiveness. One must see clearly – in particular in case of programmes that are designed for a longer life cycle – that in such cases positive effects of evaluation clearly outweighs its costs. Even a very limited feedback study among the recipients and users of new materials will provide, in most cases, important hints for improvements. This relates, for example, to the concept and design as well as the messages of materials. In many cases the adjustment of materials to different social groups of parents or pupils will not pose a disproportionate cost factor.

Evaluation should be part of the overall programme design. It is much easier to reserve a small part of programme or intervention funds when designing and raising the funds instead of seeking ex-post for financial sources.

Evaluation should be a major pre-condition for establishing a system of quality control. Quality control can help tackle problems with regard to lack of standards in terms of content, scope and actual delivery. As a first step, there is the need to establish some basic systems to monitor

implementation, in particular of RSE at school. For obvious reasons this depends strongly on the existence of co-ordination mechanisms. Even basic information such as comparing pre-defined lesson plans, which include topics and contents, and follow-up questionnaires, which give a short report on what has been delivered, actually are a major improvement compared to the current situation in many countries. This would allow for an adjusted and quantified view on RSE implementation.

Finally, a **structured exchange on RSE evaluation practices at European level** could lead to significant value added for RSE practitioners across EU Member States. Common understanding of evaluation designs will lead to increasingly comparable results of RSE evaluations. This could deepen the knowledge about differences in programme outcomes due to socio-cultural differences between countries. The results would provide an increased understanding of the actual effects of strategies and mechanisms in RSE interventions.

GENERAL GUIDANCE ON GOOD PRACTICE IN EVALUATION OF RSE IS CURRENTLY BEING DEVELOPED IN SEVERAL COUNTRIES.

Recent guidelines published by the UK Department for Transport provide advice and information for practitioners on how to evaluate a RSE intervention. They include 21 key lessons identified by Pawson and Myhill for designing evaluation¹⁰. These lessons provide an excellent overview on main issues when reflecting evaluation designs. Here we highlight some of the most important aspects:

- It is important to design a partnership of *process* and *outcome* evaluation, using both quantitative and qualitative methods.
 - Discernment of risk and response is best gathered by a close analysis of particular sub-groups under the initiative.
 - A key strategy for promoting children's participation in the evaluation process lies in the adaptation of standard instruments, presenting questions in frameworks and formats with which particular age groups are already familiar.
 - Evaluation needs to map differences in people's knowledge about their communities and measure success in terms of growth in understanding of, and responses to, the local hazards.
 - A hierarchy of outcomes should be established for each family of programmes. Outcome measurement is more secure the further it travels along the understanding 'attitude – behaviour chain'. Evaluation should also seek a multiplicity of outcomes, including those that fall outside the expectations and intentions of the programme-architects.
 - Programmes cannot be considered properly tested if based solely on 'approval ratings' and/or on the usage of self-reported behaviour.
 - With a view to budgetary constraints: evaluations without the resources to carry through investigation to behavioural outcomes should concentrate on assessing the variability in knowledge gains across different subjects and different aspects of the programme curriculum. Retrospective surveys can provide broad-brush information on the coverage of programmes and some evidence on their longer-term impact.
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Recommendation

- A pre-condition for evaluation is the definition of clear goals on various levels, ranging from programmes to interventions.
- Evaluation introduced at an early stage of new programmes can significantly improve their effectiveness.
- Evaluation should be part of the overall programme design – funds for this should be reserved beforehand.
- Evaluation has to be seen as a major pre-condition for establishing a system of quality control.
- Finally, a structured exchange on RSE evaluation practice at a European level could lead to significant value added for RSE practitioners across EU Member States.

The Actions

This chapter is mainly based on an initial data collection of 193 actions provided by country experts from all EU Member States. It should be mentioned that this data collection should not be considered a complete representation of the totality of RSE interventions at neither a national nor at European level.

An initial set of selection criteria was elaborated to give guidance for selection. Standardised questionnaires have been used to describe the actions. The final analysis and assessment has been done by a working group of several experts from six countries based on the available information of questionnaires, as well as the initial and additional selection criteria. The 193 actions have been structured according to the dominant mode of traffic participation, including actions for:

- car passengers
- pedestrians
- cyclists
- public and school transport
- moped users
- pre-drivers



The corresponding recommendations for Road Safety Education (RSE) in this booklet have also been structured along the traffic modes.

Road Safety Education for Car Passengers

The main topic of these actions concerns safe transport of children by correct use of child restraints and seatbelts. The main target groups addressed are parents/adults, retailers and sometimes children themselves. The data collection of Rose 25 includes 10 actions.

Seatbelts and child restraint systems (CRS) are important issues when it comes to injury prevention. Several studies show results of 40-60% lower mortality rates when seatbelts were used. The difference within this 'range' of 40-60% is explained by several factors, one of which includes using seatbelts correctly or incorrectly. The chance of newborns being killed in a car accident decreases by 90% when safety devices are correctly used¹¹.

In the past years, several studies on the effectiveness of projects for improved use of seatbelts and CRS have been carried out¹². **Legislation** prescribing compulsory seatbelt use is one of the most important pre-conditions for the use of seatbelts and CRS. Promotion of use without legislation is very difficult and time-consuming.

Education alone seems to have a modest effect in increasing the use of child restraints^{13,14}. Educational efforts should be combined with other safety measures, such as enforcement activities and/or incentive programmes. For example, loans for CRS can be an effective strategy to increase the number of children transported safely, at least in the short-term, but more research is needed to determine the long-term effectiveness of combined education and incentive programmes. Some studies suggest that the use of child safety seats may decline when the incentive is removed¹⁵. Table 2 provides an overview of most important topics and methods in RSE concerning in-car safety. This, and the following tables, does not enter a claim on completeness.

Table 2: RSE – Key Topics and Methods for Car Passengers

Most relevant topics	Most relevant methods
Correct use of seatbelts and CRS	Lecture, informational events (evenings)
Safety standards and requirements for safety equipment	Discussion
Consequences of non-use, incorrect and inconsequential use	Advice in combination with leaflet, brochure etc.
'Internalisation' and being a role model for children	Practical demonstrations, including active involvement
General safety in car (e.g. secure loose objects)	Combinations with enforcement and incentive programmes (e.g. loan systems, vouchers)

in the ideal case, contents and methods are embedded in a broader structure of a concept instead being 'one-off' events



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Using CRS should become a 'standard handling procedure'

Recommendation

Know-how and the ability to use child restraint systems (CRS) safely are crucial factors for in-car safety of children, but they do not ensure the use of CRS. RSE for in-car safety should definitely focus on all three aspects, which are:

1. **Knowledge** – the target group must know why the use of CRS is needed and which CRS is safe.
2. **Skills** – the target group must be able to use them correctly.
3. **Attitude** – the target group must be motivated to use CRS and its use should become an integrated element of common behaviour.

SOME HINTS TO REACH THE TARGET GROUP

- The most important factor is that the information about CRS is offered when the topic is relevant for the target group, e.g. parents need information and advice as early as possible – before or right after the birth of the child. The most obvious locations and opportunities are maternity services, health care centres or hospitals.
- Offers that enable an easy access to CRS can be an important incentive for parents to use CRS: this can be a loan system or subsidised prices for safe and certified CRS.
- An action increases its effect when information from different points of view is given (technical/legal/practical) and practical demonstrations are given on how to install and use restraints safely. The best is to demonstrate the correct use of CRS in the **own car** of the parents. Otherwise a 'discrepancy' can occur in 'translating' the knowledge and skills to their own car at home.
- Communicating the consequences is – with the emphasis that it can 'also happen to you' – of major importance, e.g. by using simulations to show the impact of non-use of seatbelts and

CRS. It is important that people identify themselves with the situation and the risk, otherwise they will not internalise the message and they will not develop the intended attitude.

Example of good practice: Child restraints in Dalarna/SE [168]

This complex action targets parents-to-be and parents of children aged 0 to 3, but also targets car and pram retailers. Parents receive information, training and instruction in their own car for the safe use of CRS. The demonstration is performed by the staff of child welfare centres. Parents can also obtain further advice by an information hotline.

A second major aspect is the quality of retailers and the quality of the CRS offers (new and used market). The quality of the retailers in terms of advice and instruction is monitored and visualised for the target group by display of a certificate.

An incentive module is offered: parents receive an information booklet and a voucher amounting to 25 Euro in the maternity hospital. The voucher is only valid for the certified retailers.

Addressing children as safety mentors

Recommendation

Efforts to increase the use of seatbelts and CRS should target not only parents or adults, but also children. Interventions can aim at increasing compliance of children to use seatbelts and CRS in order that children act as 'safety mentors' in their family.

Usually children show strong desire to comply with rules and to obey authorities, such as teachers, police officers or safety experts. The main idea of children's involvement is to make them understand the necessity of CRS and the consequences of non-use. Of course, this must be provided in a way appropriate for the age group (see example). Afterwards children raise the issue in their family and act as mentors for safe behaviour in the car. Thus, parents and adults are educated by their children.

Example of good practice: Action Kangaroo/AT [82]

A safety expert visits kindergartens or schools and demonstrates the effect of CRS with a little puppet and a model of a belt-testing device. Then children hear the story of the little kangaroo, who is well protected in its mother's bag (symbolising CRS), but gets hurt when it wants to sit in her arms instead. Children receive stickers and are motivated to talk about the event at home. Additional safety inspections on the correct use of seatbelts and CRS two weeks later are implemented at the parking lot of the kindergarten or school.



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Example of good practice: The Slovakian action 'Safe on the Road' [51] also involves children with a design similar to the well known action 'Apple-Lemon' [52]; children assist police officers to control driver's use of seat belts and child restraints.

Encouraging the use of CRS through combined safety measures

Recommendation

A combination of safety measures will lead to more sustainable results than mere RSE. Information and advice for parents can be effectively supported by:

- control of use, and
- rental systems or financial support.

Example of good practice: 'A Child in the Car'/SI [62]

Parents are actively addressed at several different locations, such as school, shopping malls, local health centres, and on the streets. Media concerning the use of seatbelts is distributed. The intervention is combined with subsequent enforcement actions. The timing of this action is very good at the beginning of the school year. Then, parents start bringing their children to school again, and at the beginning of this 'new' year, it is a good moment to communicate the potential risks while driving children to school. The combination with enforcement (police controls for wearing seatbelts) increases the envisaged effect.

Road Safety Education for Pedestrians

Being pedestrian is the first *active* involvement of children in traffic. Parents should play a key role during this phase. It is important to provide parents with knowledge and know-how at an early stage because many parents tend to overestimate the abilities of their children in traffic¹⁶. The younger the child, the stronger this tendency of overestimation is. The main reason is that parents do not properly assess the importance of distraction: safe behaviour patterns vanish when children are distracted. This might be the case if, for example, the child sees friends on the other side of the road.

In addition parents should become aware of the fact that:

- Children will have only limited experience as pedestrians in traffic when they are raised mostly as car passengers. They have no possibilities to train important skills, such as estimation of vehicle speed and vehicle distance. These skills become crucial when crossing a road without a traffic light.
- If parents and children spend only very limited time in traffic as pedestrians, the parents cannot observe their child's behaviour. Thus, they obtain only scarce evidence of their children's behaviour as pedestrians.
- Practical roadside training at kindergarten and at school cannot cover the full amount of training needed to make children safe and reliable pedestrians.

Table 3: RSE – key topics and methods for pedestrians

Most relevant topics	Most relevant methods
<ul style="list-style-type: none"> – Basis traffic rules (e.g. right of way, traffic signs) and skills (e.g. crossing streets) – Communication and interaction with other road users – Transfer of specific life skills, such as estimation of distances and speed – Hazard and risk awareness related to their own behaviour, and the behaviour of other traffic participants – Being watchful despite friends and other distractions, like during the use of headphones/mobile phones – Visible clothing – Traffic fears – Mobility patterns and safe routes 	<ul style="list-style-type: none"> – Involvement of parents: information and advice how to guide their child, awareness of the ‘development stage’ of their child – Roadside training – Investigations in real traffic, reflection, discussion, experiments (Blind spots, being visible, stopping distance, etc.)

in the ideal case, contents and methods are embedded into a broader structure of a concept instead being ‘one-off’ events

Early and active involvement of parents

Recommendation

Parents should receive basic information and practical advice on how to train their child from the very beginning when the child comes into contact with traffic. Parents are the first educators. Thus, they should be aware that it is much easier to train correct traffic participation with small children than it is to change risky behaviour and attitudes at a later stage. Roadside training started in kindergarten and/or school definitively occurs too late and is insufficient.

To reach parents of small children, new dissemination channels, apart from educational institutions, are necessary.

Generally speaking, it is difficult to reach parents of children who have not yet started their educational career in nursery schools or kindergarten with means other than large-scale campaigns. This is a major reason for the lack of actions targeting this group. In some countries, new channels for RSE have been introduced in connection with the health system.

Example of good practice: RSE via health care centres or MAILings

‘Promotion of Children’s Traffic Safety in Child Health Centres’/FI [35] aims at offering early information to, and involvement of, parents regarding RSE. At the child’s ‘four-year check up’ in health centres, a picture book for children and parents is distributed. A nurse motivates parents to go over the booklet and offers to discuss safety questions with them. The book features a collection of clear-cut recommendations on how to influence safe mobility of their children. It also includes exercises for the child related to traffic situations. These actions introduce basic concepts, such as vocabulary and knowledge.



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‘Children’s Traffic Club’/UK [123] uses another option to address parents. This action targets children when they reach three years of age. It operates in partnership with local authorities, road safety organisations, Primary Care Trusts and parents. Parents and carers are directly mailed a registration pack to enrol their child in the Traffic Club after their third birthday. Following registration, children are sent six colourful books (one every three months) and a set of stickers. The Traffic Club programme is carefully structured to introduce more advanced road safety skills as the child grows. Therefore, the books are not sent in one pack in order to ensure that the RSE programme is followed in the correct order.

When children have entered kindergarten and school, it becomes easier to reach parents (at least in theory).

Recommendation

Parents should be kept informed about RSE content taught in kindergartens and schools. They should also become familiar with the underlying rationale – thus they can reinforce the messages and conduct similar exercises with their child. In the ideal case, parents begin an active role as ‘traffic parents’ or participate in the roadside training of children.

THE INVOLVEMENT OF PARENTS IS BENEFICIAL IN SEVERAL WAYS

- Parents’ specific awareness and knowledge of children’s abilities increase,
- Parents’ general awareness and knowledge of road safety and the weak position of unprotected road users increase,
- With the support of parents, children can be trained in small groups, which allows a high level of interaction with the trainer,
- The action is cost effective due to parents acting as volunteers.

CRITICAL ISSUES REGARDING PARENT INVOLVEMENT

- It might be difficult to recruit a sufficient number of motivated parents,
- Parents should not train their own child because the attention on all children should be well balanced. This pre-condition probably makes the task less attractive for parents.
- Cost effectiveness decreases due to the fact that parents should be trained by traffic and pedagogical experts before they start to train the children. Well-elaborated media would be a further instrument, but obviously also poses a cost factor.

Examples of good practice: ‘Traffic Parents’/NL [179]

The main aim of this project is to involve parents in traffic safety of their children. The objective is to have a parent in each primary school that represents all other parents and acts as an intermediary between the school and parents. Traffic parents raise awareness for traffic safety and carry out projects, such as analysing routes to school with pupils, organising traffic exams, and organising campaigns on how to take children to school safely as parents. A website has been established to serve as an information repository for the project. Traffic parents are supported by 3VO (a Dutch traffic safety organisation) through advice and provision of materials. Practical support is comprised of e.g. plans for a campaign on the safe transport of children to school, or materials such as posters, videos and leaflets.

Example of good practice: Parents involved in roadside pedestrian training

In ‘Kerbcraft’/UK [124] parents receive training by road safety officers in order to implement training with pupils. The children are taught in a group of 3 when recognition of dangerous locations is taught and in a group of 2 when they are taught to cross safely at parked vehicles. The children observe and then practice the trainer’s behaviour. The programme consists of three modules with four to six sessions in each module. One session is carried out each week and is approximately 30 minutes long. The three modules should be completed over 18 to 24 months. It is a child centered method, because training is in small groups in real traffic. The costs are low because of volunteers.



Discovery and experience in a realistic setting

Recommendation

A realistic setting, such as the roadside, should be chosen for pedestrian interventions. RSE for pedestrians should not be offered behind the desk or in protected areas. Actions should enable children to develop skills and strategies through discovery and experience. Close interaction (questions, discussions, reporting) between trainers and children are important, therefore small groups are favoured. Mere skills training is not sufficient – these expeditions should be used to enhance children's abilities to discover, for example, dangerous spots, as well as to watch and reflect the behaviour of other traffic participants.

Roadside training should consist of a sequence of modules over a longer period, e.g. five to six days, one or two hours for each session, or 16 sessions of 30 minutes each (see 'Pedestrian Test' [42] and 'Kerbcraft' [124]).

Example of good practice: Expeditions to pupils' homes

The Danish example 'Pedestrian Test' [42] is an enjoyable form of roadside training. During one week the class takes many escorted walks in the local area. Very often the groups walk home and visit the home of each child upon prior agreement with the parents. Sometimes they enter the house or take a picture in front of it. Then the group continues to the next address. In one day they can visit up to five or six places. Before and during the walk, they discuss the road environment, traffic, where to cross safely, what to be aware of, and so on. When they have visited all envisaged stations, the children are prepared to pass a small test.

The class is guided by teachers and one parent. A police officer will either visit the class in the preparation phase or during the day of the test. Preferably, both options are used.

Finally, after the training, the children are asked to walk over a short distance and cross a road. This time they walk in pairs, not as a whole group at the same time. They are observed by the policeman and/or parents. The teacher and police jointly supervise the road crossing.

Speed reduction in traffic as a key target for pedestrian safety

Recommendation

Generally speaking, drivers should become increasingly aware of vulnerable road users and their specific responsibility towards children. Reducing vehicle speed and increasing awareness among drivers when children cross the road are key targets of pedestrian safety. Apart from large campaigns, RSE can also target drivers through children's interventions. In many European countries, driver's education is launched by children. These actions have a double effect:

- children become increasingly aware of driver's behaviour, and
- drivers tend to not forget the message brought forward by children if it occurs in a direct, face-to-face interaction.

Example of good practice: RSE for children combined with RSE for drivers

Save the Zebra/BE [138]: This action is a single event lasting one day for children aged 8 to 10. Classroom activities in the morning (discussion about crossings) are followed by a walk to the crossing where the children observe behaviour. In the afternoon, they produce materials to sensitise drivers and other people that use the crossing. After the action, schools join together in a parade through the city.

The police supervise the action and parents are invited to join the parade.



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A number of countries have launched the action 'Apple-Lemon' (Czech Republic [40], Hungary [186], Austria [76], Slovakia [52]). Police officers measure vehicle speeds and children present drivers either an apple, as a reward for compliant driving, or a lemon, as reminder for speeding drivers. The action aims at influencing drivers' behaviour. Another positive aspect is that the action might stimulate children to reflect their own behaviour. The intensity of preparatory work and subsequent debriefing depends on the teachers, e.g. sometimes children address drivers in letters, or explain to the drivers why they should comply with speed limits.

Road Safety Education for Cyclists

Road Safety Education for cyclists is most relevant in the ages between approximately seven to 15 years. Actual use and attitudes towards cycling differ significantly throughout Europe. In some countries, children use the bicycle very early from the age of four, such as in Germany and the Netherlands, whereas in other countries, bicycle riding is of less importance.

Riding a bicycle requires complex multi-tasking. Older children can better cope with these multiple operations than younger children. An important threshold in terms of age seems to be the age of eight years¹⁷. This is the reason why it is often recommended that children riding a bicycle should be protracted to the furthest extent possible, and that one should prefer other means to train motor skills. In particular, scooting is a good basis for cycling, because it requires similar motor tasks, but on a markedly lower level of complexion¹⁸. In countries with a long-standing tradition of early cycling, such recommendations tend to fail in raising awareness and cannot be enforced due to lack in political acceptance. In such countries, it is better to actively address parents and children to assist in teaching the safe use of bicycles.

Recommendation

Parents need information and assistance in:

- teaching their children safe cycling,
- obtaining practical knowledge about legislation,
- being a role model by wearing a bicycle helmet and using proper safety equipment.

In order to reach parents, informational evenings and courses are helpful¹⁹.

Table 4: RSE – key topics and methods for cyclists

Most relevant topics	Most relevant methods
<ul style="list-style-type: none"> – Knowledge about traffic rules and behaviour as cyclist (Highway code concerning cyclists) – Handling and vehicle command – Communication and interaction with other road users – Blind spot – Safe bikes and use of helmets – Visibility (lights/reflectors on the bike, clothes, flag, etc.) – Risk awareness and risk seeking, speed, peer pressure, overestimation of own skills 	<p>Stepwise approach:</p> <ul style="list-style-type: none"> – Training of motor skills in protected area (if possible initial training with scooters rather than on bicycle) – Lecture, discussion and media on traffic rules/signs and behaviour of cyclist – Transformation of knowledge into skills in protected area – Escorted tours in real traffic – Discussion, reflections, group work about cycling experiences in traffic for pupils aged 10 to 14 (high risk group) – Information and advice for parents how to guide their child, legislation, use of helmets and safe bikes

in the ideal case, contents and methods are embedded in a broader structure of a concept, instead being 'one-off' events

Learning cycling step-by-step



Recommendation

Cycling should be taught in a step-by-step process.

1. The best start is the initial use of a scooter in order to train motor skills.
2. Skills training on a bicycle offered for six to seven years old children is recommended for countries with a tradition of early cycling. Such training should by no means encourage children of this age group to cycle in real traffic! In fact, cycling in protected areas or on pavement (if it complies with legislation) is more advisable.
3. Common cycling training in most EU Member States is offered for children aged eight to twelve years old. It should extend over a longer time period and follow the stepwise approach described below.

COMMON CYCLING TRAINING FOR THE AGE GROUP EIGHT TO TWELVE

- First, training should focus on improvement of riding skills.
- Subsequent modules in protected areas should focus on managing traffic situations.
- Only after extensive training, the first bicycle rides in real traffic can be carried out accompanied by adults.
- The entire process is supported by lectures targeting relevant knowledge.
- An important topic for additional training is the blind spot. Although this topic can be taught as part of theoretical lessons, a separate module including a practical demonstration will significantly raise interest and understanding (see actions 'The Blind Spot'/BE [139] and DE [3]), 'Heavy Vehicles'/DK [45], 'Top Rider'/AT [74]).

Examples of good practice: Cycling training over a longer period of time

'The Scottish Cycle Training Scheme'/UK [127] is a three-level action.

Level 1 is for children under nine years of age and includes classroom activities (knowledge on cycling and discussion about a video tape).



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- Level 2 combines theory with practical training and assessment in a protected area (such as the school playground). Practical skills are essential before children can engage in Level 3, and include learning to cycle in a straight line, correct balance and basic manoeuvres.
- Level 3 is almost entirely practical and covers the majority of skills for safe bicycle command, from signalling to turning at junctions. The only theoretical training is the time spent studying and learning the Highway Code, which children are expected to do primarily in their own leisure time. The tuition is largely conducted in the traffic environment. Level 3 counts as a fully-fledged test of cycling proficiency.
- Each level takes approximately two days, although the exact duration depends on the teachers. It is recommended that Level 2 covers at least one afternoon and Level 3 requires at least approximately 8 hours on the road and a further 2 hours for learning the Highway Code.

'The Junior Road Safety School'/DE [7] is also a stepwise approach to cycling proficiency. One of the differences is that children visit a protected area that allows for training in a simulated road environment, but without dangers of real traffic. One of the great success factors of this action is the significant duration of practical skills training; the action is comprised of eight visits, each lasting two hours. Additionally several hours for theory are foreseen. Another success factor is the well-trained police officers. They are explicitly and solely engaged with the Junior Road Safety Schools and are experienced child instructors. In addition, infrastructure is a major incentive for carrying out the training.

RSE for cyclists should not end with traditional forms of training

Despite the obvious advantages of protected areas, such facilities cannot substitute training in real traffic. However, due to high traffic densities, group training for cyclists in real traffic requires enormous resources in terms of staff and time in many regions. Nevertheless, ongoing support and advice would be of crucial importance because children aged 11 to 15 years rank among high-risk cyclists.

Recommendation

Cycling has to be a continuous topic in RSE at school for pupils aged 11 to 15, when the traditional forms of training have been absolved and exposure in traffic increases. For this group, a set of new factors and behaviour patterns emerges: taking risks, increasing influence of peers, and denial of risks. At this stage, motives that are very similar to those of moped users and pre-drivers become relevant, and strategies to reach this target group by RSE have to be well considered (see examples below).

Examples of good practice: How to address the age group 11 to 15 with RSE for cycling

The Belgian action 'Bicycle Pooling' [146] offers supervised cycling in real traffic. Small groups of up to seven children ride to school escorted by a volunteer guide, i.e. either teachers or parents. Children and the guide wear reflecting clothes and helmets. The police or municipal authorities may support the project, e.g. by giving crossing support at dangerous locations.



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In the Hungarian [187] and German [14] action 'RSE in the Summer Camp', one focus is on cycling. Apart from skills, track-training bicycle tours in groups are organised, which is easier to be realised in the rural environment of a summer camp than in urban school surroundings.

'Big Pupils Teaching Small Ones'/DK [44] and 'Pupils as Mentors'/DE [13] follows two important topics:

- to strengthen social competence and safety-awareness of older pupils up to 12 years,
- to use older pupils as RSE multipliers for fellow pupils.

The Danish example focuses rather on pedestrian safety, whereas the German example puts emphasis on cyclists.

Encouraging the use of bicycle helmets and safety equipment

Fatal bicycle injuries occur most often due to head injury (about three quarters). The leading cause of head injury among children is due to bicycle accidents. Recent studies found that bicycle helmets reduce the risk of head injury by the range of 47% to 88%²⁰. Many governments, e.g. Czech Republic, Finland, Spain and Slovenia, have introduced legislation making the use of bicycle helmets compulsory.

Recommendation

Regardless of legislation, wearing helmets should be promoted. Arguments against bicycle helmets, such as risk-seeking tendencies while wearing a helmet or a reduction of cyclists' shares due to helmet usage, have no empirical evidence²¹. Parents should act as role models by wearing helmets themselves. In school, cycling training should only be carried out with children wearing a bicycle helmet, and use of helmets should be enforced.

Safety equipment, as well as technical checks, should be promoted. Safety inspection before or during cycling education is an essential element. Bicycle garages, where children jointly learn correct bicycle maintenance and repair, is another possibility of where to anchor this topic (see action 'Pupils as Mentors'/DE [13]).

Example of good practice: Promotion of bicycle helmets and safe bikes

'Smart Heads Use a Helmet'/SI [56] targets children and teenagers aged 6 to 17 and encourages the use of bicycle helmets. The National Road Safety Council of Slovenia organises each year the possibility to buy certified bicycle helmets for a reasonable price. This offer is accompanied by informational events, such as demonstrating the 'egg test' and disseminating information on the importance of helmets in schools and public places. Various media, such as brochures, posters and a website, complete the safety campaign. The website has been established in cooperation with the Ministry of Health. This event is offered annually.

'Safe Bike'/SI [71] concentrates on bicycle equipment. In spring at the beginning of the cycling season 'bicycle checks' are organised at schools in cooperation with the Slovene Road Safety Council, local road safety councils, and the police. A standardised checklist is used to carry out technical inspections. All bicycles that meet the requirements receive the 'safe bike' sticker. The colour of the sticker changes every year, thus it is only valid for one year.



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Road Safety Education for Users of Public and School Transport

Public means of transport rank among the safest modes of transportation, which is a major argument to promote its use in general and, more specifically, for the daily way to school. Unfortunately, the image of public means of transport is not always the best. In several countries it is linked with considerable stress: too many passengers in crowded buses, undergrounds or trains during the peak hours. In school buses, this mainly leads to aggression among pupils, shouting and pushing each other. As a consequence, the safety problem in school transport is not an actual traffic safety problem. Many accidents result from falling or stumbling when entering or leaving the bus or train, or accidents happen during the ride if pupils are not seated or hanging on to a handle/strap.

The focus of RSE actions for pupils using public/school transport should concentrate on two major aspects: firstly, on traffic safety issues and, secondly, on social behaviour and correct attitudes. For the latter point, this involves being careful about younger children, not to push others, not to be aggressive against the others, and so on.

Table 5: RSE – key topics and methods for use of public/school transport

Most relevant topics	Most relevant methods
<ul style="list-style-type: none"> – Waiting for the bus/train, entering, behaviour during the trip, exiting – Pedestrian safety around the bus and train – Blind spots – Social behaviour, partnership, aggression, vandalism – Fears while using public/school transport – Correct handling/planning a trip (tickets, time schedule, connections) 	<ul style="list-style-type: none"> – Lecture supported by media (video tape, film) – Practical training in real traffic – Visits to public transport enterprises – In case of social problems: discussion, information events, round tables with all involved partners (pupils' delegates, parents, teachers, bus drivers, enterprises, etc.) – Launching long-term projects: e.g. bus guides

in the ideal case, contents and methods are embedded in a broader structure of a concept instead of being 'one-off' events

Encouraging the use of public and school transport

Recommendation

Public transport is, on the one hand, the safest mode of transportation and, on the other hand, far more environmentally friendly than individual motorised traffic. A school that is integrated into the public transport network should actively promote its use as an alternative to parental driving services. Schools in cooperation with public transport operators and local authorities should develop joint strategies to make the use of public transport as comfortable as possible in order to have a lasting effect on current and future mobility patterns. Public transport has to be presented as a cool and trendy alternative. A notion of public transport that might be in sharp contrast to the actual current situation: public transport is often considered as a must in case of no other choice being available. RSE projects that target a change of such negative attitudes need to be strengthened.

Parents should be aware of their influence

Recommendation

Also with regard to public transport, parents are role models for their children. Parents should be made aware of the fact that their attitudes and behaviour regarding motorised traffic and public transport shape the minds of their children. RSE interventions and information for parents should address parents as role models and further the reflection of behaviour patterns and attitudes.

Make the daily trip by public/school transport more comfortable

Recommendation

Generally speaking, public or school transport is less of an actual safety problem, but far more of a social problem. In particular, the school bus is often the place where mobbing and vandalism happens. Younger children frequently stop using the bus simply because of being afraid. The obvious consequence is that parents bring them to school by car. In the worst-case scenario, pupils learn 'Darwinist lessons': when being small you are the one being pushed around by the stronger and older ones. Once you are older and stronger, you are the one who pushes the younger children. This attitude often prevails also at later stages in life. Thus actions counterbalancing such experiences and the development of such attitudes are beneficial and support a general sense of social responsibility. Actions, like 'Bus Guards', address exactly this problem. The success of this type of action depends on strong support from all parties involved: parents, schools, bus drivers, public transport operators and the local authorities.

Examples of good practice: Interventions for increasing safety and comfort in public/school transport

'Bus Guards in Public Transport'/DE [18]: In order to achieve a safer and more convenient public transport, older pupils aged 13 to 18 are working as bus guards for younger pupils. The future bus guards receive a basic six-day training in order to solve problems of younger pupils (e.g. jostling of bus users, arbitration in disputes). They are trained to identify conflicts and to de-escalate the situation non-violently. The escorts wear special clothes (labelled with 'Schülerbegleiter', which means 'escort', on a waistcoat and baseball cap).



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'Bus School'/DE [17]: First, all relevant safety topics (e.g. blind spots, crossing a street when leaving the bus) around the bus are discussed in the classroom. The discussion also addresses social themes, like communication with bus drivers and other passengers, or fears while using the bus. A videotape aids the teacher's message. As a second step, a bus excursion follows. Problems and questions are raised and discussed with an experienced bus driver in the bus and at bus stops.



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Road Safety Education for Moped Users

Young moped drivers have a high accident rate²². They have the highest risk of being involved in road accidents. The main reason for this high-risk exposure is the dangerous combination of youth-related overestimation of their own skills, on the one hand, and the lack of experience, on the other hand. Insufficient knowledge of rules does not seem to be an important explanation for the high level of 'accident risk'. In fact, instead of learning to be in control of risks, like more traditional education programmes aim at, the main focus should be on improving the motivation and the skills needed for risk avoidance. Thus interventions should take risk prevention into account.

Also, the vehicle²³ itself poses an important risk factor. Moped drivers are relatively vulnerable, using a motorised vehicle without protective construction. Generally speaking, risks increase with speed. Therefore speeding, reaction time, and stopping distances are crucial elements of moped driver training. This does not refer to mere theoretical knowledge, but rather learning by doing. Not only is practice in protected areas, but also in real traffic, essential for improving risk awareness and improving risk assessment abilities. The table below provides an overview on the most important topics and methods concerning RSE for moped users.

Table 6: RSE – key topics and methods for moped users

Most relevant topics	Most relevant methods
<ul style="list-style-type: none"> – Own skills and limitation of own skills: speeding, reaction time, stopping distances – Sensation and taking risks: denial of risks, acceptance of risks – Influence and pressure of peers – Alcohol, drugs – Use of helmets – Technical control of the vehicle – Safe vehicle and manipulations on the vehicle for higher speed 	<ul style="list-style-type: none"> – Lecture and practical training – First lessons in vehicle command and driver training in protected areas – Transfer of skills to real traffic situations – Promoting appropriate attitudes: discussions, workshops, visits from external experts – Support through enforcement measures

in the ideal case, contents and methods are embedded in a broader structure of a concept instead being 'one-off' events

Addressing the 'right' target group

One must be careful to train the 'right' target group, especially when training is not compulsory. Teenagers with already a positive attitude towards safe behaviour are likely to join moped driver courses, whereas 'hard-core' moped drivers tend to neglect such offers.

Recommendation

In the ideal case, moped driver training is legally required. This legal context is the most effective way to reach the entire target group. If the training is voluntary it is of crucial importance to reach also those teenagers that need the training most.

- Interesting content, methods and materials are one pre-condition,
- Well-trained instructors who speak the language of the target group are a second pre-condition. These instructors should be used to deal with the specific group of teenagers. Respect and equality are keywords (a 'warning' approach should be avoided). They must be trustworthy, respected, and credible and must be seen as experts by the teenagers.
- Another possibility is the provision of financial incentives, like reduced tariffs for moped insurance only for those having passed the training.

Examples of good practice: how to address the 'right' target group

In Denmark, moped driver trainings are obligatory. The training 'Education of Moped Drivers' /DK [101] is partly offered within the school system. It is an instrument to obtain the moped-driving license. Only teenagers who possess this license are allowed to drive a moped. The police can ask for it any time, similar to a car driver's license.

In Italy, the cultural setting is that most teenagers are eager to drive a moped. By offering a moped driving course in school, such as 'Teenagers on Mopeds'/IT [48], all future moped drivers of this particular school are reached.

In the Netherlands, moped driver training is voluntary. Therefore, an economical pull-factor is used: teenagers who participate in the course receive a reduction of the insurance costs for their moped. Furthermore, the Dutch 'Moped Driver Training' [173] is very successful due to well-trained instructors. In order to obtain a high, uniform quality level of this course, only certified instructors (in most cases driving-instructors) who have completed special training are allowed to teach the 'moped driver training'. Nevertheless, for obvious reasons, the personal skills of instructors play an important part in the quality of the course.

In the German 'Project Motorcycle' [169] action, teachers receive a one-week training for teaching both theoretical and practical lessons in a school setting.

In Belgium, the action named 'Awareness Raising Courses for Moped Drivers by Fedemot' [143] employs special instructors who are experienced in driving motorbikes. Thus, the instructors have the status of an 'older brother' who is respected by the teenagers, but who is also accepted as a group member.



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From risk control to risk avoidance

Traditional moped driver training concentrates on vehicle command. One has to be aware that this approach might lead to overestimation of one's own skills and limits, and also to wrong expectations concerning the technical limits of the vehicle. In combination with the specific risk factors of this age group, like seeking admiration, exploring limits, and peer pressure, this might result in a dangerous mix that is counterproductive to the initially envisaged effects of training.

Recommendation

Moped driver training should focus on risk avoidance instead of risk control. Risk avoidance puts the focus on the teenager's attitude; risk control lays the focus on improving skills. Mere skills training might stimulate confidence in one's own skills and lead to over-confidence. Also, technical limits of the vehicle should be a key aspect. Therefore it is essential that instructors apply appropriate strategies and tactics to highlight the 'other side of the coin', i.e. the risks stemming from overestimation of own skills and technical limits of the vehicle. Key training objectives are improved awareness of own risky tendencies and the motivation to behaviour adjustment based on self-evaluation.

The effect on awareness of one's own limits and risks is most obvious when it is experienced in practice. It is also important to practice in real traffic. Direct feedback when correcting technical skills, behaviour and assessment is essential for an effective learning process.

Examples of experienced-based moped driver training focusing on risk avoidance

Actions like '50cc Special Driving Licence'/PT [161] and 'Education of Moped Drivers'/DK [101] are good examples combining theory and practice in protected areas as well as in real traffic. In the **Danish** example, the course consists of 15 hours: 12 lessons in theory and 12 lessons in practice. Theory lessons are illustrated by a package of interactive media, such as a movie and a website. The practical modules are partly given in protected area. Practical training goes beyond vehicle control towards experience of risks related to speed and overestimation. The teenagers also train the assessment of real traffic situations.

In the Portuguese training, the same structure is used combining theory and practice in a protected area as well as in real traffic. This course consists of seven hours of theoretical training and two practical modules each lasting four hours.

In Austria, an example of an integral approach also exists focusing on defensive driving. In 'Road Safety Education in the 9th and 10th grade: Preparing for Motorised Traffic' [94], cognitive, affective and sensorimotorical aspects of driving a moped are covered. A special focus is put on self-overestimation of teenagers once by practical training (but only in protected area) and twice by interactive discussions. This action takes place exclusively within the school system.

Integrated approach towards safe behaviour

Influencing behaviour and changing attitudes is a continuous process. Therefore no sustainable results may be expected from short, single and isolated actions. Single RSE actions are most likely to be effective on the short term since attention on the subject is raised only for a short time period and diminishes quickly after the action is finished.

Recommendation

A long-term effect is more likely when RSE measures are not isolated interventions, but part of a comprehensive RSE programme. Also synergy effects will occur when different types of measures are combined. The effects of education and training for young moped drivers will increase when being combined with other measures like enforcement. Enforcement activities, such as speed control, wearing helmets, and control of technical features of the moped, can contribute effectively to safer behaviour. Therefore it is recommended to approach the changing behaviour of moped drivers from more than one perspective, i.e. combining training and education with enforcement activities.

Example of a synergy between education and enforcement

In the Belgian project 'Safe Use of Mopeds' [149], a combination of education with enforcement is combined. In the classroom, police officers explain the risks of driving on a high-speed moped. Then students get one week to set their mopeds in order. After this week, repressive controls in the streets take place during which mopeds can be confiscated.



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Road Safety Education for Pre-drivers

In this context pre-drivers are defined as teenagers aged 15 to 17 and potential future novice-drivers. Traditional car driver training mainly focuses on knowledge and skills, but not sufficiently on attitudes. In fact, safe attitudes cannot be expected to develop in a few hours, but have to be considered as a long-term objective, which should be tackled and developed continuously in school. Risks concerning driving a car reveal marked similarities with the topics that have been discussed for moped users. Also, the abuse of **alcohol and drugs in combination with driving**, as well as **speeding**, are relevant topics for this target group.

Table 7: RSE – key topics and methods for pre-drivers

Most relevant topics ²⁴	Most relevant methods
<ul style="list-style-type: none"> – Overestimation of one's own skills (in general and especially when alcohol and/or drugs are consumed) – Lack of experience – Underestimation of accident risk – Sensation and seeking risks: denial of risks, acceptance of risks – Influence of peers and handling social pressure – Alcohol, drugs 	<ul style="list-style-type: none"> – Group discussions among peers²⁵ – Workshops – Active engagement in safety issues/community based approach – 'Happenings' (but including a preparation phase and a debriefing) – New channels apart from school in order to reach the 'right' target group (sport clubs, pubs, youth centres, etc.)

in the ideal case, contents and methods are embedded in a broader structure of a concept instead being 'one-off' events

Handling peer pressure

Being part of a group is of essential importance for teenagers. Such peer groups develop their own values and standards, often explicitly opposing values, standards and habits of adults. A common feature of peer groups, in the context of traffic safety, is seeking risks and excitement. This is frequently done in order to be respected in the group. RSE that aims at strengthening or even changing attitudes towards increasingly safe behaviour has to keep this fact in mind: The willingness and intention of young people is not sufficient. They need guidance to handle social pressures from their peers, and even guidance to change existing social values and behavioural standards within their group.



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Recommendation

RSE should contain elements for pre-drivers to deal with peer pressure and to make one's own choices. Such interventions should improve the self-confidence of young people, and appeal to their general feeling of social responsibility.

Example of good practice with focus on peer group values

In Germany, the project 'Traffic Safety Work Being Taken Seriously' [4] is a remarkable project that encourages students to develop alternative behavioural strategies.

- The project starts with a facilitated discussion about traffic safety among young people. The discussion is not based on traditional teaching methods. The main topic is typical leisure time risks. In this context, pupils discuss so-called dilemma situations²⁶. The (student) facilitator – being rather in the role of providing impetus and ideas – hardly interrupts the discussion.
- The second step consists of a mutual analysis of the pupils during a car trip in real traffic with a pupil as the driver. The driver is observed by fellow pupils and the driving instructor on a normal road.
- In the third step, the driving behaviour of the pupil is discussed with the aim of encouraging fellow passengers to mention critical aspects and to point out the driver's wrong behaviour.

Also, in the Slovenian project 'Youth should be Joyful, also in Traffic' [69], the social aspect of behaviour and decision-making is one of the key elements. In workshops teenagers participate in social games, role-plays, and discussions in order to critically reflect their own actions, as well as other's. The series of workshops encourages students up to 17 years to express their views on traffic safety, alcohol and drugs in traffic.

Scare tactics or confrontational approaches

Teenagers aged 15 to 17 years are usually absorbed by issues other than road safety. This subject is generally not considered an 'exciting' or 'interesting' topic for them. Therefore, it can be a key problem to motivate pre-drivers to participate in road safety actions that target their attitudes towards safe traffic behaviour. RSE must create a certain interest for this target group to be effective. One frequently used approach are shocking stories and visualisations of the consequences of risky behaviour and traffic accidents. Such scare tactics confront teenagers with seriously shocking elements, which explicitly aims at an emotional shock. Such projects can easily work counterproductive. Actually teenagers – during the confrontation – shut themselves out and do not identify themselves, or even more strongly resist against the imagination that such situations affect them. In fact, fear arousal may prompt denial that undermines precautionary motivation²⁷. Therefore, an approach that does not apply to their own situation is likely to be counterproductive.

Recommendation

Scare tactics can be a useful method to reach teenagers with road safety issues, but several rules have to be obeyed:

- Scare tactics should not be 'one-off' events, but be embedded in a broader frame of RSE activities.
- The use of scare tactics has to include a preparatory and a debriefing phase.
- The students should be offered tools to deal with their emotions and to guide them towards self-reflection and self-evaluation. A mental bridge to their own situation is crucial.

Example of effective use of confrontational approaches

Within the Danish project 'Survival Team' [99], a team consisting of a nurse, police officer and a traffic victim visit classes to present their experiences with unsafe behaviour and to discuss alternatives to risky behaviour in a 'safe social setting' (in the classroom). Pupils are stimulated to identify themselves with the consequences of unsafe traffic behaviour and to translate potential risks to their own future plans and dreams. The latter element is the key success factor. The reflection of their own behaviour in the context of future plans is a key element. This mental process is illustrated by an example of what can happen to personal dreams as a consequence of unsafe behaviour in traffic.

Example of innovative, attractive approaches

The German project 'Traffic Safety Work Being Taken Seriously' [4] is particularly interesting for future novice drivers since one of the elements of the action is driving in a car. The Swedish project 'Don't Drink and Drive' [22] offers a variety of elements that raise the interest of the target group. It combines a confrontational and emotional element – a father telling his story about his son being killed by a drunk driver – with more relaxing elements. The main fun elements are a demonstration of the impact of the non-use of seatbelts by a crash



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sledge and a simulator, visualisation of stopping distances by taking a student in a crane lorry as high as the stop distances for different speeds, or listening to the story of a crash with the destroyed car being shown, and a theatre play about drunk driving that students can participate in themselves.

Other examples of approaches that are related to the world of teenagers are (theatre in education) 'Never Saw the Day'/IE [104]), which is about speeding, or the Spanish 'SMS Road Safety Monitor' [158], where teenagers are invited to think of 'cool' SMS messages to send to fellow students.

Increasing effectiveness by RSE that is embedded in structures

In our data collection, most actions for pre-drivers are 'one-off' events, mostly focusing on alcohol, drugs, use of safety belts and speeding. It depends on the interest and engagement of teachers to deepen discussions and raise awareness in school subjects. But often schools and teachers are not interested in integrating RSE at a structural level in their school programme because other subjects are prioritised.

Recommendation

Time constraints are a major reason that RSE is often neglected in secondary schools. A suggestion to broaden the attention for road safety within schools without consuming disproportionate time of the school programme is to integrate issues related to road safety in other subjects.

The effectiveness of actions in the context of school could be increased, for example, by an in-depth debriefing in subsequent lessons. The focus should be on active involvement and engagement of teenagers. This could extend the duration in contrast to 'one-off' events. RSE for this target group cannot be founded entirely on school. Therefore, initiatives for pre-drivers in other contexts should also be stimulated. Key players, like the local police, driving schools, and youth clubs are relevant partners in developing and implementing RSE activities for this target group.

Examples of longer-term/embedded actions

'Hard Pavement' [108], reported from Italy, is an example of good practice for long-term actions. In this action teenagers are confronted with specific topics over a longer period of time, e.g. while writing articles for newspapers. The project targets high school students in the Province of Bologna and relies on the support of teachers and professional members of the Emilia-Romagna Journalist College. In the course of the project, a monthly publication called 'Asfaltoduro' is produced, which addresses road safety topics. The project stimulates students to reflect and analyse questions related to road safety. Being the author of articles and conducting interviews is considered an efficient strategy since it fosters self-learning among youth. The publication is distributed for free in the provincial schools and high schools.

An example of an RSE project that can be integrated into other subjects is 'On the Road Under Influence' [175] from the Netherlands. It is a package of teaching materials, which can be easily integrated in secondary school subjects, such as personal healthcare. The package is meant to raise awareness on the risks of alcohol and drug abuse in traffic.



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RSE Contacts



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- Belgium** **Belgian Road Safety Institute**
Chaussée de Haecht, 1405, 1130 Brussels
Phone: 0032-2 244 1511, E-mail: ingrid.engels@bivv.be
- Czech Republic** **Pedagogická fakulta Masarykovy university**
Ústav didaktické technologie
Poříčí 31, 603 00 BRNO
Phone: +420 543 129 312, Mobile: +420 602 773 556
E-mail: stojan@ped.muni.cz
- Centrum dopravního výzkumu**
Lišeňská 33°, 636 00 BRNO
Phone: +420 543215050/129, Mobile: +420 723 881 813
E-mail: heinrichova@cdv.cz
- Denmark** **The Danish Road Safety Council**
Lersøe Parkalle 111 – 2100 Oesterbro–Denmark
Phone: +45 39 16 39 39
E-mail: rfsf@rfsf.dk, www.sikkertrafik.dk, www.rfsf.dk
- Germany** **German Traffic Safety Council**
Beueler Bahnhofplatz 16, D-53222 Bonn
Phone: +49 228 40001 0, Fax: +49 228 40001 67
E-mail: dvr-info@dvr.de, Website: www.dvr.de
- German Traffic Guard**
Deutsche Verkehrswacht e. V., Am Pannaker 2, 53340 Meckenheim
Phone: +49 0228 43380-0, Fax: +49 0228 43380-68
E-mail: dvw@dvw-ev.de, Website: www.deutsche-verkehrswacht.de
- BAST – Bundesanstalt für Straßenwesen**
Brüderstraße 53, 51427 Bergisch Gladbach, Germany
Phone: +49 2204 43 445, Fax: +49 2204 43 403
E-mail: neumann-opitz@bast.de, Website: www.bast.de
- Estonia** **Estonian Road Administration**
Pärnu mnt. 463°, 10916 Tallinn
Phone: +372 6119300, Fax: +3726119360
E-mail: info@mnt.ee
- University of Tartu – Institute of Geography**
Vanemise 46, Tartu 51014, Estonia
Phone: +3727375817, Fax: +3727375825
- Greece** **Centre for Research and Technology Hellas (CERTH)**
Hellenic Institute of Transport (HIT)
17 Posidonos Av., 17455 Alimos, Athens, Greece
Phone: +30 210 9844360, Fax: +30 210 9853193
E-mail: abek@certh.gr, Website: <http://www.hit.certh.gr>

**Director for Road Safety and Environment
Hellenic Ministry of Transportation and Communications**
Anastaseos 2 & Tsigante, Papagou, 10191, Athens, Greece
Phone: +30 210 6508811, Fax: +30 210 6508481
E-mail: cphp@hol.gr

Spain

Dirección General de Tráfico
Josefa Valcarcel 28, 28027 Madrid
Phone: +34 913018500
E-mail: ariu@dgt.es, Website: www.dgt.es

P.A.U Education
Muntaner 262 3 planta 08021 Barcelona
Phone: +34 933670400
E-mail: pa.ullmo@paueducation.com, Website: www.paueducation.com

Universitat politècnica de Catalunya
C/Girona U-3 Modulo B-1 08034 Barcelona
Phone: +34 934017104, E-mail: f.robuste@upc.es

France

La Prevention Routiere
6 Av. Hoche, BP 469.08, 75360, Paris cedex 08,
Phone: +33 1 44 15 27 75
E-mail: emmanuel.renard@preventionroutiere.asso.fr
Website: <http://www.maif.fr/site1/prevention/prevsom.htm>

Ireland

National Safety Council
4 Northbrook Road, Ranelagh, Dublin
Phone: +353 14963422
E-mail: info@nsc.ie, Website: www.nsc.ie

Dublin City Council – Road Safety Unit
Office of the Director of Traffic
Fishamble Street, Dublin
Phone: +353 1 679 6111, E-mail: Michael.byrne@dublincity.ie

Galway County Council
County Hall, Prospect Hill, Galway
Phone: +353 91 563151, E-mail: nheffernan@galwaycoco.ie

Italy

**Direzione Generale per lo status dello studente, le politiche giovanili e le attività motorie –
Ufficio II**
Via Ippolito Nievo, 35 – Roma
Fax: +39 06 583 308 32
E-mail: patentino@istruzione.it, Website: www.istruzione.it/patentino/index.shtml

Osservatorio per l'educazione stradale e la sicurezza
E-mail: osseducstrad@regione.emilia-romagna.it
Website: <http://www.osservatorioeducazionestrada.le.regione.emilia-romagna.it>

Cyprus

Ministry of Education and Culture
Kimonos and Thoukididou, 1434 Nicosia, Cyprus
Phone: +357 2280 0774, E-mail: sacratum@hotmail.com

Ministry of Education and Culture
Kimonos and Thoukididou, 1434 Nicosia, Cyprus
Phone: +357 2280 0795, E-mail: ixmaria@hotmail.com

Ministry of Communications and Works

28 Acheon street, 1424 Nicosia, Cyprus
 Phone: +357 2280 0237, E-mail: gморfakis@pwd.mcw.gov.cy

Latvia**The Ministry of Transport and Communications of Republic of Latvia**

Str. Gogolaiela 3, Riga, LV – 1743, Latvia
 Phone: +371 7028 222, Fax: +371 7217 180
 E-mail: satmin@sam.gov.lv, Website: www.sam.gov.lv

Lithuania**Director of the Traffic Safety Service**

Lithuanian Road Administration
 Phone: +370 5233 1229, Mobile: +370 6153 8203
 E-mail: gintautas.ruzgus@lra.lt

Luxembourg**Sécurité Routière Luxembourg asbl**

75, rue de Mamer, L-8081 Bertrange, Luxembourg
 Phone: +352-31 97 86-1
 E-mail: securorc@pt.lu

Police Grand-Ducale

Direction Générale, L-2957 LUXEMBOURG
 Phone: +352 4997-1, Fax: +352 4997-2099
 E-mail: info@police.public.lu

Hungary**Ministry of Economy and Transport – Department of Transport Policies**

H-1024 Budapest, Margit körút 85.
 P.O.Box: H-1880 Budapest, Postafiók 111
 Phone: +36.1.336.7930, Fax: +36.1.336.7906
 E-mail halasze@gkm.hu or csoti@gkm.hu
 Website: (Hungarian) <http://www.gkm.gov.hu/balmenu/kozlekedes/kozlekedespolitika>
 Website: (English) <http://www.gkm.hu>

Hungarian National Police HQ – National Committee for Accident Prevention

(Országos Rend_rf_kapitányság – Országos Balesetmegel_zési Bizottság)
 H-1139 Budapest, Teve utca 4-6.
 P.O.Box: H-1903 Budapest, Postafiók 314/15
 Phone: +36.1.443.5690, Fax: +36.1.443.5690
 E-mail szadvarij@mail.orfk.b-m.hu
 Website: (Hungarian) http://web.b-m.hu/rendor/bal_meg.nsf/temakor

Malta**Malta Transport Authority**

Sa Maison Road, Pieta MSD 08, Malta
 Phone: +356-994 39 391 and +356-256 08 000-153, Fax: +356 21243049
 E-mail: lara.baldacchino@maltatransport.com

Netherlands**Adviesdienst voor Verkeer en Vervoer/AVV Transport Research Centre**

P.O. Box 1031, 3000 BA ROTTERDAM, The Netherlands
 Phone: +31 010 2825821
 E-mail: w.vermeulen@avv.rws.minvenw.nl, Website: www.rws-avv.nl

Stichting Wetenschappelijk Onderzoek Verkeersveiligheid/Institute for Road Safety Research

P.O. Box 1090, 2260 BB Leidschendam, The Netherlands
 Phone: +31 70 3173 365
 E-mail: divera.twisk@swov.nl, Website: www.swov.nl

Traffic Test

Landjuwel 22, 3905 PG Veendaal, The Netherlands
 Phone: +318 528 787
 E-mail: tt@traffictest.nl

Austria**Austrian Road Safety Board**

Ölzeltgasse 3, A-1031 Vienna
 Phone: +4301 71770, Fax: +4301 717708
 E-mail: kfv@kfv.at, Website: www.kfv.at

Federal Ministry of Education, Science and Culture

Department V/B/12, Minoritenplatz 5, A-1014 Vienna
 Phone: +4301 53120-2550, Fax: +4301 53120-2599
 E-mail: ministerium@bmbwk.gv.at, Website: www.bmbwk.gv.at

Poland**Ministerstwo Edukacji Narodowej Sportu (Ministry of Education)**

Al. Szucha25, 00-918 Warszawa, Poland
 Danuta Dzido, E-mail: Dzanuta.Dzido@menis.gov.pl

Krajowa Rada Bezpieczeństwa Ruchu Drogowego (National Road Safety Board)

ul. Cha_ubi_skiego 4/6, 00-928 Warszawa, Poland
 Phone: +48 22 630-12-55, 830-08-45, Fax: +48 22 830-00-80
 Mr. Andrzej Grzegorzczak, E-mail: sekretariat@krbrd.gov.pl

Instytut Transportu Samochodowego (Motor Transport Institute)**Centrum Bezpieczeństwa Ruchu Drogowego (Road Traffic Safety Centre)**

ul. Jagiellonska80, 03-301 Warszawa, Poland
 Phone: +48 22 814-17-46, Fax: +48 22 811-09-06
 E-mail: mariad@its.waw.pl

Portugal**PRP – Prevenção Rodoviária Portuguesa (Portuguese Road Safety Association)**

Estrada da Luz nº 90- 1º Andar, PT-1600-160 Lisboa, Portugal
 Phone: +351-21-003 66 21, Mobile: +351-91 94 588 28
 E-mail: carla.bento@prp.pt

Slovenia**Svet za preventivo in vzgojo v cestnem prometu RS**

Phone: +386 01 2327 892, Fax: +386 01 4393 034
 E-mail: mateja.markl@spv-rs.si, Website: www.spv-rs.si

Slovene Road Safety Council

Phone: +386 1 2327 892, Fax: +386 1 4393 034
 E-mail: mateja.markl@spv-rs.si, Website: www.spv-rs.si

Slovakia**Katedra cestnej a mestskej dopravy (Department of Road and Urban Transport)**

Veký Diel, budova NF, 2. posch., 010 26 ilina, Slovakia
 Prof. Ing. Štefan Lišák, CSc.
 Phone: +421 41 5133 501
 E-mail: liscak@fpedas.utc.sk, Website: <http://fpedas.utc.sk/katedry/kcmd>

Finland**Opetushallitus/ Finnish National Board of Education**

Address: P.O. Box 380, FI-00531 Helsinki

Phone: +358 9 774 775

E-mail: opetushallitus@oph.fi, Website: www.oph.fi

Liikenneturva/ The Central Organization for Traffic Safety in Finland

Address: P.O. Box 29, FI-00421 Helsinki

Phone: +358 9 417 47 00

E-mail: liikenneturva@liikenneturva.fi, Website: www.liikenneturva.fi

Sweden**The Swedish Road Administration**

Röda vägen 1, 781 87 Borlänge

Phone: +46 771 119 119, Fax:

E-mail: vagverket@vv.se, Website: www.vv.se

The Swedish National Agency for Education

106 20 Stockholm

Phone: +46 8 52 73 32 00, Fax: +46 8 24 44 20

E-mail: skolverket@skolverket.se, Website: www.skolverket.se

UK**Road Safety Division – Great Minster House**

76 Marsham Street, SW1P 4DR, London

Phone: +44 020 7944 2044

E-mail: Deirdre.OReilly@dft.gsi.gov.uk, Website: www.dft.gov.uk

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All pictures have been either taken from public web sites or have been sent to us by the country experts of ROSE 25.

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Keywords and the main goal of booklet 2: be aware of your responsibility for the environment, your health and social effects (e.g. peer group pressure, vulnerable road users such as children)
Keywords and the main goals of booklet 3: traffic planning, driving licence, safety devices for vehicles, experienced versus inexperienced drivers.
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