



The EU Advanced project

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The EU Advanced project: an introduction

Advanced is a study of post-licence driver and rider training co-financed by the European Commission (2000-2002). It describes and analyses voluntary, post-licence training and makes a series of recommendations on how to improve such training. It emphasises the importance of avoiding overconfidence amongst trainees and indicates how training can be more effective and balanced. The report also includes guidelines for countries wishing to introduce obligatory '2nd phase' training for novice drivers.

Advanced specifically arose due to (a) Commission concern about the lack of standards in - and potential side-effects of - voluntary, post-licence training, and (b) interest amongst European Union Member States and within the Commission itself in obligatory novice driver training. Voluntary and obligatory post-licence training are not mutually exclusive. In countries looking to introduce obligatory 2nd phase training, experts and policymakers will undoubtedly look to existing infrastructure and resources to facilitate the implementation of training. Infrastructure and resources do, at least in some countries, exist in the voluntary sector, but whether they are suitable for providing training for this very specific target group (namely, generally young and inexperienced road users) is another question.

The project was managed by CIECA, the international commission of driver testing authorities and overseen by a steering group composed of the following organisations:

- Bundesanstalt für Straßenwesen (BASt), Germany
- University of Turku, Finland



- Centre de Formation pour Conducteurs, Luxembourg
- Kuratorium für Verkehrssicherheit (KfV), Austria
- CIECA member organisation (French Ministry of Transport)
- Transport Research Laboratory (TRL), UK
- Swedish National Road and Transport Research Institute (VTI).

Advanced was also supported by a number of advanced driver training organisations from around Europe.

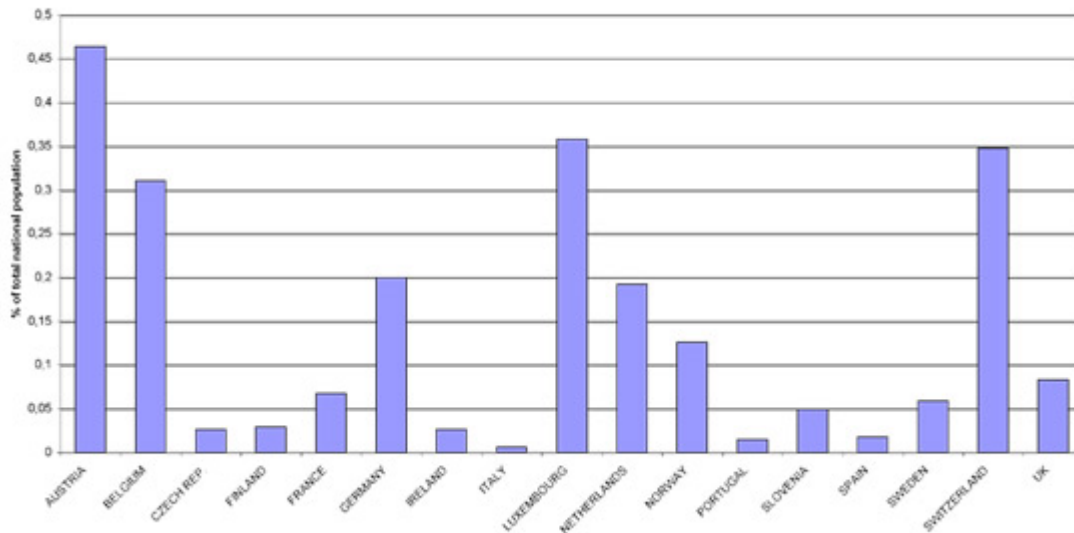
Developments in post-licence driver training

Over 400,000 drivers took part in continuous driver training throughout Europe in the year 2000. Moreover, demand for post-licence driver training has grown over the last 5-10 years across the European Union (and, in Germany, over the last 20 years). Amongst the various reasons cited ¹⁾, the main explanation for this rise in demand is the growth of fleet driver training. The increase in the provision of company cars over the last few years has led to higher accident and damage claims which company management are at pains to reduce and which their insurance companies are unwilling to support over the long-term. Changes in working practice are also encouraging governments and authorities to consider the company car as an extension of the workplace. Health and safety regulations, in addition to legal concepts such as corporate responsibility, are therefore no longer restricted to the office. Finally, a combination of higher living standards and increased traffic density has brought road safety into the public and political limelight.

Post-licence training varies considerably in popularity from one country to another. Fleet driver training accounts for the vast majority of it, although a market does exist for novice drivers and individuals wishing to take part on a purely voluntary basis (especially in Germany).

1) Companies may have compulsory training budgets which they choose to spend on driver training; safety campaigns have encouraged companies to take action; the provision of more training facilities and better marketing has helped absorption and increase of demand, health and safety regulations have been extended (or will be extended) to include company cars and drivers; competition has grown between providers leading to higher quality and more client-oriented training; multinational companies (with many temporary expat workers) have created and led the market in some countries.

Estimated number of participants in voluntary, post-licence driver training in Europe (2000) as % of total national population



Population data: United Nations (data relates to 1999 figures)

Luxembourg statistics: 2001

UK figures do not include RoSPA and IAM data

Training can take place in one or more of 3 training environments: on tracks, public roads and the 'classroom' (see pages 44-67 of the main report). Some countries have a track training tradition, for example, Germany, Switzerland, Austria and the Nordic countries. The individuals involved in track-based training (both directors and trainers) tend to have a racing background (rally driving or circuit racing), technical background (engineers, etc) or are (ex) policemen. Other countries, on the other hand, are more accustomed to on-road training, such as the UK and Ireland. This market is heavily influenced by ex-policemen and trainers qualified as pre-licence driving instructors who are not familiar with track-based courses and are used to "working" on the road (see pages 69-73).

Track-training generally involves groups of participants who are able to benefit from interaction with each other, as well as from the course content. In contrast, training on public roads is mostly one-to-one, where the opportunity exists for a highly tailored, individual approach to the training.

Current training programmes

All driver training organisations will claim that their main goal is to enhance road safety by reducing the likelihood of accidents amongst their trainees. However, the specific objectives of training are likely to differ according to the needs of the clients and the particular philosophy of the training organisation (see pages 52-67 and annexes 4 & 5). Business clients who spend a lot of time in their cars may require, for example, training on recognising fatigue, environmentally-friendly driving techniques or ways to reduce fatigue. Novice drivers often need to gain

experience, for instance, with night-time driving, recognising poor road conditions and learning how to brake effectively. More experienced drivers may be offered courses with braking and avoidance exercises and others to show how ESP or other new technology functions.

Course programmes tend to differ according to the following parameters:

- Whether they are track-based, on-road or in a classroom (and combinations of the three): the training environment will dictate, to a large extent, the level of individual attention given to participants by the trainer(s) and the flexibility to respond to individual needs, group sizes and how much interaction takes place amongst participants
- The needs of the target group (and how the course organiser perceives and translates those needs into concrete exercises)
- What 'level' of driving behaviour is being addressed (see the paragraph after next)
- The relative focus on manoeuvring and traffic-based training to improve *skills* as opposed to *risk awareness*

The classic content of advanced (track-based) training courses originates *inter alia* from North American accident investigations in the 60s and 70s from which it followed that a lack of vehicle control in emergency situations was often a contributory factor in causing accidents. Courses were therefore set up to train drivers to react appropriately in such situations. This concept has since been denounced by researchers due to the potential of overconfidence arising amongst course participants and the fact that emergency reactions could not be properly trained in such a short timeframe and without regular practice. Despite this, the classic driving skills of braking and avoidance manoeuvres in emergency situations and other manoeuvring skills such as negotiating bends, using the steering wheel, correct sitting position, etc. has remained a primary focus of many advanced training courses.

In contrast, current research in the field of driver training emphasises the existence of 4 levels of driver behaviour and the need to design training to address each level. Whereas most voluntary, post-licence training focuses on the two lower levels of behaviour (1. vehicle manoeuvring and 2. mastery of traffic situations), the two higher levels are largely neglected. It is these levels, however, which heavily influence driver behaviour and relative driving safety, namely: 3. the context of driving (fatigue, distractions, peer pressure, etc) and 4. goals for life and skills for living (values and attitudes in relation to life in general and how they may effect one's driving). The so-called Gadget matrix is a model encompassing these 4 levels of driving behaviour and incorporating three forms of training needs at each level: *knowledge and skills*, *risk-increasing factors* and *self-evaluation*. Significantly, risk awareness training and self-

evaluation (requiring coaching /moderation skills for trainers) do not currently feature heavily in post-licence courses.

Overall driver training, from learner drivers and above, should (ideally) involve training at each of these levels and according to each training form. The question is to what extent post-licence voluntary training can be expected to contribute to this ideal training format, and how they need to improve to get there.

Problem areas

An ideal driver training format should include training on all 4 levels of driver behaviour, addressing knowledge and skills, risk-increasing factors and ways for the participants to think for themselves (self-evaluation). Initial (pre-licence) training should cover, at the very least, basic manoeuvring and driving in traffic. In general terms, therefore, *Advanced* takes the assumption that post-licence training should focus on more advanced information and techniques on these levels, and measures to introduce and discuss the highly important higher levels of driver behaviour.

Following a questionnaire survey of post-licence training, and visits to various courses, Advanced identified the following, principal problem areas:

- Whereas most voluntary, post-licence training focuses on the two lower levels of behaviour (vehicle manoeuvring and mastery of traffic situations), the two higher levels are largely neglected.
- Courses continue to promote skills and knowledge over risk awareness and self-evaluation ([see pages 91-92](#))
- An emphasis on skills training in track-based courses may be counterproductive if participants become overconfident in their abilities ([see pages 93-97](#))
- Trainers continue to preach to - rather than coach - their clients. ([see pages 84-88 and annex 6](#)).

The general observation was made that the training-of-trainers is often poor, and that the lack of standards in the sector allows unqualified trainers and organisations to offer post-licence training. Many of the trainers remain old-school types from the emergency manoeuvring mould; public policy research has failed as yet to penetrate into the commercial, post-licence training sector. Basic teaching skills, let alone coaching, are often missing.

Two factors must be mentioned to qualify the above statements. Firstly, a lack of research in the voluntary driver training sector has meant that conclusions are being drawn partly on the basis of public policy research (into obligatory, post-licence training for novice drivers). Some conditions

clearly vary between the public and commercial sectors, not least the motivation aspect with respect to participation in training. Secondly, the short duration of training (normally a one-day course) must be seen in the context of the numerous other behavioural influences which citizens and road users are exposed to in their daily lives. Substantial behavioural change is unlikely to occur purely on the basis of a one-off post-licence training event, although it may contribute to this if delivered well and if part of an ongoing educational support structure for drivers.

General Recommendations

Advanced has issued a general set of recommendations for driver and rider training, covering the following elements:

- Course programming
- Course content
- Trainers
- Other quality issues, such as documentation

On a *programme level*, the report makes recommendations on the subject of training tailored to target group, group sizes, goal setting and evaluating, and the working climate between trainer and participants (see pages 119-20). *Course content* recommendations focus on the 4 levels of driver behaviour, the balance between skills and risk awareness exercises, the training environment (track, road and classroom) and how to recognise and avoid overconfidence amongst participants (pages 121-26). It also comments on specific exercises which should be either avoided, adapted or which are recommended. The *trainer* section reemphasises fundamental issues in driver training and includes a checklist on general teaching principles: differentiating between participants, teaching methods and assessing participants (pages 126-34). Moreover, the study recommends coaching training-for-trainers (see annex 6) and periodic, continuous training in various forms. In order to ensure a consistent and systematic approach to training, the report recommends basic - but often overlooked - quality control through regular client feedback and availability of course manuals and trainer handbooks (pages 134-5).

In addition to this, other products were developed in response to the following sectoral weaknesses:

Weakness

A lack of client feedback and evaluation of training effects

A lack of focus on risk awareness, particularly on the higher levels of driver behaviour

A general lack of standards

Response

A section on "[evaluation methodologies and how to make a 5 star evaluation of the results of your advanced training](#)"

A free, accessible [Risk Awareness Database](#), on the CIECA website, containing exercises to train risk awareness (click here to access the database)

Initial talks on a [European Quality Label](#) for

across the industry
Poor design of track-based
exercises

post-licence driver training
Particular attention is given to this issue, and how
to overcome it, in the conclusions and
recommendations sections of the main report and
below

Recommendations for track-based training (see pages 89-98 and 123-25)

Track-based training has potentially a lot to offer: it can be highly physical, involving the stimulation of the senses, adrenalin, fear, excitement, etc, all of which can leave a strong impression on the individual driver. It also provides an effective way of convincing participants that "the theory" (on physical forces) does actually apply in practice. A third advantage is that participants can "experiment" in safe surroundings, i.e. without posing a risk to themselves or others. Track-based courses can simulate a number of different scenarios and conditions which can be repeated *ad infinitum*. Training in groups also allows participants to become aware of the different personalities, attitudes, strengths and weaknesses of other road users.

The overwhelming intensity of many track-based exercises, must, however be harnessed in order to transmit the right 'message' to participants. Poorly designed or badly implemented exercises may lead to counterproductive effects, where participants leave the training with a sense of confidence in their own abilities which is out of proportion with reality.

Advanced, therefore, advocates the following:

1. Leave out highly technical, emergency reaction training (such as regaining control of a skidding car). Insufficient practice time and the potential for counterproductive effects make such exercises pointless. Trainers with years of technical handling experience should not assume that everyday road users can master such manoeuvres in a one-day course and, crucially, be able to execute in a split-second at some random stage in the future.
2. Focus more on exercises to highlight risk factors (e.g. effects of slippery conditions/speed on braking distance) than on those to improve manoeuvring skills. Track-based exercises can also be devised to show the effects of human risk factors (distraction, time pressure, etc), in addition to the factors related to the vehicle and road.
3. Track-based exercises must be true to life. They should be varied, and set up so that participants can relate to real life scenarios with all the normal constraints which apply (lack of space to manoeuvre, lack of time to react, etc)

4. Courses tend to regard the practical exercises as complete learning products in themselves. Exercises must, however, be followed by proper analysis, feedback and discussion between participants and the trainer for the real messages of the exercise to be reinforced and the undesirable alternative messages to be dispelled. The intense experience of the practical exercise needs to be "harnessed" and contextualised by the post-training feedback.
5. In general, trainers should take specific countermeasures, including the above, to avoid the phenomenon of overconfidence.

Recommendations for 2nd phase training

Novice drivers - especially young drivers - continue to be over-represented in accident fatalities throughout the EU 2). National governments have a range of policy measures at hand to address this problem (education and training programmes, safety campaigns, legal enforcement measures...). Behavioural research has highlighted the need for a combination of training and legal measures in order to provide an extended supported learning period including the crucial first months of driving. During this post-licence stage, drivers will gain invaluable experience which some countries are keen to contextualise, analyse and discuss in the form of obligatory "2nd phase training" for novice drivers in the months after obtaining the licence. Such training has already existed for several years in Luxembourg and Finland. Austria began its "multiphase" training in 2003, and Switzerland will follow in 2004. Other countries have either begun drafting legislation or are conducting pilot projects in this area ([see EU NovEv project on this site](#)).

On request of the European Commission, *Advanced* has set out a number of guidelines for countries wishing to implement 2nd phase training (pages 136-39). In terms of the goals of 2nd phase training – which should be interlinked with initial training in the country in question – these include:

- Raising awareness of risks at all 4 levels of driving behaviour ([see GADGET matrix](#))
- Developing a sense of self-awareness amongst novice drivers and the ability to recognise the strengths and weaknesses of oneself and those of other road users
- Exchanging experience amongst peers in a relaxed and interactive learning environment
- [Developing new and individual safe driving strategies for the future \(based on the risks identified at all 4 levels of driver behaviour\), e.g. safe distances, relationship of driver to passenger, etc.](#)

Implementing 2nd phase training is very difficult to do well. For example, designing track-based exercises which are effective, but not counterproductive, requires considerable knowledge, skill and patience. Developing the group dynamics needed for fruitful discussions and exchange of experiences also requires considerable ability on the part of the trainer. Similarly, the on-road trainer must have the ability to provide an open, interactive learning environment with the novice driver, without appearing condescending and overly didactic.

Thus, *Advanced* has created 10 methodological Golden Rules to respect when implementing such training:

1. Training should be varied, highly interactive, self-analytical and held in a relaxed atmosphere.
2. Group sizes (trainer: participant ratio) should be small enough to allow for individual attention and for intensive training, but large enough to facilitate stimulating group discussion.
3. Practical track exercises should be considered more of a starting point for the learning process than a complete process in itself. Each exercise should be followed with discussion.
4. Keep discussion, where possible, in a classroom in order to minimise distraction and maximise on focus. Write participants' comments on a whiteboard (or otherwise) so the "group results" can be seen and more easily retained.
5. Creative track exercises can and should be used to raise awareness of level 3 and 4 issues.
6. Check for undesirable side effects of the training and monitor the *filter* effect (see page 79 of *Advanced* report).
7. Check for course elements that may lead to overconfidence.
8. Use a range of locations and teaching methods (track training, discussions, case studies, problem-solving, self-evaluation questionnaires, video + discussion, on-road training and driver observation, etc) and limit individual sessions to maintain participants' concentration.
9. A good ending is vital: a relaxed, (not rushed!) session where the experiences and views of the training can be shared, summarised and discussed.
10. AND REMEMBER: Even courses designed to focus on risk awareness can be perceived as skills based courses by participants. It is not the message which is delivered, but the message which is received by the participants that counts. Constant participant feedback and course evaluation is necessary!

The *Advanced* guidelines on 2nd phase training are being tested in a successor project co-financed by the EU called NovEv (Evaluation of Novice Driver Training Schemes). This project, like *Advanced*, is managed



by CIECA. Over the period 2003-2004, 7 pilot projects in 6 EU Member States will be conducting small-scale training events for novice drivers. The training and evaluation of its effects will be closely monitored and reported on towards the end of 2004.

2) Data from France, the United Kingdom, the Netherlands, Sweden and the United States show that fatalities involving car occupants in the 18-24 year old category are over-represented by a factor of 2.1 – 2.6 (compared to the proportion of drivers in this category). Source: OECD 2002

Quality labelling

In the absence of government regulation, would a voluntary quality label scheme for post-licence driver training meet the needs of consumers, course providers and policymakers alike? This was the question asked and explored, towards the end of the *Advanced* project, with course providers and the *Advanced* project team (see pages 157-163). The *Advanced* project was not commissioned to deliver a readily-prepared quality label, but rather to open a constructive debate on the level of interest, feasibility and possible structure & content of a such a scheme. In fact, positive and very constructive steps were taken to lay the groundwork for a future European Quality Label in this area.

All 14 countries represented in the talks were in principle in favour of such a scheme. Benchmarking is considered important due to the almost complete lack of standards for post-licence driver and rider courses across the EU. Many training organisations are too commercially-oriented at the moment, and most clients go to the courses with the best marketing (rather than the best courses). Consumers have insufficient knowledge and information on the sector at this stage to be able to make an informed choice on which training to take, and a quality label would encourage quarrelling factions in national sectors to overcome their differences and accept the introduction of standards. A quality scheme would be useful, as long as it does not complicate any efforts to introduce standards at national level (for instance in Germany or the UK) and that its structure allows for ongoing change (research has been limited in this field until now).

In the end, the training organisations represented in the project were able to agree on 4 important building blocks for a European Quality Label:

1. the *basic principles* which should underpin a quality label
2. the *administrative structure* for granting and enforcing the label
3. what *content criteria* should be used to decide which courses are granted the label.
4. a possible *award scheme* to assess or “grade” each course.

In terms of the principles underlying a future scheme, the label should be:



- voluntary
- science-based
- subject to renewal
- independently assessed and monitored
- with both European and national coordination & control
- a progressive, graded system (to allow and encourage room for improvement within the label)
- course-specific (not company-specific)
- able to provide independent consumer information

The administration would be guaranteed by 3 different bodies: a coordinating body at European level (responsible for overseeing the scheme as a whole), national authorities in each country (responsible for contact with course providers and consumers, and with enforcement of the label) and, finally, a team of auditors, to be chosen on an *ad hoc* basis by the European and relevant national authority, to assess each course wishing to join the label scheme.

The content criteria for joining the scheme, on which each applicant driver training organisation would be judged, includes the programme goals, course construction, course content, quality of the trainers, 'other quality issues' and facilities/equipment at the training organisation (most relevant to track-based courses). Each of these criteria, and sub-criteria within them, vary in importance, so a grading system would need to be developed that gives due recognition to criteria that are particularly vital (such as the quality of the trainer).

The following items remain open for potential future discussion:

- The use of a graded or a yes/no system
- The weighting of points given to each content criterion
- An elaborated audit team reference document and quality criteria for auditors (the proposed audits will be at least in part a subjective assessment method)
- A label-withdrawal procedure
- Possibilities for financing 3)
- The legal status of a future quality label
- The exact procedures to follow with regard to communication between the coordinating body, control authority, course providers, consumers and the political establishment.
- The choice of national control authorities and European coordinating body (and available resources)

3) The Motorcycle Safety Foundation in the USA, which organises rider training across the country, gains financial support from 10 motorcycle manufacturers. This may be an angle worth pursuing.

Evaluating your training

Course evaluations are an important means of getting feedback on the effects of the training, and areas where improvements can be made. Previous evaluations of driver training have revealed, for example, non-correlation between the message delivered by the trainer and the message received by the participants. Such feedback is vital if courses are to improve and address counterproductive elements of the training.

The evaluation section of the *Advanced* report (see pages 141-156) helps trainers and course providers in the following ways:

- What you can expect to evaluate (targets of evaluation)
- How to gather the information you need to evaluate the training (data collection methods)
- What choices you have when setting up the evaluation (evaluation designs)
- What typical mistakes are made in evaluations and how to overcome them (evaluation checklist)
- Examples of the main types of evaluations in the driver training field

There are 3 main targets of evaluation, differing in terms of both complexity and importance:

1. Evaluation of the course content and methods, based on customers' opinions.
2. Evaluation of whether the learning goals of the course have been met immediately after the course, and whether any learning effects are maintained over the longer term.
3. Evaluation of the effects of the course on traffic safety (i.e. reduction in accidents) and offences. This is ultimately the most important type of evaluation but it is also the most difficult to carry out successfully.

As for data collection methods, there are several ways of collecting information for evaluation purposes. One of the main differences concerns the objectivity of measurement. Knowledge and skill tests can be objective, as can observations, historical data and other existing records. Questionnaires and interviews are sometimes criticised because of their subjectivity; but they are the only way of collecting certain types of information concerning, for example a driver's thoughts, intentions, feelings and attitudes. Drivers can also describe in a reliable way their driving style and driving habits. Also self-reports concerning accidents are reliable if the time span for reporting is not too long, and the accidents to be reported are clearly defined and described.

Data collection methods are used to measure changes in skills, knowledge, attitudes and behaviour of participants/non-participants.

Evaluation design deals with questions such as when and how many times to measure, and how many groups to use. There are several possibilities for measurement times and for the number of groups used in the study. The most simple research design contains only one group, the training participants. However, this design is very basic because it is impossible to prove that effects have arisen as a result of the training rather than any other outside influence. For more advanced and reliable evaluations, two or more groups, including at least one group of training participants and at least one untrained or 'control' group, are needed. Use of a control group allows the effects of the training to be isolated from the effects of other sources, thus allowing a true statement of the effectiveness of a particular course. The trained and untrained groups should preferably belong to the same population (i.e. have similar profiles), so that the only difference between them is that one receives the training and the other does not.

In terms of when to measure the training effects, the choices are: after the training, before and after the training, or before and after the training with follow-up, namely more than one measurement after training at some further stage in the future. Measuring only after training does not generally allow us to draw any conclusions concerning changes or the training effects. It is not possible to know how the situation was with the course participants before the training. On the other hand, before and after training measurements allows us to know what changes have taken place. If there is a proper control group as well, these changes can then be attributed to the training, rather than any other outside influence.

The sub-sections on typical mistakes and evaluation examples provide practical insight into the theoretical approaches outlined above. Despite the complexities attached to evaluations, it is hoped that the large course providers, in particular, will realise the benefits of proper, periodic evaluation in terms of feedback for them and as positive public relations and marketing tool.

The Risk Awareness Database

The Risk Awareness Database was developed in reaction to the limited amount of quality risk awareness exercises used in post-licence training. The database is seen as a first step on an international level towards encouraging more focus on risk awareness in these courses. The examples on the site have all been provided by course providers (or, in one case, by a road safety organisation which has compiled examples used by course providers). Course providers are free to consult the database and to consider using these examples, or adapted ones, for their own courses.



The examples provided are available in English, French, German and the original language it was submitted in (if appropriate). [Click here](#) to access the database.

Developed by an international interdisciplinary scientific committee, *Advanced* builds on knowledge in the field of driver training and highlights a number of areas which can be improved in order to better address the needs of driver and motorcyclists in the post-licence phase. It also, however, underlines various obstacles to progress, as far as the trainers, course providers and trainees are concerned. It bases a number of its assumptions and conclusions on *practical experience* rather than scientifically valid data. This reflects the lack of relevant research into the effects of post-licence road safety training.