

CIECA project 2007

**Independent Driving in the category B
practical driving test**

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NOTE: For simplicity’s sake, drivers, examiners and instructors are referred to in the masculine in this report. This by no means intends to suggest that they are all masculine in reality.

A. Background

1. Once novice drivers obtain a licence, they will have to drive independently. In other words, they will no longer be able to rely on a driving instructor or examiner sitting next to them, ensuring their safety and making decisions on their behalf. The novice driver will have to make his own decisions regarding when to drive, where to drive to, how to get there, and who to drive with – at the same time as driving safely. It follows therefore that driver training and the driving test should be designed to encourage a sense of responsibility, awareness and individual decision-making amongst learner drivers, in order to prepare them for the scenarios they will be exposed to when driving solo.
2. But to what extent do current training and testing regimes take these needs into account, and what can be done to reinforce ‘independent driving’ principles and skills in training and the test? This small project arose from a systemic concern that instructors, examiners and the licensing system as a whole maintain too much control of the traffic situation during training and the test. This leads to learner drivers and driving test candidates becoming too reliant on the instructions, cues and prompts of driving instructors and examiners to drive safely. Consequently, the solo novice driver is poorly prepared to deal with certain driving situations, is more easily ‘overloaded’ and more likely to make mistakes.
3. This project is tightly linked to CIECA’s parallel project on ‘integrating the GDE matrix into the practical test’, in that it tries to develop arguments and ideas for more valid training and testing which meet the full set of needs of young, novice drivers.

B. Independent driving as a concept – and in concrete terms

4. In a general sense, Independent Driving means drivers make their own decisions and feel responsible for their own driving. This requires the driver to be aware of what is happening around him and what other road users in proximity are doing. Responsible decision-making also requires insight into one’s own abilities. There are various ways of encouraging such behaviour in training and the test, as discussed below.
5. Responsible drivers are safe drivers. This sense of responsibility can be developed in the driver training process, if the learner is empowered to make decisions, choices, identify his own goals, etc. Such ‘responsibility’ does not mean that learners should immediately be able to make decisions which have serious road safety implications. Especially at the outset of training, the learner should ‘feel responsible for his own learning’, rather than responsible for making major decisions in traffic. Developing a sense of responsibility and increasing awareness in driver training are major goals of the EU HERMES project (in which CIECA is involved) on coaching skills for driving instructors (www.gutefahrt.at/hermes).
6. In a more detailed sense, being able to drive independently means that the learner or candidate no longer has to rely on prompting, cues or instructions from the instructor or examiner. At the very least, the driver should be able to drive at an appropriate speed for the circumstances and maintain sufficient safety margins to the road users around him. But this is not enough to drive safely. A further requirement is being able to drive safely from A to B - often in an unfamiliar

area - for example by following signposts. This requires additional - but essential - skills to those traditionally trained and tested in many jurisdictions. This report also includes ways of assessing these skills and encouraging the development of such skills in training.

7. Overall, this project looked at ways of ensuring independent driving in the driving test, and to some extent driver training, in order to make the test a more realistic and 'natural' driving environment for the test candidate.

C. Why Independent Driving?

8. The previous section already discussed the importance of developing responsible drivers. Responsibility develops with awareness, and awareness comes from experiences as a result of being encouraged to think individually and make independent decisions and choices. Measures to increase such responsibility and independence of mind can and should be integrated into driver training and the test. The important thing is to move away from the perception that driver licensing is simply a series of bureaucratic steps and towards acceptance that the right to drive a potentially lethal machine represents a new phase in a person's maturity and personal development. Too much control on the part of the instructor and the examiner decreases the awareness of the learner/candidate (of what is happening around him, of his own abilities and limits) and absolves them of a sense of responsibility for their own welfare and the welfare of other road users.
9. Another important justification for independent driving in training and the test is that, generally speaking, learners drivers are not gaining enough experience in trip planning and orientational skills while driving (level 3 of the GDE matrix). Novice drivers are not always going to drive in areas which are totally familiar to them, so they need to be able to look out for signposts and landmarks, at the same time as maintaining core driving skills (positioning, speed, safety margins and communication = levels 1 and 2 of the GDE matrix).
10. Making the driving test more realistic, for instance where the candidate has to follow signs to the railway station, gives examiners better insight into the core driving skills of the candidate. This is for two reasons. Firstly, the candidate has to 'multi-task' to a greater extent: finding his way is an additional skill which must be performed in addition to the core driving skills of positioning, speed and so on. If the candidate's core driving skills are not sufficiently automatic, this weakness will be exposed when the additional - yet essential - skill of orientation in traffic is added on top. Secondly, removing the constant stream of instructions from the examiner means that the candidate cannot use these instructions as a 'cue' to spur him into action (mirror-indication-positioning-speed). The candidate has to decide on the timing of his actions independently and without external support. For test-led systems, where the content of the test dictates what is taught in training, the integration of 'independent driving tasks and concepts' into the test is likely to influence how the learner is prepared.

D. An instrumental view of 'Independent driving'

11. The concept of 'Independent driving' in the driving test can be considered from at least two perspectives. The first approach focuses directly on the issue by trying to simulate specific independent driving tasks and to assess them where possible in the test. The CIECA-led EU TEST project may have encouraged this because 'Independent driving' was one of the six issues measured in the project. The results showed how much (in minutes) the six countries involved in the study focused on 'Independent driving' in their driving tests. This is a very natural and common solution in test-driven countries like Great Britain or the Netherlands, where driving instruction is relatively weakly structured. In addition, the reliability of the test may increase when the independent driving concept itself - or parts of the concept - are directly assessed.
12. The other approach is an 'instrumental' one. It does not count 'Independent driving' as a separate assessment criterion, but simply focuses on encouraging candidates to drive as independently as possible in the driving test. This approach is probably nearer to CIECA's work for the European Road Safety Charter which emphasised that there is a need for 'natural' driving in the driving test. So, 'driving independently' probably reflects this approach well. Since this approach lets candidates drive as naturally and independently as possible in the test, it ought to increase the validity of the assessment made during the test.
13. In principle, the more independently candidates drive in the driving test, the more valid the examiner's observations during the test should be. There are many ways to increase the opportunities for candidates to drive independently in the test. Areas where independent driving can be enhanced include¹:

Actions before driving in traffic

- Is the candidate clear what is expected of him/her in the test?
- Is it clear that during the test the candidate is expected to drive like an ordinary licensed driver? (adjustments, observation, car's condition, all decisions during driving...)

Actions while driving in traffic

- how the examiner sets tasks and gives instructions
- selecting routes
- how the examiner makes markings (on the assessment form)

Actions after driving in traffic

- Does the candidate appreciate her/his level of readiness for driving solo in traffic?

14. The ultimate goal should be that candidates understand what is expected of them in the test and that they feel responsible for their own driving. So, all the parts and elements of the driving test

¹ The subsequent CIECA workshop held in Munich on December 6-7 identified the following areas where independent driving can be enhanced in the driving test:

The candidate's expectations, calibrating the activation level of the candidate, the examiner's behaviour (especially with regard to marking), independent driving tasks during the test, special manoeuvres (choosing where to perform them), examiner's communication to candidate, allowing for the candidate's opinion of his/her performance after the test, the readiness of the candidate for solo driving, agreement on the result between examiner and candidate.

should enhance and encourage candidates to drive independently. Only then can the candidate's readiness for independent safe driving be measured validly.

15. This is where the link to safety also applies: the rationale of 'driving independently' during the test is to meet the safe driving goals of the GDE-matrix. So, 'driving independently' should not only be considered as a separate issue to be evaluated in the driving test. Moreover, in the driving test it can be a usable and valuable instrument. But, without the right behaviour and attitudes of the examiners – together with the supporting licensing processes and procedures – it is useless.
16. Finally, below are two concrete examples of independent driving in the test:
 - a. Markings may be carried out in several ways during driving test, and some of these practises may disturb the candidates' (independent) driving more than others. This is why some countries do not encourage their examiners to make any markings at all during the test.
 - b. Conditions should be created for special manoeuvres during the test in such a way that candidates may carry them out independently. For example, when parking a car it is interesting to see where the candidate parks the car, not just how it is parked.

Increasing the length of net on-road time in the practical driving test is also designed to enable the examiner observe the 'normal' driving behaviour of the candidate, rather than the optimal behaviour (which can only be maintained for a limited period).

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E. Specific Independent driving tasks in the practical test

17. The CBR (Dutch driver testing organisation) has tested a range of independent driving tasks which could be used in the practical test. These tasks involve creating circumstances in which the candidate has to demonstrate his driving skills during a period without instructions from the examiner. During this period, the candidate has to find his way and make decisions in a timely and independent manner.
18. The following forms of independent driving will be introduced in the Dutch category B practical test in 2008. A short analysis of these tasks can be found in annex 1.
 - a. Driving to or back from a 'coordination point' (e.g. railway, hospital, school) without further instructions from the examiner.
 - b. Following a 'series of instructions' from the examiner to reach a certain destination (the series will be composed of 3-5 instructions, delivered by the examiner as if the candidate was receiving instructions from a passer-by).

- c. Using a GPS / Satellite Navigation system (inputting and following directions) to reach a specific destination. This option will only be considered if the test vehicle (namely the driving school vehicle in the Netherlands) is equipped with such a device.
19. The examiner will choose one of the above three independent driving tasks during the practical test. The task is designed to take up around 10 minutes of the test. The essential point is not that the candidate succeeds in completing the independent task, but that he always continues to drive in a safe and responsible way, despite this extra element of ‘multi-tasking’.
20. An additional ‘fixed task’, where the candidate is asked to continuously take the second street on the left followed by the second street on the right, was tested by the CBR but was ultimately dropped because it was ineffective and difficult to arrange in practice. Depending on the location of the driving test, alternative ‘coordination points’ (see point a. above) can include nearby towns/villages or a particular road which must be reached (e.g. the ‘A37’).
21. There are also ways of making the *special manoeuvres* more independent in the practical driving test. Again, the CBR explored a number of possibilities to this effect. Known as ‘productive’ special manoeuvres, these can be seen as a special form of independent driving in which the candidate has to make his own decisions about when and how to perform a special manoeuvre. The examiner makes it clear to the candidate that a certain manoeuvre should be performed but leaves the decision to the candidate as to when and where to perform it. All the methods of ‘productive’ special manoeuvres below have been tested and integrated into the new Dutch practical driving test (2008+).
- a. *Turning manoeuvre*:
- Independently turning the vehicle to face the opposite direction
- b. *Parking manoeuvre*:
- Independently looking for a parking space in a parking lot and parking the car
- Independently looking for a parking space in a street in a built-up area and parking the car
- c. *Stopping manoeuvre*:
- Independently stopping directly behind another vehicle (in such a way that the candidate can follow his route without having to reverse first).
- Stop & Go: independently pulling over to the roadside and subsequently continuing the route.

F. Independent driving and the issue of reliability / validity of the test

22. These independent driving measures, as well as the measures considered in CIECA’s GDE matrix project, are designed to increase the validity of the driver training and/or testing regime. The validity of the test is the extent to which it effectively assesses the full range of driving competencies needed to be a safe driver. At the same time, the reliability of the test is also important, namely to ensure that each candidate is assessed according to the same conditions and criteria, regardless of the location or specific examiner in question.
23. With regard to independent driving, a balance needs to be struck between giving the candidate enough freedom in the practical test to feel responsible for his own driving (validity) and maintaining enough control and structure to the test so the examiner can be assured that the test norms have been observed (reliability). For example, some concepts of independent driving may

be considered incompatible with ‘fixed testing routes’ which are in place in several countries in Europe in order to ensure some sort of standardisation of the driving test.

G. Independent driving in training

24. The goal of integrating independent driving in the practical driving test is to ensure that this concept be addressed in training. Only through proper training and practice can learners be prepared for solo driving. There is little point in adding independent driving to the test if it does not have the knock-on effect of influencing training as a result. For countries with test-led systems, the most effective way of ensuring the independent driving is covered in training is to add it to the test – and to make it clear that the independent driving performance of the candidate will be taken into account in the pass-fail decision.
25. Some countries with obligatory on-road training, such as Finland and Norway, integrate independent driving in the driving lessons preceding the test. The idea of this phase is to move one step beyond mere vehicle control and traffic rules and to prepare novice drivers for real-life scenarios which they will face in the first few months of solo driving.
26. Accompanied driving, e.g. practising with a parent or close family member, is likely to encourage independent driving because of the extra mileage involved and the fact that an accompanying person is unlikely to intervene as much as a driving instructor. Accompanied driving can come before the test or after the test (e.g. in Germany).
27. Trip planning can – and should – be covered in theory lessons and can be used in combination with practical lessons.
28. Various coaching techniques and methods can be used by the instructor throughout the driver training process to give the learner a stake in the training and to instil a sense of responsibility. These techniques are being collected and developed within the EU HERMES project.

H. Summary of Independent driving measures in training and testing

29. Various methods and approaches have been considered for encouraging independent driving in driver training and the practical driving test. In the practical driving test, the Netherlands has chosen to introduce independent driving tasks, such as driving to or from a coordination point without any instructions from the examiner. Several countries, including Netherlands and Sweden, allow their test candidates more independence in deciding when and where to carry out special manoeuvres, not just how. Norway and Finland advocate an ‘instrumental’ approach to independent driving, whereby the whole test is designed with a view to encouraging the candidate to make his/her own decisions and to drive as naturally as possible. One example how to encourage this is for the examiner not to take notes during the test (only afterwards), in order not to disturb the natural driving behaviour of the candidate. This is possible in countries in which the test is assessed globally rather than on the basis of individual faults (which an examiner would have to mark during the test for fear of not being able to recall them at the end). Adding net on-road time to the practical driving test is another way of encouraging the candidate to find and show his/her natural driving style.

30. There are 3 obvious ways of encouraging independent decision-making in the training process: one is in the form of accompanied driving (e.g. with a parent) where driving is likely to complement driving school training because it is a way of implementing what has been learned in driving lessons in a much more natural and functional context (e.g. driving to the shops or to a relative's house). Independent driving can be built into the licensing process by formally including this objective in one or more obligatory driving school modules. Typically, such as in Norway, these independent driving lessons (e.g. driving a long distance with minimal input from the instructor) would take place towards the end of training and just prior to the test. In addition, independent decision-making can clearly be encouraged over time by the driving instructor. The driving instructor should be constantly asking him or herself: "are my actions giving or taking away the responsibility of the learner?" Allowing the learner progressively more decision-making in the learning process will encourage the learner to assume responsibility for his/her own driving over time. Responsibility, in more general terms should also be given to the learner from the outset of training, albeit in terms of decisions which do not have a major safety implication. The EU HERMES project will be developing standards for these skills over the next 18 months.

I. Videos

31. 2 videos regarding independent driving are available from the CIECA secretariat. The first one, developed by the DSA, explains the rationale for more independent driving in driver training. The second video, developed by TUEV SÜED, provides some practical demonstrations of independent driving tasks which can be used in the driving test.

J. Project Team

32. The independent driving project team was developed by CIECA's EAG (Expert Advisory Group) + the Norwegian Public Roads Administration:

- ★ Reinhard Meyer (TÜV SÜD, Germany, chairman)
- ★ Trevor Wedge (DSA, Great Britain)
- ★ Han Rietman (CBR, Netherlands)
- ★ Sami Mynttinen (AKE, Finland)
- ★ Per-Olof Nilsson (SRA, Sweden)
- ★ Eveliis Nagel (ARK, Estonia)
- ★ Jacques Quoirin (GOCA, Belgium)
- ★ Per Gunnar Veltun (NPRA, Norway)

Annex 1: Analysis of independent driving tasks (CBR, Netherlands)

CIECA's EAG (Expert Advisory Group) visited the Netherlands to observe the independent driving trials being carried out by the CBR. The following observations were made regarding the pros and cons of each individual task:

a. Driving to or back from a 'coordination point' (e.g. railway, hospital, school)

- To be able to use this system of coordination points perhaps you need more alternatives to prevent candidates from learning the route by heart and this becoming a memory exercise.
- Perhaps the coordination points could be integrated into the test so that the starting point is a point the candidate passes during the driving test instead of the test centre from where he / she starts. This would give the examiner more flexibility in selecting the route. In the first 10 minutes of the test, the examiner could get an impression of the candidate and then ask him to drive towards a certain coordination point selected in accordance with the candidate's skills. Candidates could even be asked to drive from one coordination point to another coordination point.

b. Following a 'series of instructions' from the examiner to reach a certain destination

- In advance there was some concern that candidates would not remember series of instructions. This was not a problem, as long as the instructions were not too numerous or long-winded.
- This system gives the examiner a lot of freedom in selecting the route he asks the candidate to take (the route can be adjusted depending on the type of candidate)
- All candidates indicated they enjoyed the exercise and that it encouraged them to think for themselves and take responsibility for their driving.
- Examiners will require training in terms of how best to give the series of instructions.

c. Using a GPS / Satellite Navigation system (inputting and following directions) to reach a specific destination.

- Navigation systems are becoming standard equipment in nearly all new cars. It is therefore important to find a way to incorporate them into driver training and testing.
- By using navigation systems in part of the test, you have introduced novice drivers to the concept of route planning and preparation. This seems to be a relatively easy way to introduce level 3 of the GDE matrix into the driving test
- Using a GPS system is perhaps not independent driving in the purest sense (to a large extent, the examiner's oral instructions are replaced by GPS oral instructions) but it does require multi-tasking, a need to glance regularly at the screen, listening skills, etc. The task would include entering the destination into the GPS too.
- The timing of the instructions was sometimes very unfortunate. An examiner can choose when to give candidate directions and tends to choose times when the candidate is not in the process of dealing with a relatively complex situation.