EU HERMES Project - Executive Summary

High impact approach for Enhancing Road safety through More Effective communication Skills

In the context of category B driver training

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I. Coaching in driver training

1. The HERMES project

The HERMES project began in March 2007 and was finish in February 2010. Its main aim was to create a 4 day training course for driving instructors to allow them to develop their ‘coaching’ skills. In addition, a number of coaching scenarios have been developed to enable instructors to coach in on-road training, track training and the classroom, and to meet a wide range of goals in the driver education process.

HERMES builds on a number of different EU projects in the driver training field which recognise the need for:

• less reliance on short-term instructional methods which tend to help learners to pass the driving test, and more focus on active-learning methods to prepare learners for solo driving and to foster ongoing learning after the test
• more focus on the higher levels of the GDE matrix in driver training (personality factors, self-awareness, emotions, different trip-related contexts for novice drivers and their motives for driving).

The final HERMES product includes the following:

1. HERMES-project final report (state of the art report on learner centred methods plus newly developed communication techniques and scientific evaluation of the HERMES-Seminar; in English only)
2. HERMES Coaching Scenarios (English and German)
3. HERMES Seminar Manuals (English and German)
4. HERMES Film “Coaching in Driver Training” (English and German)

The documents and the film can be downloaded from the official HERMES-Website: www.alles-fuehrerschein.at/HERMES

2. Objective of this report

The aim of this final report is to create a coherent package from a range of sources on the subject of coaching and active-learning methods in the context of learner/novice driver training. It provides the largest background knowledge for those who want to conduct coaching seminars for driving instructors.

Additionally, all evaluation results of the HERMES coaching seminar (feedback analysis and audits) are outlined in this report.
3. Defining coaching within the HERMES project

HERMES-Definition of Coaching in driver training:

Coaching is a learner-centred method that engages body, mind and emotions to develop inner and outer awareness and responsibility with an equal relationship between the learner and the coach.

The definition that has been agreed upon reflects how coaching should be seen in the context of driver training. HERMES thus focuses on developing:

- Methods which activate the learner driver and make him more aware of himself, the car, and the interaction between himself and others in a (social) traffic environment.
- Methods which accept the learner driver as being responsible for himself, his own learning and his behaviour in traffic (and which helps him maintaining this sense of responsibility in complex situations).
- Methods where the teacher/coach and learner form a partnership in which the coach, through observation, questioning and feedback, encourages the learner to be himself, identify goals, reflect on his experience and develop strategies to meet his driving goals in the future.

4. Principles of coaching

A number of principles have been identified to provide insight into the role of the coach and the process involved. These principles are listed below, and then the most important aspects explained in some detail.

1. The coaching relationship is an equal relationship: the trainer is no longer ‘the expert’ in the hierarchical sense.
2. Coaching puts the learner into an active role.
3. Coaching encourages the learner to identify his/her goals and to meet these goals.
4. Coaching raises the awareness, responsibility and self-acceptance of the learner.
5. Coaching raises awareness not only through rational thought but also through the learner’s senses and emotions. It raises awareness of the learners’ values, goals, motives and attitudes as well as his sensations and emotions, knowledge, skills and habits.
6. Coaching addresses the learner’s internal obstacles to change
7. Coaching builds on the prior knowledge and experience of the learner
8. The coach is convinced of his role and of the benefits of coaching
9. A coach communicates in an authentic, neutral and non-judgemental manner
10. The basic skills a coach uses are effective and precise questioning, listening and reflecting back
11. Coaching and instruction do not mix: if instruction cannot be avoided, alternate with coaching rather than mixing them.
12. Coaching shall be experienced by the coachee as much as possible as a voluntary process: the learner shall not be forced to participate in the coaching method.
13. Coaching is not just about asking questions: it is about using a method which is appropriate for the circumstances, ensuring that the learner is put in the active role wherever possible.

Many of these principles are actually interlinked and mutually dependent.

- **Leading the learner into an active role**

Today’s society contains so many influences which encourage youngsters to take a passive role. For instance, in school they are often talked at rather than to, and cinema, computer games, internet and TV are always available to entertain them. This is one reason why they may approach driver training in the same way. Instead of being actively interested in developing safe driving competencies, some are happy to remain passive and to be ‘told and shown how to pass the driving test’.

The big challenge of coaching is to “lead the student out of the role of passive consumer and into the role of active producer” (Bartl). The more active a person is involved in the learning process, the more responsibility and awareness we create and the better we recognise learning opportunities and the will to act upon them. In short, the more active the student is in the learning process, the more likely they are to develop and maintain skills not just during training but also when driving solo after the test.

It should be understood that simply manoeuvring the car in driver training is not ‘active enough’. Learning is enhanced if the ‘student’ is asked to the following ‘active’ things:

1. State what they have learned in their own words
2. Give examples of it
3. Recognise it in various guises and circumstances
4. See connections between it and other facts or ideas
5. Make use of it in various ways
6. Foresee some of its consequences
7. State its opposite or converse.

There are many ways in the coaching process to activate the learner, as described below.

- **Creating an equal relationship**

If the learner feels the instructor is in control of the training, he will be encouraged to take a passive role in the training process. This feeling implies a hierarchy, with the instructor as ‘boss’ and the learner as obedient servant. Such a hierarchy can also create anxiety in the learner because he feels he is constantly being judged. This anxiety can lead to defensiveness and other forms of resistance to learning. If the instructor presents himself as an equal, and someone with whom the training can be tackled in partnership, the learner is likely to be more relaxed and more inclined to share his concerns and views with the instructor.
This transition from a hierarchy to an equal relationship is recognised to be an important challenge for the HERMES project. Both are of the same value although the competencies of the coach and the coachee will vary. The attraction of telling (i.e. imposing a hierarchy) is that, besides being quick and easy, it provides the instructor with the feeling of being in control. And being in control can be one of the most attractive aspects of the role of a driving instructor.

- Identifying and meeting goals

Goal setting is another key principle of coaching. First and foremost every goal in driver training, independent on the learning method (coaching or telling etc.), must fit to the needs of traffic safety! The coach helps the learner to identify his goals and then to realise them – again, in accordance with the needs of traffic safety. Goals in driver training could be the overall goal: “What do I hope to achieve as a result of the training?” or specific goals, for instance within each lesson. It is very important that the learner fully accepts the goals in the coaching process – because coaching is tailored towards change in that individual only. Efforts should be made, using coaching, to ensure that learners subscribe to the basic goals of training (safe, social and environmentally-conscious driving). And there is no reason why driving should not be a pleasurable experience too, provided it remains safe at the same time.

In practice, many youngsters are used to obeying and following instructions. Agreement on goals at the start of training is therefore often hard to get, partly because the person has never been asked to identify goals before, and partly due to a lack of knowledge of the training process (how can I set goals if I don’t know what is important to become a good / safe driver?). So any agreement may be formal at the beginning, but after two or three lessons, as long as the coach keeps trying to jointly identify goals, the learner will start realising that the coach is ‘different’ and start thinking for himself. It may therefore be during the training rather than at the beginning when the learner starts to identify his own goals. And goal setting can be a type of negotiation between coaching instructor and learner. The coach must make his intentions explicit, make the learner aware of what he is feeling, seeing and what his perspectives are, and encourage the learner to identify his own goals. The coaching instructor and learner then meet halfway. This is an ongoing process.

In practice, the learner drivers’ most important goals relate to what they need to know and do to pass the driving test. These kinds of goals are probably not that difficult for learners to conceptualise and express. The difficult ones are more general and more focused on levels 3 and 4 of the GDE matrix – a person’s driving context, motives, moods and habits when driving solo. Getting the learner to focus on goals on these levels is a real challenge, especially because measuring these goals in the driving test is so difficult.
- Raising awareness, responsibility and self-acceptance

Awareness

Building awareness and responsibility is the essence of good coaching (Whitmore, 2002). A high state of awareness is required for driving, both in terms of awareness of the outside world (what is happening around me?) and in terms of self-awareness (how do I feel, and what do I feel?). To be in control and therefore to be able to drive safely, you have to be aware of these inner and outer worlds. It follows therefore that anything you are unaware of controls you.

The instructor-coach can raise awareness of both these worlds, primarily through questioning. For example, what do you see, what can you hear, how do you feel, what do you feel, etc? These questions raise awareness in the form of feedback: but this is feedback from the environment, from your body, your actions and from the car you are driving, rather than feedback from people.

Responsibility

Safe drivers are responsible 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. Ideally, learners should be given responsibility from the beginning of training. Starting with coaching immediately increases the sense of responsibility within the learner when he is in the car. We want to create a situation where, each time the learner gets in the car, the learner’s inner voice says “this is a place where I am responsible”. By giving him responsibility from the beginning of the training process, this goes some way towards reaching this goal.

It should be emphasised that this responsibility does not mean that learners should immediately be able to make decisions which have serious road safety implications. The learner should ‘feel responsible for his own learning’, rather than responsible for making major decisions in traffic right at the beginning. The allocation of responsibility between trainer and student, according to ‘coaching’, ‘normal instruction’ and ‘poor instruction’, can be presented as follows:
According to the ‘coaching’ line in this model, learners must be given responsibility right from the beginning of the training process. This should soon get them accustomed to making decisions, and making choices. If the trainer retains too much or even all the responsibility, this is a bad model for the learner to start with (‘poor instruction’). A classic instructor will only start giving responsibility gradually, as the training progresses (‘normal instruction’).

Self-acceptance

Low self-acceptance is a typical trait of young males. Feelings of inadequacy (e.g. not being manly enough) can lead to compensation in the form of risky behaviour, such as showing off in order to try to gain the respect and admiration of others. Such behaviour can of course have serious implications in traffic. Low self-acceptance in girls often breeds anxiety and dependence or nervousness and lack of concentration.

If the learner feels empowered and responsible for the learning process, he recognises the trainer as a partner rather than an instructor and he feels he is being listened to, this develops a sense of inner self-esteem which is often lacking in teenage males. If self-acceptance is developed within the training process, the learner will be more relaxed and learning can be a lot more effective because it is built on a much sounder basis than building on an external image which does not correspond to the real person inside. Coaching should be used increasingly to develop an environment where it’s ok to act naturally.

- Raising awareness through senses and emotions

A limitation of driver training today is that there is too much focus on rational thinking and not enough on the senses and emotions. Senses and emotions are important for a number of reasons:
1. Driving is not just a rational process. People inevitably bring in their lives and their emotions into the car with them. And it is a highly physical activity.

2. Young drivers are going through a very emotional period in their late teens as they develop into adults and start to experience new freedom. They have numerous ‘building sites’: what they learn is constantly being torn down and re-built based on their new experiences. Driver training is about giving them experiences which they can relate to and build on. Coaching on an emotional and physical level is all the more important to prepare novice drivers for feelings and emotions they will have in a wide variety of potentially risky situations in the initial post-test period of solo driving.

3. Self-awareness, as recognised by the third column of the GDE matrix, is an important characteristic of a good driver. Self-awareness can only be developed if the learner recognises physical sensations and emotions which often precede rational thought. Knowledge and rational processing of information is not enough to produce awareness. Awareness can only be achieved if the learner emotionally processes an experience.

Importantly, coaching already on the lower levels of the GDE matrix (vehicle manoeuvring, interaction in traffic) can bring the learner into contact with their senses (e.g. physical sensations) and their emotions (e.g. anxiety). So coaching on the lower levels already raises awareness of emotions that are also important to recognise on the higher levels of the GDE matrix (e.g. a person’s moods, anxiety, willingness to show off, etc). Coaching should make them aware of their ‘internal state’. So by the time levels 3 or 4 of the GDE matrix are more addressed in the training process, the learners will already have some experience recognising their emotional and physiological state.

In short, being encouraged to learn for oneself, based on emotional, physical and intellectual experiences, is considered to have a longer-term impact on learning and well-being than more instruction-based teaching techniques.

This aspect of coaching is recognised to pose a challenge for the HERMES training programme because driving instructors are generally not accustomed to teaching on these levels.

- Addressing ‘internal obstacles’

‘Internal obstacles’ are any form of interference inside a person which disrupt the learning process and ability to meet a goal. An internal obstacle to an effective driving lesson could be a concern that the learner has from a previous lesson. If this concern is not addressed, and the instructor continues with ‘the curriculum’, the learner is unlikely able to focus fully on the new goals. Internal obstacles to safe driving include a desire to show off or to be competitive. The need to remove internal obstacles emphasises the importance of setting goals which suit the learner driver rather than the trainer. To do this, the trainer needs to put the learner in the active role. A typical coaching question at the beginning of each lesson could be: “What is your main concern today?”
Another type of internal obstacle is low self-esteem. As described in the above section on self-acceptance, low self-esteem can induce teenagers to compensate for their perceived inadequacies by projecting an image which does not reflect their true selves and by acting in a ‘don’t care, high-risk’ manner. If coaching can at least create a sense of self-acceptance in the training process, this internal obstacle can be addressed. “I am who I am now, it is good that I exist, and I can learn from here”.

### - Building on prior knowledge and experience

Building on prior experience is another important principle to incorporate into driver training through the coaching process, and to bear in mind when developing and setting goals. Learning is about connecting new elements with old elements (= prior experience) or building blocks on existing blocks. Therefore, an important principle of coaching is that it doesn’t start from scratch. It assumes that learners had some kind of experience already in life which they can link with the new learning. This exposes the limitations of a programme externally imposed on individual learners which does not recognise their individual learning sequences, experiences, motivations and concerns.

Learner drivers bring to driver training a wealth of experience from life and often from driving itself. Many will have driven before (depending on the licensing system) and all will have had the opportunity since childhood to observe their parents and others drive. Most learners will have cycled before, all will have been pedestrians and some will have ridden mopeds.

Of course, the driver training process itself also provides for a wide range of experiences. But these experiences must be built on and structured in a process of reflection to ensure that what has been learned is sustainable in the future.

### - Being convinced of the coaching role

One of the main challenges of the HERMES project is to develop a course which convinces instructors that coaching is a worthwhile approach in driver training. It should be recognised that it can be more difficult to make a coach out of an instructor than to develop a coach who has no teaching experience. It can be a typical and natural reaction of the instructor to be resistant towards the idea of coaching. But if a person is not convinced of the coaching role, this will be quickly perceived by the learner and the process will not work. Furthermore, for an expert driving instructor with a wealth of technical knowledge, it is very tempting and easy to revert back into a telling, hierarchical role. One of the main focuses of the HERMES coaching programme is to address this issue in detail.
- Authentic, neutral and non-judgemental communication

That communication must be authentic simply means that the coach must be convinced of the coaching process and genuinely interested in the ‘world of the learner’. Coaches have a range of techniques to help their clients feel that they are being listened to and being treated seriously. These include things like repeating sentences, rephrasing and repeating the main ideas, looking at the person, facing them (when you can) rather than standing beside them, and so on.

Finally, the instructor-coach needs to be non-judgemental with the learner. Direct criticism or blame invokes defensiveness and tension which puts a strain on the relationship and encourages the learner to close up. Instructors should avoid focusing only on errors and establishing their authority in pointing them out (even though the way the driving test is assessed in many countries only serves to encourage this approach). Again, there are various techniques to avoid direct criticism, such as:

- Don’t tell the learner he has done something wrong. Ask non-judgemental questions about things that went wrong…such as “What do you think happened back there?”
- Focus on the situation and not the driver’s behaviour. Try to focus on the specific behaviour or situation that was a problem rather than directing a criticism at the driver’s ability to drive.
- Focus on the positives. Always first point out: “What are you doing well?” We learn most from our mistakes, but in learning from them we rest on our qualities, our already mastered skills. The key is to find the qualities, even in a mistake (after all, some aspects may have been correct). Going through this process together develops confidence and trust.

- Questioning, listening and reflecting back

The main method for the coach to raise the awareness of the learner and give him responsibility is in the form of questions. Questioning techniques are therefore one of the key skills of a coach and a whole field of expertise in itself.

A typical coaching question at the beginning of a driving lesson could be: “What is your main concern today?” This immediately activates the learner, allows for any internal obstacles to be addressed and encourages him to identify a goal.

A number of principles have been established for good coaching questions. They include:

- Questions should follow the interest of the learner and use their words
- Questions should start broadly and then increasingly focus on detail
- The coach should only ask one question at a time
- Effective questions are clear, ‘open questions’ (what, when, where, who, etc) which require attention and thought, and are non-judgemental

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• Questions can and should focus on the **senses** (seeing, hearing, touching, etc), **emotions** (moods, feelings...), **attitudes** (opinions, values), **goals and motives** as well as **cognitive** factors (knowledge, habits).

• Questions can relate current experience to prior experiences.

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**II. Evaluation of HERMES-Coaching Seminar**

5. *Students’ feedback before - after HERMES coaching seminar*

5.1. Method

In summer 2008 17 Austrian driving instructors participated in a 3 days coaching seminar plus a supervision day two months later. In spring 2008 these instructors have been audited during their theory lessons, driving lessons and track training. Questionnaires have been presented to their students in order to evaluate the learning process. After the instructors have participated in the coaching seminar the same audits and questionnaire study has been carried out. In total 285 driving students participated. Those students who were asked in the before phase (spring 2008) were different subjects than those who were asked in the after phase (autumn 2008). Students and instructors were randomly selected in the area of Vienna/Austria. The sample of course is not representative. As a result of a factor analysis 6 factors have been generated out of the 30 questionnaire items.

First measurement (before the students’ instructors participated in the HERMES coaching seminar)

Driving students (N=158) ranging in age from 15 to 60 years (M=21.3, SD=7.14) served as subjects in the first measurement of this study. The gender of the subjects was evenly distributed (male n=76 and female n=80). Male and female subjects had a similar educational background. Most of them were employees or students in a school with a matura exam. Subjects completed the questionnaire mainly after a safe driving course (n=50) or a theory lesson (n=96). Only five subjects completed it after a driving lesson and seven after a feedback drive.

Second measurement (after the students’ instructors participated in the HERMES coaching seminar)

130 driving students took part in the second measurement of the study. Three of them answered the questionnaire without any inner variation and thus they were eliminated from the data. Therefore 127 driving students, 70 male and 56 female, served as subjects in the second measurement of the study. The age range was 16-48 years (M=20.2, SD=4.86). The driving students were mostly employees, both male and female subjects. Most of the subjects completed the questionnaire after a theory lesson or a safe driving course.

5.2. Result

Driving Students

Before phase: Driving student’s (N=158) experiences concerning normal driving school education (first measurement) were very positive (graph 2). The means of all variables were at least on the level of three in the five points scale (five is best). *Interactivity of the teaching style, Experiences of the course leader and Contentment with the course* got the
best evaluations. Students evaluated that **Possibility to take responsibility** was the least realized thing in the driving school education.

After phase: The experiences of the driving school education following the rules of coaching were also very positive (graph 2) according to the driving students (N=127). In total, the results were very similar to the first measurement but a little bit more positive.

The course leaders were experienced in a positive manner by the students and the students were very content with the course. Like in the first measurement of the study, the possibility to take responsibility was the least realized thing.

When comparing the before and the after phase the only statistically significant difference was found for activeness (U= 8691.00, p< .05) in the analysis. Thus, the coaching seminar had influenced on the course leaders teaching style which provided the students to be in a more active role.

In an ANOVA it was shown that age had also an influence on two further factors. Students older than 20 years of age could experience significantly more personal growths a driver (e.g. to learn more about myself as a person…) and to take better the responsibility over in the learning process during the seminars or driving lessons (e.g. I could set my learning goals in the lesson etc.). The communication between the students and instructors did not become more meaningful and they did not understand each other better during the lessons of the after phase (factor: “interactivity in teaching style”). Not surprisingly there was no effect found concerning the evaluation of the instructor and the evaluation of the entire course due to ceiling effects. Already in the before phase evaluations were on the top of the five scale ranking. Detailed results are highlighted in graph 2 below (before was without coaching style, after with coaching style):

**Graph 2: Driving students evaluate their training before and after the coaching seminar for the instructors**

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5.3. Results of audits

20 audits were carried out during the months before and after the coaching seminar for the instructors. During the theory classroom lessons, during basic driving lessons, during feedback drives of the second phase and during the one day track training seminars of the second phase training the instructor’s communication has been observed and categorized by especially introduced auditors. As the instructors were the same persons in the before and the after phases the results can be compared.

One essential approach was to detect if the contents of the communication was rather “outside” oriented (lower levels of GDE-matrix) or “inside” oriented (higher levels of GDE-matrix) and if the communication was rather trainer or customer active. A detailed description of this approach can be seen in the HERMES state of the art report on www.alles-fuehrerschein.at.

The results of the before as well as the after audits indicate that the majority of the communication was focussing on the lower levels of the GDE-matrix and it was mostly trainer active. Especially in theory lessons no communication at all about inside oriented subjects – such as personal believes and attitudes – took place, neither before nor after. But a general trend can be seen in all aspects that customer activity was improved in a clear tendency, which follows one of the coaching principles: Asking not telling, and this is in accordance with the questionnaire results, explained above.

Detailed types of communication:
The auditors also observed the number of the following communications from the instructors:

- Closed versus open questions
- Laud versus blame (critics)
- Positive versus negative humor
- Communication which decreases versus increases the learning responsibility of the customers
- Showmanship
- Communication which underlines the transfer of the elaborated knowledge into real life
- Finally the duration was checked in minutes.

There was no change from before to after, neither concerning the number of open nor the number of closed questions.

No change could have been observed concerning laud – only in theory lessons less laud took place.

A decrease in blame (critics) was found in the after phase, which is positive.

Generally, a little bit less of positive as well as negative humor was observed in the after phase.
Especially during the basic driving lessons and the feedback drives more communication was observed, which decreases the responsibility of the customer – which is a clear negative result. But also communications which increase the customers' responsibility increased during the driving lessons and the feedback drives a little which compensates partly for the negative changes mentioned before. (There was more communication in total.)

Less showmanship was observed which is positive.

There was no change in the number of communications to transfer elaborated knowledge and skills into real life.

The total time spent increased during the after phase – primarily caused by a longer introduction and final discussion whereas the lessons remained about the same time span.

The only exemption from this general trend were found in two instructors who did not perform driving lessons (in car or theory in classroom) but a track training for novice drivers who participated in a compulsory track training after the acquisition of the license. They focused more on inside oriented subjects and induced more customer activity in the after phase. But anyhow, in total also the majority of their communication was focussing on the lower levels of the GDE-matrix and was more trainer active. These two instructors also asked more open questions in the after audit and increased those types of communication which increases self-responsibility of students.

**Summary:** After having participated in a coaching seminar, driving instructors changed their teaching style towards more customer activity. Other results were also partly positive in the sense of coaching, but not generally statistically significant. It may be concluded, that teaching style can be changed in the specific HERMES-coaching seminar.