Proposal for discussion

Current state of work (25th June 2014)

- work in progress -

WG 2

Framework for a curriculum (or blueprint)
for driver education

Imprint

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Version 2.1

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Chapter I

Introduction

I.1 Task of Working Group 2

CIECA runs the the Road User Education Project (RUE-Project) with three different working groups:

- WG 1 – Minimum Driving Competence Standards
- WG 2 – Framework for a curriculum (blueprint) for the driver education
- WG 3 – Minimum Competences for Driving Teachers (Driving Intructors)

Based on the draft of WG 1 "minimum driving competence standards" WG 2 should design a framework for a curriculum for the driver education. For this WG 2 hold a workshop at 11th and 12th February 2014 in Berlin to discuss all relevant aspects for a framework, which can be used in Europe and other countries. The first draft report from WG 1 was published at the 18th February 2014 and describes the following nine competence areas of "hard competences" for safe, responsible and eco-friendly driving with maingoals, skills and behaviour:

Knowledge: theoretical compentence and understanding

- Road traffic as a system: rules and regulations
- Risk awarness & hazard perception
- Behaviour at crash sites
- Safety check of car

Between knowledge and skills

- Preparation of car, load & journey
- Traffic observation

Skills: Driving aspects

- Car handling/manoeuvre: guide and control car
- Vehicle positioning & speed adaption
- Communication

WG 1 also talks about **"soft competences"** like physical and **personal traits**, which are not discussed in the draft document, but which will be a part of the "framework for a curriculum (blueprint for the driver education" from WG 2. At least the aspect of lifelong learning is also discussed in the draft paper from WG 1.

The last updated WG 1 document "minimum driving competence standards" from 30th April 2014 was the basis for the proposal for a "framework for a curriculum (blueprint) for the driver education" which was discussed the workshop of WG 2 in Lisbon at the 21st May 2014.

With the workshop in Lisbon the members of WG 2 agreed on the following topics and tasks:

- Hard competencies are the basis (see draft WG 1) for the framework
- Soft competencies are the basis for the framework
- WG 2 is working on "driver education" not on "driver training" – see aditional description - page …..
- Combination between soft/hard competencies is needed
- Combination (indentation) between theory and praxis education is needed
- The used pedagogical structure is "client centered learning" (e.g. Finish model)- see aditional description – page …..
- The used didactical structure is "step wise-education" (e.g. complemented German model, model from the Netherlands) – see description
- A matrix with useful methods to educate the competencies will be added
- The description how to educate the competencies will be based on the example from the proposal including contents sorted to the areas of the GDE-Matrix and formulated goals for driver education
- possible support of driver education through examiners

As a result of the work of WG 2 CIECA will offer a proposal for a blueprint for a curriculum for driver education with the following structure:
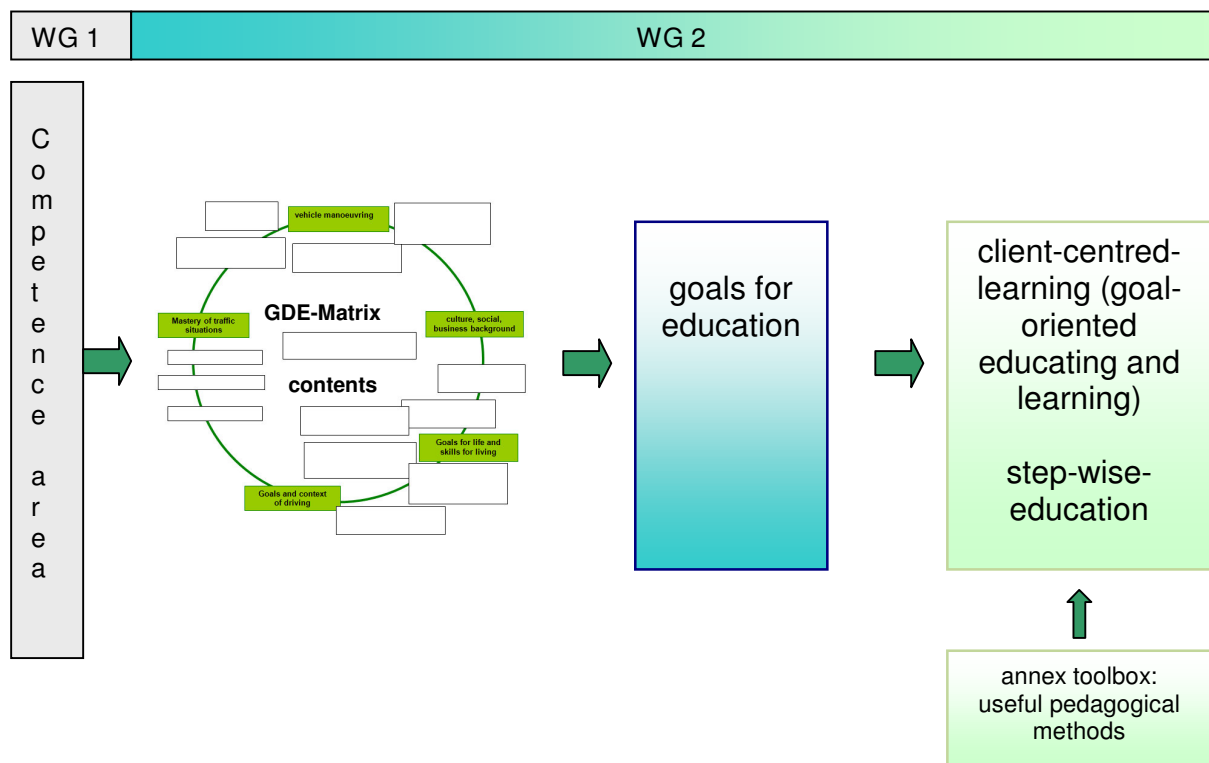
I.2 Learning "How to drive a car" in an international context

The learning process "how to drive a car" can not be focused on one competence area after another one. There is everytime a connection between different competence areas, which is also mentioned in the document from WG 1.

The first challenge of the proposal for a "framework for a curriculum (blueprint) for the driver ecudation" is to define the contents and objectives (based on the different competence areas) for the driver education related to the GDE-Matrix **(see chapter I)** and to describe the necessary connections between them. For example, Eco-Driving everytime is connected with handling, manouvre, acting and adaptation of situations in the car beginning with the first lesson of driver education.

The second challenge of the proposal for a "framework for a curriculum (blueprint) for the driver education" is the circumstance that there are existing different driving education systems in Europe and countries outside of Europe:

- professional education (paid education)
- unpaid education (layman instruction)
- accompanied driving as a part of education before examination (test)
- accompanied driving after examination (test)
- mixture of paid and unpaid education with professional support
- mixture of paid and unpaid education without support
- mandatory theoretical lessons
- no theoretical lessons
- regulations about minimum number of driving lessons
- no regulations about minimum number of driving lessons
- mandatory track based basic professional education
- parts of simulator education
- professional (paid) multiphase education
- monitoring with professionl feedback after examination
- mandatory use of a syllabus
- prohibitions of driving tasks in the learner stage
- restrictions in the first time after examination (GDL-System)
- probationary period

A CIECA-"framework for a curriculum (blueprint) for the driver education" in this context musst have the possibility for every country to implement (these) ideas in there national systems in a future oriented way to increase more safety on the streets.

To get an idea how to build up a structure of an education process (independent from the national system) in this proposal it is offered a "step wise education process" combined with pedagogical principles **(see chapter II)**. To find concrete ideas to design driving lessons the chapter II will be interesting. Also the results of the EU-HERMES-Project give a lot examples (60 situations) for very detailed lessons.

I.3 Principles for learning / structure of education

Driver Education – WG 2 decide only to use the term "driver education" and "driving teacher" in relation with the framework of a curriculum. In this context driver education means to prepare (students/pupils) to be analytical thinkers and problem solvers by facilitating the learning of principles, concepts, rules, facts and associated skills and values/attitudes.

Client-Centred-Learning - WG 2 decide to propose client-centred-learning, which is part of the professional driver education in some countries.

DVSA describes "client-centred-learning" as: "People learn in different ways and at different speeds. If someone who likes time to reflect on their learning is forced to move on to the next thing too quickly it could slow down their progress. Or if someone who likes to learn by trying things out is made to watch too many demonstrations without having a go they will get frustrated. Client-centred learning is an approach to learning that takes into account how the learner prefers to learn. When people learn in this way they are more likely to retain information and skills. People are also more likely to keep learning if they are encouraged to take responsibility for their learning at an early stage – this is the second aim of client-centred learning. At its simplest, this means listening to the learner (the client) to find out how they like to learn, the things that are getting in the way of their progress and how the driving teacher can help"[1] and support the student (pupil).

In some driver education systems "client-centred-learning" is known and used by driving teachers. One example, specially at the beginning of the driver education is the use of **coaching techniques** to get all relevant information about the student and his or hers learning style. With the EU-HERMES-Project there are a lot of examples how to use coaching techniques in the driver education in a professional way.

Client-centred-learning in the blueprint or the framework for a curriculum includes the following pedagogical principles:

- goal-oriented learning and teaching (the student knows everytime what to learn and which goals should be reached)
- client-oriented teaching (the driving teacher knows and use the learning method (style), which is the right one for the student)
- motivated learning (the student will be motivated with direct benefits)
- self-reflected learning (evaluation and feedback are necessary for a good learning process to reach the goals - first the opinion of the student is important)
- self-evaluated learning (self evaluation is the key-factor)

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[1] www.safedrivingforlife.info/instructors-and-trainers/im-instructor-or-trainer/im-driving-instructor/adi-knowledge-centre/what, 24th June 2014

"Step-wise-education"
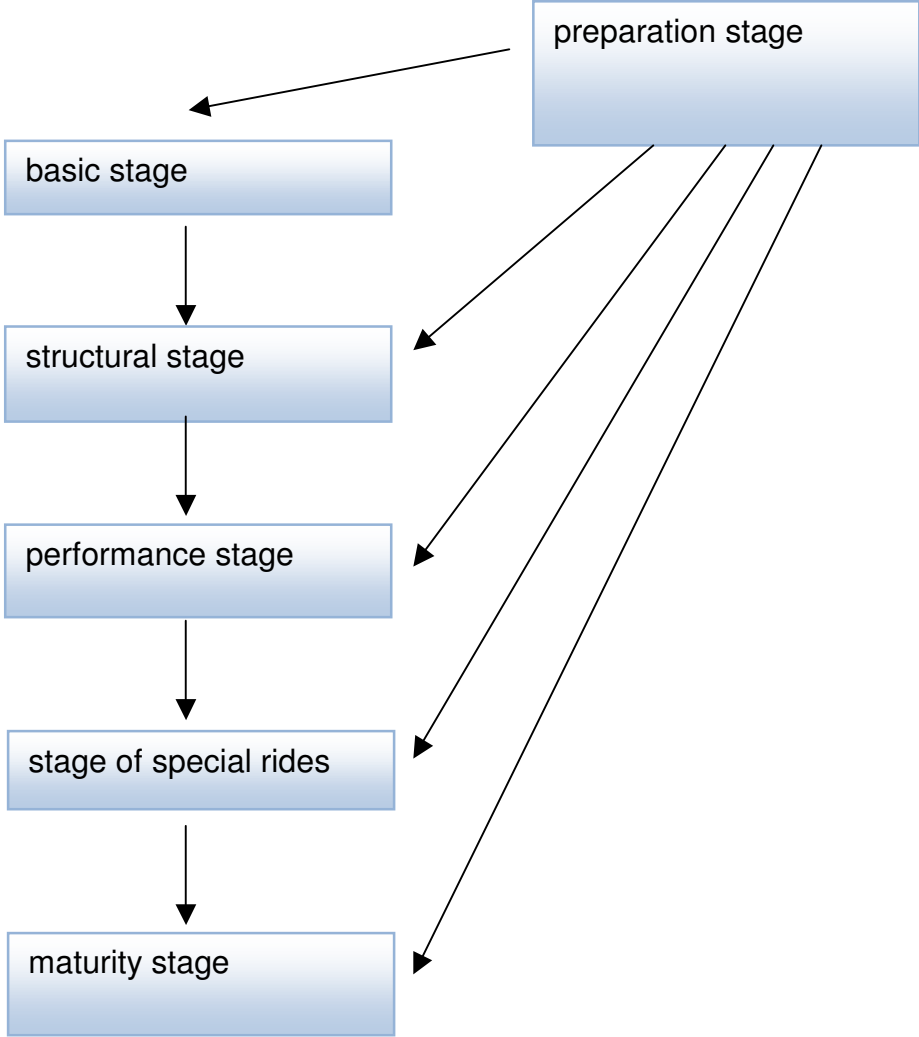
I.4 The GDE-Matrix as a requirement

"The "GDE-framework" (Goals for Driver Education) has its origin in Finnish research within the field of traffic psychology. The framework was introduced in its present extended form within the EU-funded research project GADGET (Hatakka, Keskinen, Gregersen & Glad in Gadget, 1999) and published internationally for the first time by Hatakka, Keskinen, Gregersen, Glad & Hernetkoski (2002). Stemming from the project, the framework is sometimes referred to as the "Gadget-matrix".

The GDE-framework has been widely acknowledged within the European traffic research community as a fruitful theoretical starting point when developing traffic education. However, being a model of quite complicated phenomena, the framework has been criticised for lack of detail.

Driving is a complex task, but describing driving and the skills that are needed when driving is even more complex. Although knowledge of how to use the controls of a car and how to manoeuvre it forms the basis of driving, an analysis of the driver's task and accidents has shown that adequate psychomotor skills and physiological functions are not sufficient for good and safe driving. This conclusion concurs with the notion that driving is by and large a self-paced task (Näätänen & Summala, 1974). It is ultimately up to the driver's own actions and decisions how successful and safe his or her driving is." [2]

In the most documents the GDE-Matrix is shown as a hierarchical system with four levels.

Level 4: Goals for life and skills for living
Overriding function over levels 3-1, independent of the traffic domain
- Importance of cars and driving on personal development and feeling of well-being
- Skills for self-control, social skills, habits, beliefs etc.
- Physical and mental capabilities and preconditions

Level 3: Goals and context of driving
Traffic domain specific function
- Global decisions, e.g. whether to drive or not
- Purpose of driving, driving environment, social context and company

Level 2: Mastering traffic situations
Situation specific function
- Adapting level 1 functions to the demands of specific driving situations

Level 1: Vehicle manoeuvring
Executive function
- Knowledge of car control, speed, direction and position
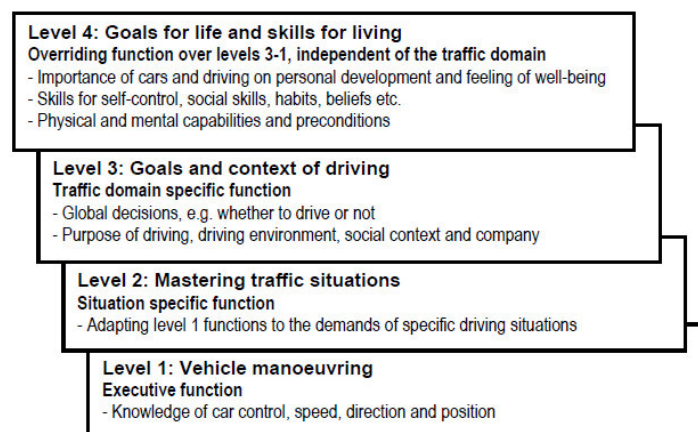
Fig.1. Hierarchical levels of driver behaviour (adapted from Keskinen, 1996).

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[2] DRIVER COMPETENCE IN A HIERARCHICAL PERSPECTIVE; IMPLICATIONS FOR DRIVER EDUCATION, M. Peräaho, E. Keskinen, M. Hatakka, June, 2003

To describe the idea more detailed later the GDE-Matrix was shown as a real matrix[3] with important aspects.

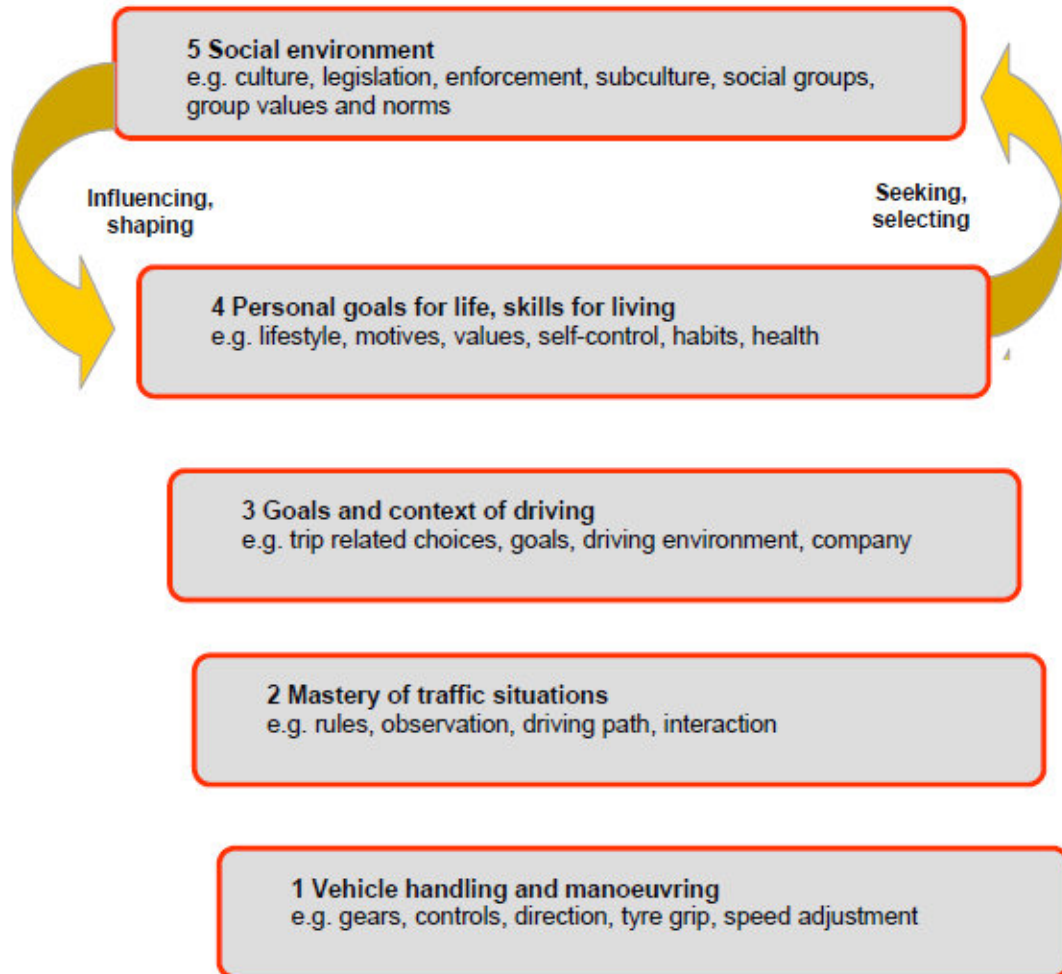Table 1. Goals for Driver Education -framework

Hierarchical level of behaviour (extent of generalisation):	Central content of driver education: Knowledge and skills the driver has to master	Risk increasing factors the driver must be aware of	Self-evaluation
Goals for life and skills for living (global)	**Knowledge about / control over** how general life goals and values, behavioural style, group norms etc. affect driving.	**Knowledge about / control over** risks connected with life goals and values, behavioural style, social pressure, substance abuse etc.	**Awareness of personal tendencies** re. impulse control, motives, lifestyle, values, etc. Developing self-evaluation skills.
Goals and context of driving (specific trip)	**Knowledge and skills** re. trip-related considerations (effect of goals, environment choice, effects of social pressure, evaluation of necessity, etc.).	**Knowledge and skills** re. risks connected with trip goals, driving state, social pressure, purpose of driving, etc.).	**Awareness of personal** planning skills, typical driving goals, driving motives, etc. Developing self-evaluation skills.
Mastery of traffic situations (specific situation)	**General knowledge and skills** re. rules, speed adjustment, safety margins, signalling, etc.	**Knowledge and skills** re. inappropriate speed, narrow safety margins, neglect of rules, difficult driving conditions, vulnerable road-users, etc.	**Awareness of personal** skills, driving style, hazard perception, etc. from the viewpoint of strengths and weaknesses. Developing self-evaluation skills.
Vehicle manoeuvring (specific task)	**Basic knowledge and skills** re. car control, vehicle properties, friction, etc.	**Knowledge and skills** re. risks connected with car control, vehicle properties, friction, etc.	**Awareness of personal** strengths and weaknesses re. basic driving skills and car control (especially in hazardous situations), etc. Developing self-evaluation skills.

In 2010, an additional 5th level comprising cultural and work-related influences was introduced. This 5th level is considered as additional influencing variable to the already existing 4 levels.

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[3] DRIVER COMPETENCE IN A HIERARCHICAL PERSPECTIVE; IMPLICATIONS FOR DRIVER EDUCATION, M. Peräaho, E. Keskinen, M. Hatakka, June, 2003

The GDE-Matrix 2010

Proposal was based on a five-level GDE5-SOC matrix
(Keskinen, Peräaho & Laapotti, 2010)

5 Social environment
e.g. culture, legislation, enforcement, subculture, social groups,
group values and norms

Influencing,
shaping

Seeking,
selecting

4 Personal goals for life, skills for living
e.g. lifestyle, motives, values, self-control, habits, health

3 Goals and context of driving
e.g. trip related choices, goals, driving environment, company

2 Mastery of traffic situations
e.g. rules, observation, driving path, interaction

1 Vehicle handling and manoeuvring
e.g. gears, controls, direction, tyre grip, speed adjustment

PERÄAHO, KESKINEN, LAAPOTTI, KATILA , HERNETKOSKI 2010

In the EU-Project "ECOWILL"[4] the GDE-Matrix was used and "translated" into a model for education. Moreover, the GDE-matrix shows the limitations and difficulties for learning processes aiming to train and change behavioural patterns. Ignoring these aspects, attempts may fail establishing application of contents or change in behaviour.

Conveying driving techniques like e.g. early shifting, letting the car roll and enlarging the safety distance are mainly "hard knowledge" how to handle the car and specific driving situations on levels 1 and 2. If those driving techniques shall be accepted by the learner drivers, the corresponding willingness of levels 3 and 4 ("soft knowledge") has to be given. For example, it is hard to teach learners modern driving style, if e.g. their parents constantly drive with medium or even high engine speed / high revolutions (rpm), contradicting and conflicting with the taught driving techniques.

GDE-Matrix as support
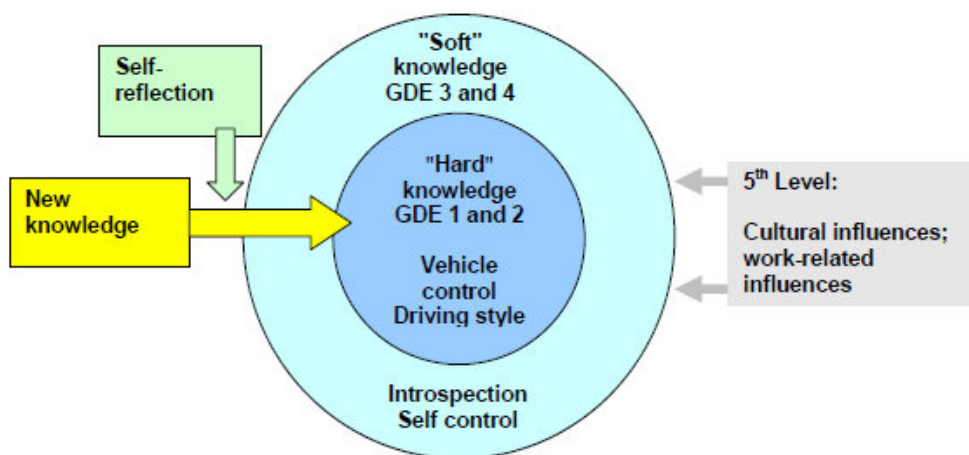
Taking into account the cultural and work-related influences of level 5, to ignore this dimension may result in complete confusion when communicating with learner drivers. It is crucial to understand why somebody wants to obtain the drivers license or to drive a car. Knowing the individual wishes, expectations and hopes the learning process can be influenced.

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[4] Schulte, K. (2011/2012), "Ecodriving in Learner Driver Edcucation - ECOWILL Level1", Handbook for Trainers, Deliverable D3.1

WG 1[5] from the CIECA-RUE-Project adapted the GDE-Matrix to show levels of driver behaviour and conected competencies.

Levels of driver behaviour

Basic vehicle control (Operational level)	Mastery of traffic situations (Tactical level)	Trip-related context and considerations (Strategic level)	Personal characteristics, ambitions and competencies (General level I)	Culture, Social, Business Background (General level II)

Competences   Competencies

| • control of direction and position of car
• surface grip, tyre pressure
• dimensions of the vehicle
• technical aspects of Vehicle
• etc. | • traffic rules
• observation and use of signals
• anticipation
• speed adaptation
• communication
• safety margins
• etc. | • choice of route
• estimated driving time
• effects of social pressure from passengers
• estimating urgency of the trip
• etc. | Control of general ambitions in life, values and norms and personal tendencies which effect driving behaviour
• lifestyle
• peer group norms
• motives in life
• self-control and other characteristics
• personal values and norms
• etc. | Cultural and social influence of general ambitions in life, values and norms and personal tendencies which effect driving behaviour
• cultural norms
• social norms
• moral principles
• moral values
• etc. |

Minimum driving standard: Hard competences
knowledge/ability, understanding, skills

Soft competencies
motivation/willingness

The task of WG 2 is to offer a proposal for the work of e.g. driving teachers with necessary contents, goals and objectives and to give them an idea how to structure the learning process in a goal oriented way. For this WG 2 use the GDE-Matrix as an circle model (based of the idea of ECOWILL) to show the connection and interaction between contents related to the different areas of the GDE-Matrix.

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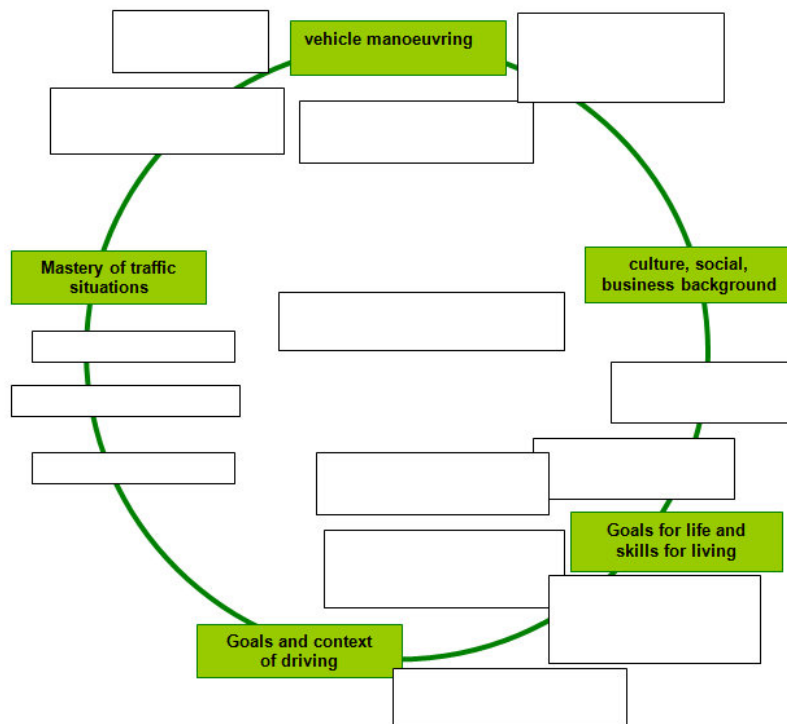
[5] Discussion paper of Cieca Working Group 1 MINIMUM DRIVING COMPETENCE STANDARDS current state of work: 04-04-2014

Chapter II:

Contents and objectives of the competence areas for the driver education related to the GDE-Matrix

In reference to "Swedish Transport Agency provisions on curriculum for driving licence (B)[6]" the used verbs have the following meanings:

accept	students are committed to a particular approach
adapt	students adjust their behavior to a certain level
use, drive, apply, demonstrate, show	students do things on the basis of their knowledge
assess	students assess their ability
identify, anticipate	students recognise something and can justify why
explain	students describe and reflect on an area of knowledge
perform	students perform a task
evaluate	students take a standpoint and can explain why
reproduce	students can reproduce facts with some understanding of what the facts represent

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[6] Swedish Transport Agency provisions on curriculum for driving licence B;
28th February 2011 (Olof Stenlund)

II.1 Personal aspects (attitudes, motives, culture background, social background, willingness)

II.1.1) attitudes, motives, backgrounds as social competencies

a) contents
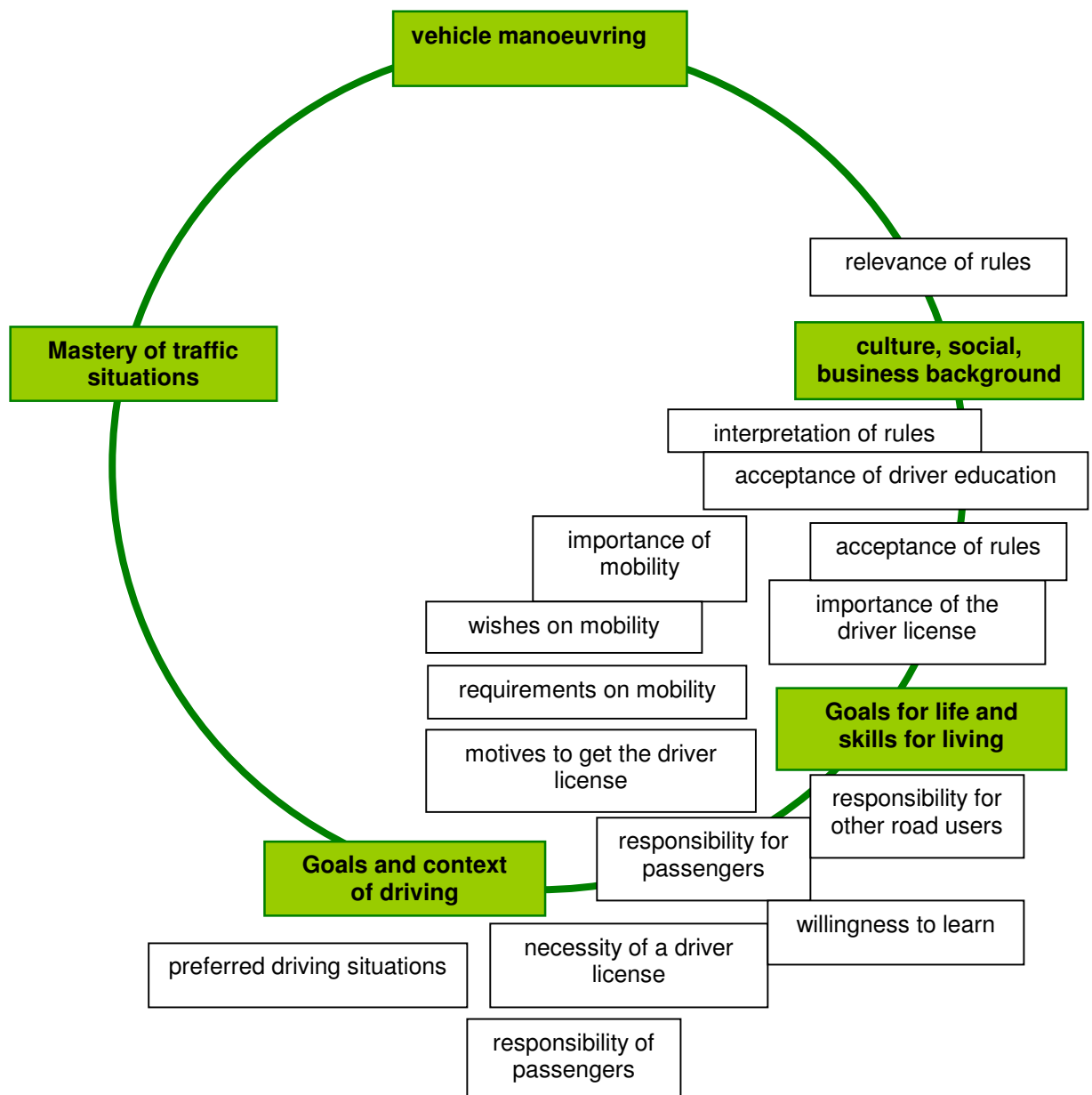
b) goals for driver education

Preparation / theoretical part (theoretical education in classroom or in the car, CBT, WBT or handbooks)

- The student must identify and explain the importance of mobility for himself.
- The student must identify and explain his/her requirements on mobility.
- The student must identify and explain his/her wishes on mobility.
- The student must identify and explain his/her motives to get the driver license.
- The student must identify and explain his/her preferred driving situations.
- The student must identify and explain the importance which the driver license will have for him/her.
- The student must evaluate the necessity which the driver license will have for him/her.
- The student must identify that motives, requirements and wishes can increase the risk of driving.
- The student must evaluate and reproduce his/her personal risks based on the motives, wishes and requirements.
- The student must identify and explain the relevance of rules.
- The student must assess the interpretation of rules.
- The student must evaluate and reproduce his/her own acceptance of rules.
- The student must accept the necessity of rules.
- The student must identify and explain the responsibility for other road users.
- The student must identify and explain the responsibility for passengers in the car.
- The student must evaluate and reproduce the necessity of responsibility.
- The student must identify and explain his attitudes about driver education.
- The student must accept the necessity of driver education.
- The student must perform willingness to learn.

c) proposal for driver education

In some countries this content can be a part of the theroretical education (classroom training). It is necessary, that this part is done before the first lesson of the practical education in a car.

In countries, which have no theoretical education (classroom training), it must be a part of the first lesson in the car, but neverthelesss it should be designed as a part done at home (e.g. WBT, CBT, handbook etc.). This is a special task for publishers.

Goal-oriented teaching and learning

The student must evaluate the importance of his attitudes and motives for safe driving.

The student knows what and how to learn

The driving teacher must introduce, that It is important to come to know about the influence of attitudes about mobility, responsibility, rules and motives for safe driving and for the learning process and have to ask the student, what he is expecting from the driver education.

e.g. Questions:

"What are you expecting from the driver education?"
"What do you know about driver education?"
"How do you want to learn?"
"How can I support your learning?"
"What do you expect from me?"

> The student will be
> motivated with direct
> personal benefits

The student must know, that he as a person is important to define the right teaching/learning method/process. The driving teachers has to ask, how he can support the learning process of the student in a goal oriented way.

e.g. Questions:

"What can you do, to learn effective?"
"What is your preferred learning style?"
"What do you need for learning with fun?"
"Which goal(s) do you want to reach?"
"How can I support you to reach this goal(s)"?

Examples, how it is possible to integrate the contents of attitudes, motives, backgrounds as social competencies in different driving education systems are published in the EU-HERMES-Project[7] under

http://www.allesfuehrerschein.at/HERMES/ and
http://www.fahrenwieeinprofi.de/cieca-rue/index.htm

in car preparation (no mandatory theoretical education)	theoretical education classroom training	CBT / WBT training
HERMES EU Coaching Project 2.1.26. Before the training really begins – first contact in driver training	**HERMES** EU Coaching Project 2.2.22. Before the training really begins – first contact in driver training	**?** new task for publishers
	HERMES EU Coaching Project 2.2.28. Self-evaluation of personal risk	

Evaluation and feedback (first the students own opinion)

The student must evaluate his experiences and his understanding about the contents with support of the driving teacher. This can/should be combined with a professional feedback from the driving teacher.

e.g. Questions:

"What is your main result and why?"
"What do you understand concrete?"
"What is your conclusion and why?"
"What does is mean for your driving and why?"
"What does it mean for your learning and why?"
"What does it mean for the driver education?"

key factor: self-evaluation

The student need support to get an idea of possibilities for self-evaluation in the near future. One example can be, that the student at this stage have the task to evaluate his attitudes, motives etc. in other areas of life (e.g. school or work).

The driving teacher can support this task with clear formulated questions.

e.g. Questions:

"What are you expecting from school education?"
"How are you learning in school?"
"What can you do, to learn effective?"
"What is your preferred learning style?"
"What do you need for learning with fun?"

WG 1 Driving Compentence "Traffic observation"

II.2.6) traffic observation

a) contents

feeling for the visuable area of mirrors

knowing the blind spot areas of mirrors (car)

importance of head check

vehicle manoeuvring

knowing other blind spot areas in a car (A-pillar etc.)

knowing advanced driver assistance systems

adjust the mirrors useful (using marks for help)

using the mirrors in an effektiv and safe way

Mastery of traffic situations

culture, social, business background

observation when changing lanes

build up a scanning plan

difficulties by night

how to decide what is importend?

observation when turning right

observation when turning left

dangerous of blinding

importance of 360 degrees scanning

influence of personal behaviour for traffic behind

observation crossing junctions

observation in roundabouts

what does it mean, if an advanced driver assistance system is working?

Goals for life and skills for living

observation by "give way" or "stop" - signs

to have to much trust in advanced driver assistance systems

Goals and context of driving

observation entering highways (motorways, autobahn)

influence (dangerous) of distraction

observation of other (vulnerable) road users

perspective of other road users

b) goals for driver education

WG 1 Driving Compentence "Car handling/manoeuvre"

II.2.7) Guide and control car

a) contents

switch on/off the car in a safe way

using the clutch, accelerator and break pedal **(see Eco-Driving)**

using pedals safe in an emergency situation

using the steering wheel in an useful way

vehicle manoeuvring

using the right gear for every speed **(see Eco-Driving)**

knowing advanced driver assistance systems

adjust the mirrors useful **(see traffic observation)**

driving with a safe seating position

open and lock a car in a safe way
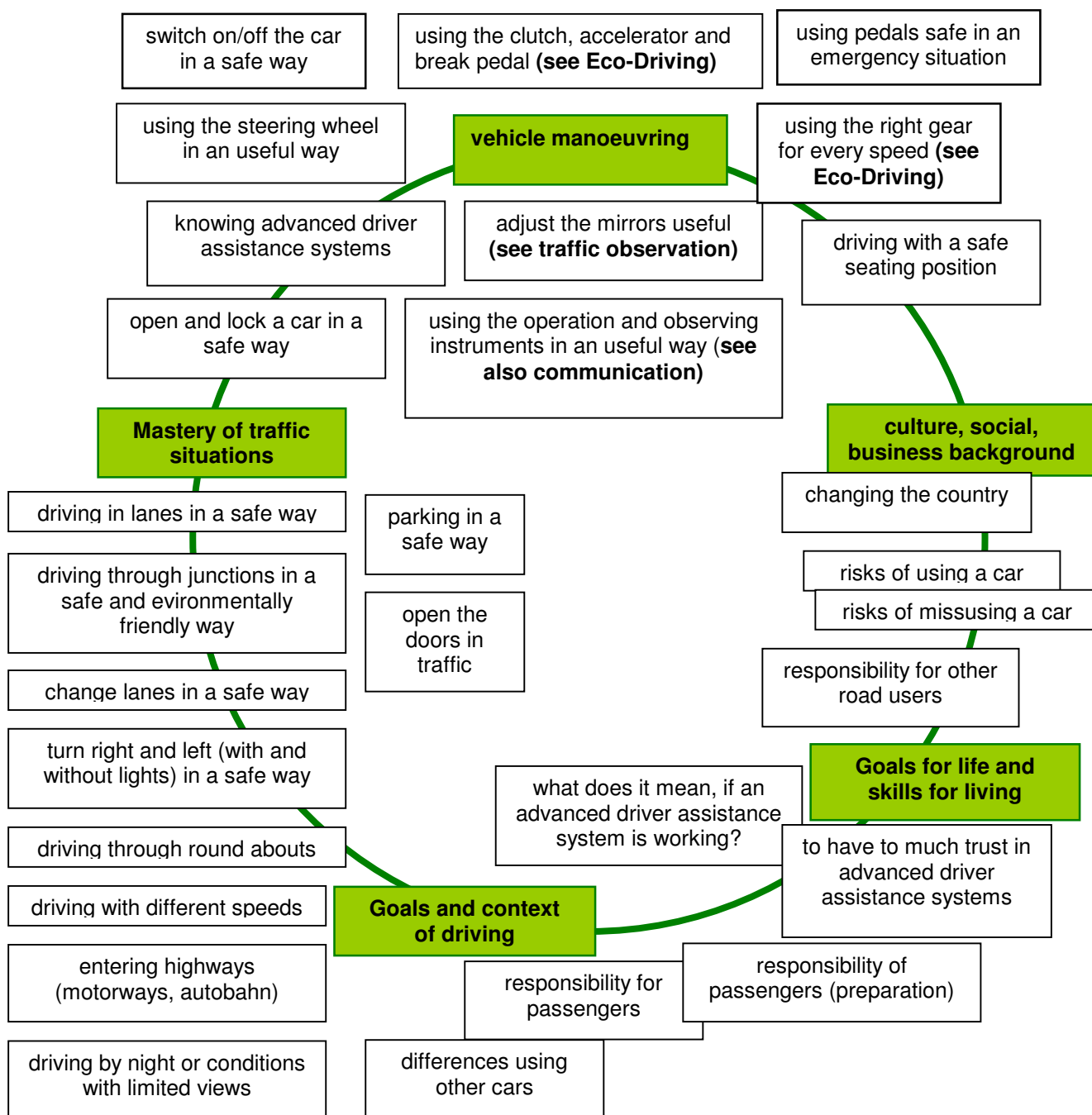
using the operation and observing instruments in an useful way (**see also communication**)

Mastery of traffic situations

culture, social, business background

driving in lanes in a safe way

parking in a safe way

changing the country

driving through junctions in a safe and evironmentally friendly way

open the doors in traffic

risks of using a car

risks of missusing a car

change lanes in a safe way

responsibility for other road users

turn right and left (with and without lights) in a safe way

what does it mean, if an advanced driver assistance system is working?

Goals for life and skills for living

driving through round abouts

to have to much trust in advanced driver assistance systems

driving with different speeds

Goals and context of driving

entering highways (motorways, autobahn)

responsibility of passengers (preparation)

responsibility for passengers

driving by night or conditions with limited views
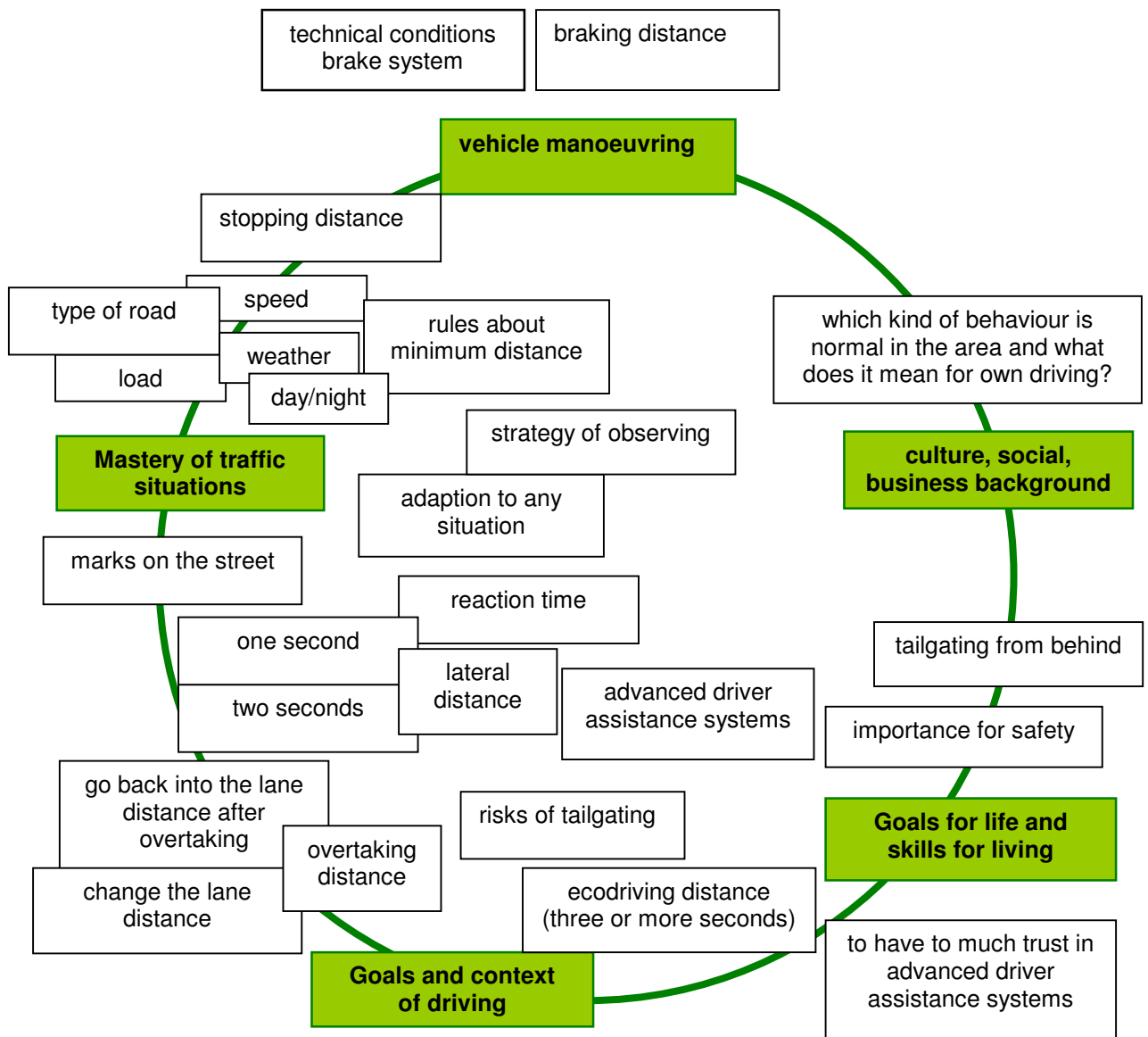
differences using other cars

b) goals for driver education

WG 1 Driving Compentence "Vehicle positioning & speed adaption"

II.2.8.1) Safety Margin

Preparation / theoretical part (theoretical education in classroom or in the car, CBT, WBT or handbooks)

- The student must come to know the rules about minimum distance driving a car in traffic and is able to explain the rules.

- The student must have an understanding of the terms braking distance, stopping distance and reaction time and can reproduce the connection of this aspects.

- The student must come to know how speed, weather etc. influences the braking distance and the stopping distance and is able to explain the connection.

- The student must come to know which factors can influence the reaction time and is able to reproduce and to explain the facts.

- The student must have an understanding of the importance of safety margin for responsible and safe driving and is able to evaluate the importance.

- The student must have information about advanced driver assistance systems related to safety margin and is able to explain the dangerous of total trust in this systems.

- The student must have an understanding about the benefit of an "ecodriving distance with three or more seconds" evaluate the benefits.

- The student must have an understanding of the risks of tailgating and is able to evaluate the risks.

- The student must have an understanding about the risks of tailgating from a car behind and is able to explain strategies to avoid critical situations.

Practical education in car

- The student gains experiences with emergency breaking with different speed and is able to assess his/her ability and to reproduce it for different driving situations

- The student gains experiences how to use e.g. the "one-second-rule" and the "two-second-rule" and is able to demonstrate it in different situations.

- The student gains experiences with useful marks and is able to demonstrate how to use the marks in different situations.

- The student gains experiences how to use the "ecodriving distance" and is able to use this it in different situations.

- The student gains experiences with safety lateral distance with different road users and is able to demonstrate it in different situations.

- The student gains experiences how to use the mirrors in a way to build up a strategy of observing driving a car and is able to perform different observation tasks related to safety margin.

- The student gains experience to change lanes and how to use helpful utilities to change the lane with a safe distance to a car in this lane and is able to demonstrate it in different situations.

- The student adapt experience with changing lanes to overtake other cars and how to use helpful utilities to go back into the lane with a safe distance and is able to demonstrate it.

- The student is able to identify critical situations in relation to safety margin and is able to anticipate in a safe way.

c) proposal for driver education

Goal-oriented teaching
and learning

The student must evaluate the importance of his safety margin for safe driving.

The student knows
what and how to learn

The driving teacher must introduce, that it is important to come to know the rules about minimum distances, the different terms, the influence of outside factors, the risks of tailgating, the aspects of advanced driver assistance systems related to safety margin e.g.

The student must have an understanding about the importance of safety margin and the benefits of an "ecodriving distance".

e.g. Questions:

"What do you know about safety margin?"
"What do you think about safety margin?"
"What do you know about risks related to braking distance and stopping distance?
"How can you get the relevant information?"
"What do you have observed as a passenger in a car?"
"Which experiences do you have as a passenger in a car?"

<div style="border: 1px solid; padding: 10px; width: 300px;">
The student will be motivated with direct personal benefits
</div>

The student must know, that he as a person is important to define the right teaching/learning method/process. The driving teachers has to ask, how he can support the learning process of the student in a goal oriented way.

e.g. Questions:

"What can you do, to learn effective?"
"What is your preferred learning style?"
"What do you need for learning with fun?"
"Which goal(s) do you want to reach?"
"How can I support you to reach this goal(s)"?

Examples, how it is possible to integrate the contents of safety margin in different driving education systems are published in the EU-HERMES-Project[8] under

http://www.allesfuehrerschein.at/HERMES/   and
http://www.fahrenwieeinprofi.de/cieca-rue/index.htm

in car preparation (no mandatory theoretical education)	theoretical education classroom training	CBT / WBT training
ERMES 2.2.13. reaction time	**ERMES** 2.2.13. reaction time	**?** new task for publishers

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[8] HERMES coaching scenarios, 2010

Evaluation and feedback (first the students own opinion)

The student must evaluate his experiences and his understanding about the contents with support of the driving teacher. This can/should be combined with a professional feedback from the driving teacher.

e.g. Questions:

"What is your main result and why?"
"What do you understand concrete?"
"What is your conclusion and why?"
"What does is mean for your driving and why?"
"What does it mean for your learning and why?"
"What does it mean for the driver education?"

key factor: self-evaluation

The student need support to get an idea of possibilities for self-evaluation in the near future. One example can be, that the student at this stage have the task to evaluate his attitudes, motives etc. in other areas of life (e.g. driving as a passenger).

The driving teacher can support this task with clear formulated questions.

e.g. Questions:

"When can you observe safety margin in traffic?"
"What do you need for observing?"
"How can you use observed situations for your learning?"
"What do you want to know e.g. from your parents?"

Example of the "step-wise-training" in traffic

> The student knows
> what and how to learn

Before starting the practical exercises it is necessary to define clear goals for every session, which are possible to evaluate. To formulate clear goals it is possible to use the SMART-Method or the GROW-Method.

> **basic stage**

- The student gains experiences with emergency breaking with different speed and is able to assess his/her ability and to reproduce it for different driving situations

> **structural stage**

- The student gains experiences with safety lateral distance with different road users and is able to demonstrate it in different situations.

> **performance stage**

- The student gains experiences with safety lateral distance with different road users and is able to demonstrate it in different situations.
- The student gains experiences how to use e.g. the "one-second-rule" and the "two-second-rule" and is able to demonstrate it in different situations.
- The student gains experiences with useful marks and is able to demonstrate how to use the marks in different situations.
- The student gains experiences how to use the "ecodriving distance" and is able to use this it in different situations.
- The student gains experiences how to use the mirrors in a way to build up a strategy of observing driving a car and is able to perform different observation tasks related to safety margin.
- The student gains experience to change lanes and how to use helpful utilities to change the lane with a safe distance to a car in this lane and is able to demonstrate it in different situations.
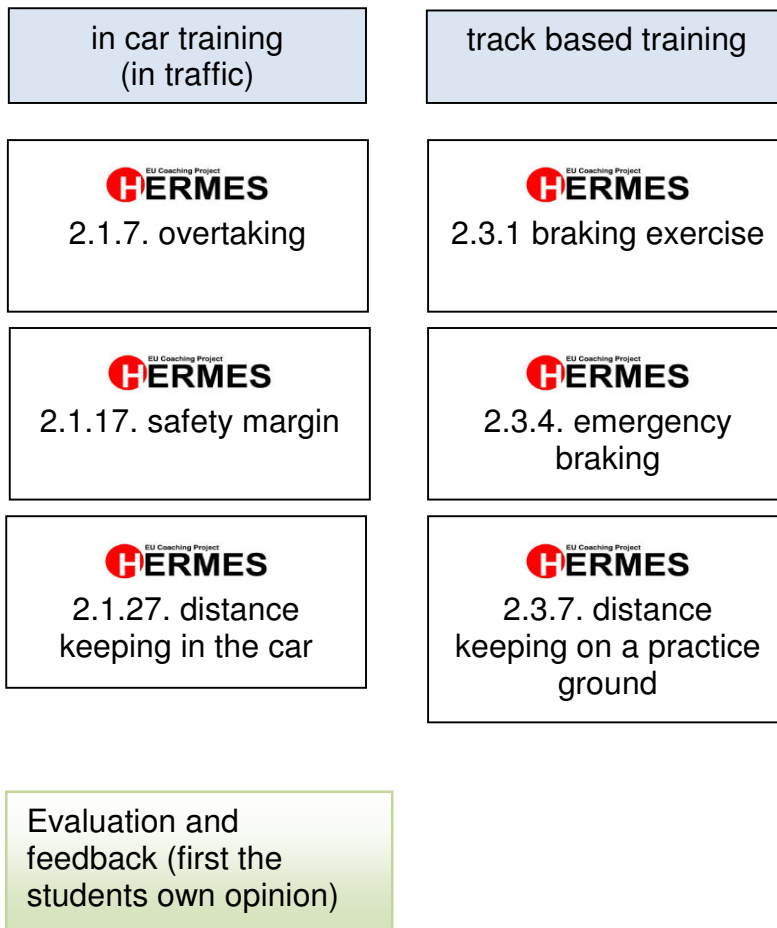
> **stage of special rides**

- The student adapt experience with changing lanes to overtake other cars and how to use helpful utilities to go back into the lane with a safe distance and is able to demonstrate it.

> **maturity stage**

- The student is able to identify critical situations in relation to safety margin and is able to anticipate in a safe way.

Examples, how it is possible to integrate the contents of safety margin in different driving education systems are published in the EU-HERMES-Project[9] under

http://www.allesfuehrerschein.at/HERMES/ and
http://www.fahrenwieeinprofi.de/cieca-rue/index.htm

in car training (in traffic)	track based training
HERMES 2.1.7. overtaking	**HERMES** 2.3.1 braking exercise
HERMES 2.1.17. safety margin	**HERMES** 2.3.4. emergency braking
HERMES 2.1.27. distance keeping in the car	**HERMES** 2.3.7. distance keeping on a practice ground

Evaluation and feedback (first the students own opinion)

After every exercise it must be evaluated if the goal is reached.

e.g. Questions:

"How was it for you to reach the goal? What was easy and why, what was difficult and why?"
"What does your experiences mean for other situations?"
"What is your main conclusion and why?"
"What are the main results for you and why?"

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[9] HERMES coaching scenarios, 2010

Additional example for feedback-situations (feedback drives)

II.2.8.4) Eco-Driving

using the 1st gear only to start moving (one or two length of a car)

using momentum (in gear, using engine cut off, using neutral)

change gears around 2.000 rpm and lower

vehicle manoeuvring

using the highest gear which is possible

which kind of behaviour is normal in the area and what does it mean for own driving?

avoid unnecessary acceleration and braking

driving at a steady speed

Mastery of traffic situations

turn off the engine, when it is useful

culture, social, business background

anticipate traffic flow

acting instead of reacting

attitudes about environment

which kind of car is useful?

ecodriving distance (three or more seconds)

strategy of observing

possibilities of mobility

effects for safety

use engine break only driving downhill (gasoline, diesel, gas)

driving uphill

Goals for life and skills for living

using what kind of car?

check tyre pressure frequently

why using a car?

Goals and context of driving

check the trunk and the roof for unnecessary weight

planing the journey in an effektive, environmentally friendly way