

# *Fit to Drive*

4th International Traffic Expert Congress  
Tallinn from June 4th - 5th 2009



Welcome



## **DRIVING IN DARKNESS AND WINTER TIME CONDITIONS**

**Kaija Savolainen**

managing director

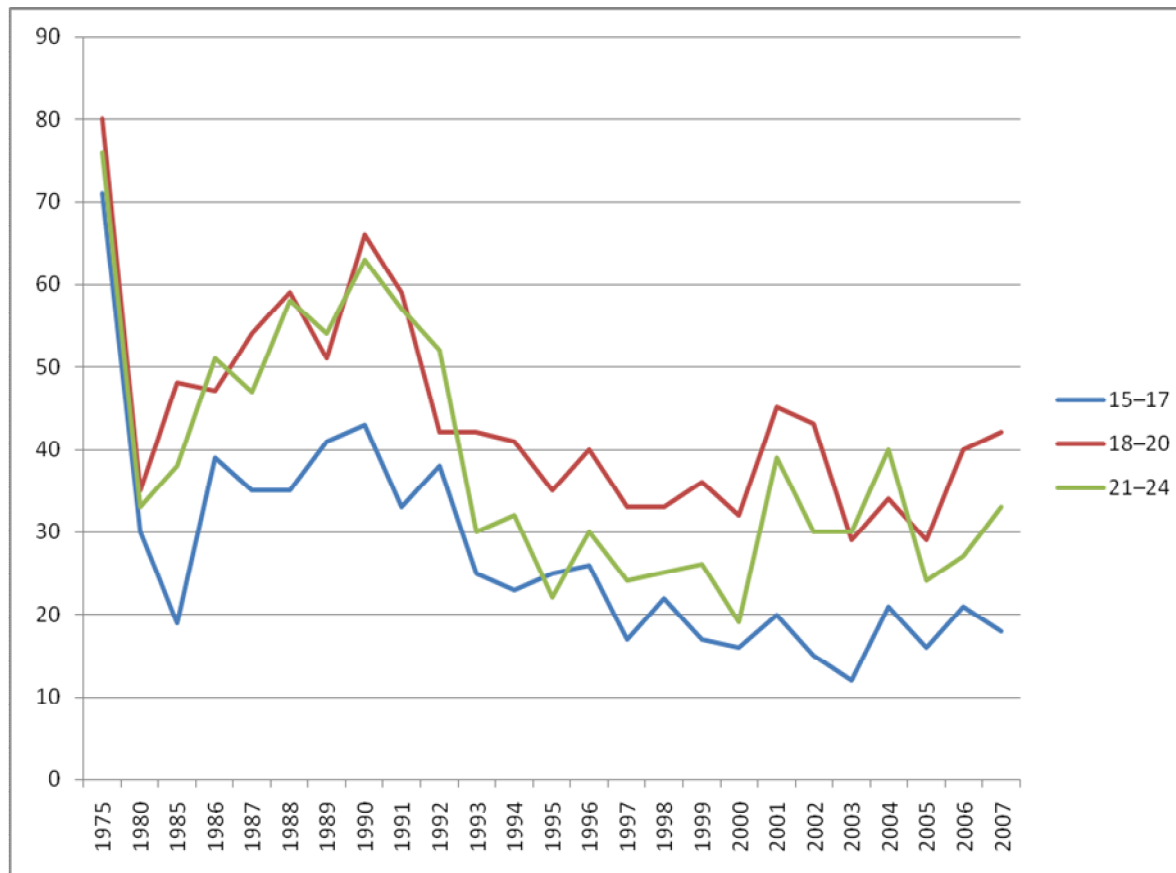
Finnisch Driving School Association

## CONTENT

1. Traffic accident in Finland among young people and driving in dark and winter conditions
2. Research of driving in darkness with the simulator
3. Driving in darkness with simulator (program)
4. Situation now, feedback and future



# 1. Traffic accident in Finland among young people and driving in dark and winter conditions



Killed in road traffic accidents by age 1975–2007

Source: Statistic Finland, 2008.

## 2. Research of driving in darkness with the simulator

- Development of the Program
  - Finnish Driving School Association
  - Inted (Swedish company)
  - EcaFaros (manufacturer)
- Realisation
  - Finnish Driving School Association
  - Vaasan ja Kristiinan autokouluyhdistys
  - Ajoneuvohallintokeskus
  - Follow-up research Valmixa Oy



## 2. Research of driving in darkness with the simulator

- The aim of the project and study context
  - To arrange first testing of how well the simulator is adapted to teaching and testing of driving in darkness skills.

Stage	Group A Simulator first	Group B Traditional method first
1.1	Driving in the dark simulator exercise	Traditional driving in the dark exercise
1.2	Student evaluation: "How well can you apply ... in traffic?" (7 points of evaluation)	Student evaluation: "How well can you apply ... in traffic?" (7 points of evaluation)
1.3	Multiple choice questions (6)	Multiple choice questions (6)
		Teacher evaluation on the success of the exercise module (Stage 2.3).
2.1	Traditional driving in the dark exercise	Driving in the dark simulator exercise
2.2	Student evaluation: "How much more do you think you have learnt...?" (7 points)	Student evaluation: "How much more do you think you have learnt...?" (7 points)
2.3	Teacher evaluation on the success of the exercise module	

## 2. Research of driving in darkness with the simulator/Results

- **The simulator is experienced to be better than traditional training in teaching to**
  - Take pedestrians and bikers into account, and
  - Dodge unexpected obstacles on the road
- **Traditional teaching gives a stronger learning experience in**
  - Adapting speed and directing of sight, and
  - Switching between lights in meeting other traffic

Source: Mikkonen (2007) Simulaattori kuljettajaopetuksen pimeäajoharjoituksissa



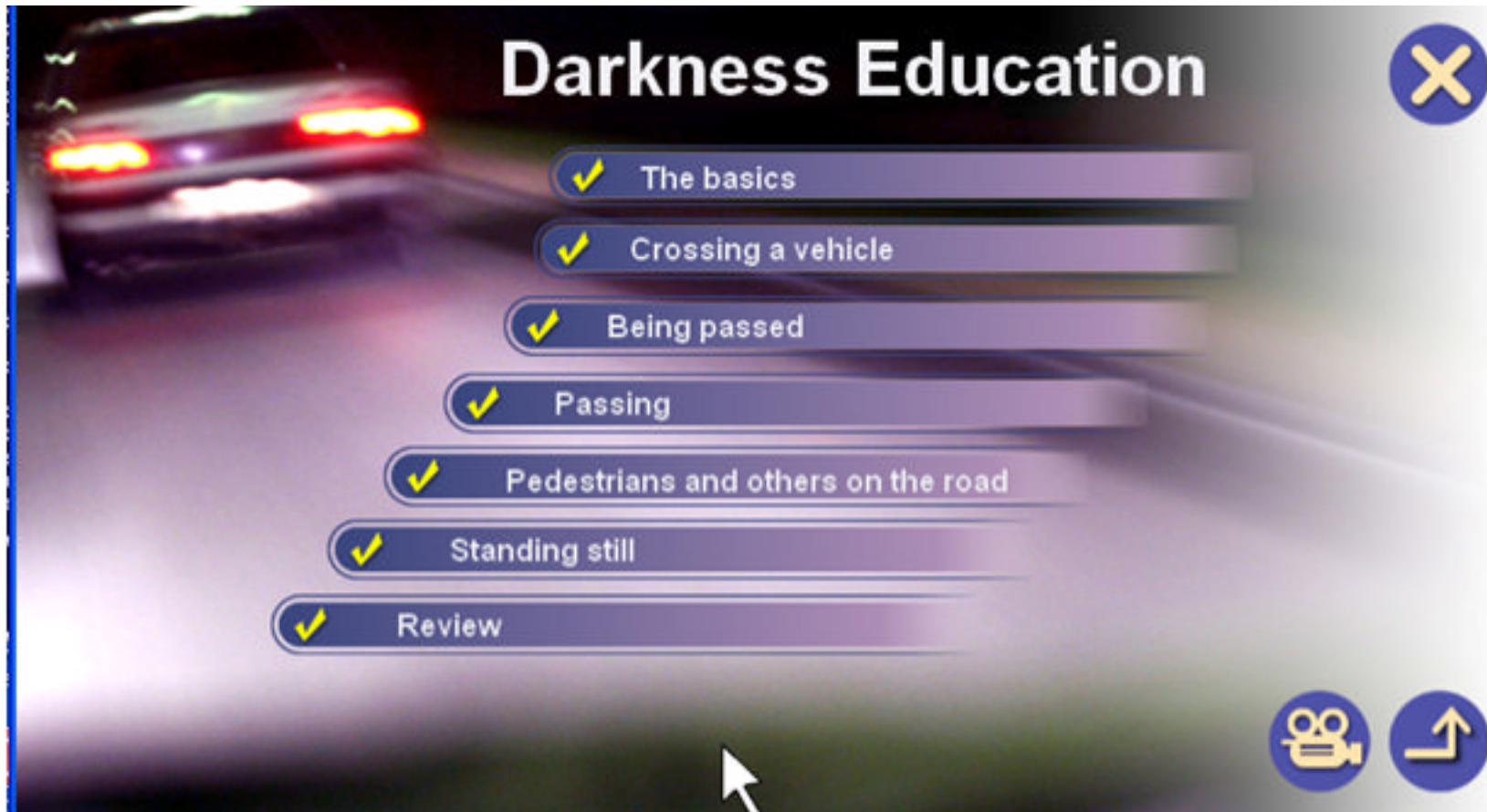
## 2. Research of driving in darkness with the simulator/Results

- The simulator and traditional teaching are experienced equally good in learning to park the car and using of lights while passing another car
- Learning with simulator gives less variation between the learning results of different areas, as compared to the traditional method of teaching where variation is bigger
- The research shows that learning twith simulator **gives sufficient skills in driving in darkness**

Source: Mikkonen (2007) Simulaattori kuljettajaopetuksen pimeäajoharjoituksissa



### 3. Driving in darkness with simulator (program)





### 3. Driving in darkness with simulator (program)/Benefits

1. Customer friendly
  - The students may attend to the training at all seasons and during all times of the day
2. Equal quality for everyone
  - Same tasks and same circumstances for all participants
  - The program requires active participation from the student
  - It is possible to see the exercise afterwards
3. Environmentally friendly (ecological and economical)
4. Up-to-date (technology and pedagogy)



## Fit to Drive

4<sup>th</sup> International Traffic Expert Congress  
Tallinn from June 4<sup>th</sup> – 5<sup>th</sup> 2009

### 3. Driving in darkness with simulator (program)



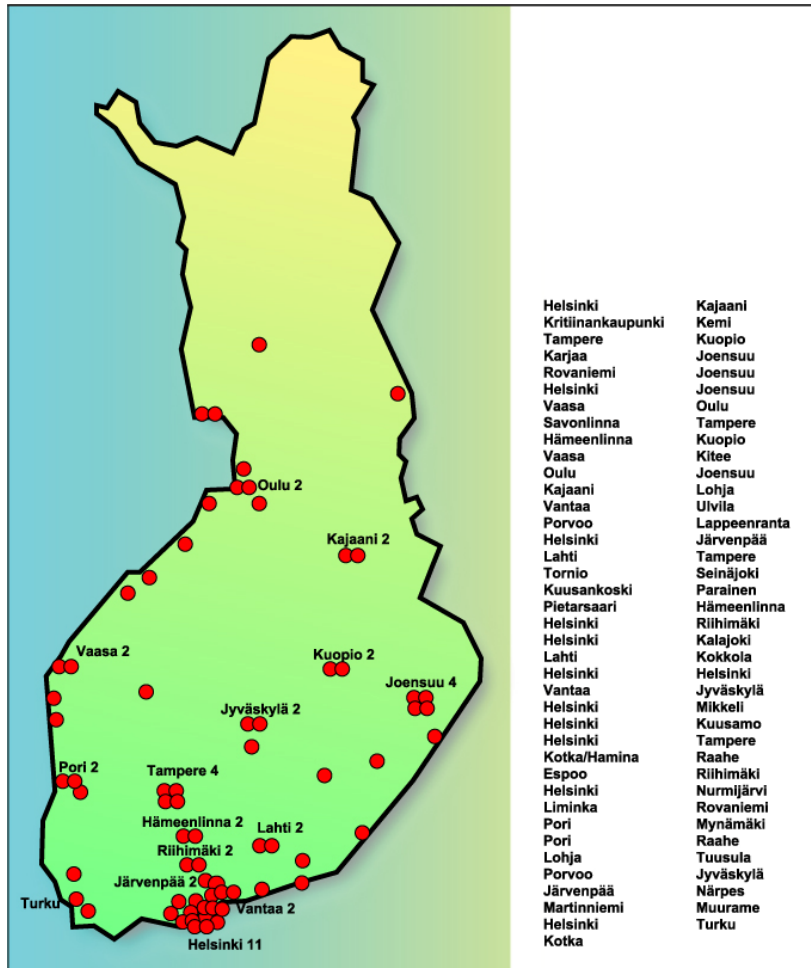


## Fit to Drive

4<sup>th</sup> International Traffic Expert Congress

Tallinn from June 4<sup>th</sup> – 5<sup>th</sup> 2009

### 4. Situation now, feedback and future



- Around 80 simulators sold in Finland and estimation of 150 driving schools utilise the simulator
- Around 700 driving instructors has participated to the training
- Around from 10 000 to 20 000 student has already participated the simulator training
- Possibilities of new software applications
- Decline in traffic accident statistic?




## Fit to Drive

4<sup>th</sup> International Traffic Expert Congress  
Tallinn from June 4<sup>th</sup> – 5<sup>th</sup> 2009

### 4. Situation now, feedback and future

interaction

Intersection of equal roads



I can go first as that motorist gave me a sign.  
I'll show that driver approaching from the right that he should go first.  
Oh well, let the ones in the most hurry go first, I'll wait.  
I'll give a sign to the motorcyclist that he should go first.

- Possibilities of new software applications



- Decline in traffic accident statistic?