# Task C / WP 2　Research Summary

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Human Factors : HMI and User Education CAD GermanyJapan HF

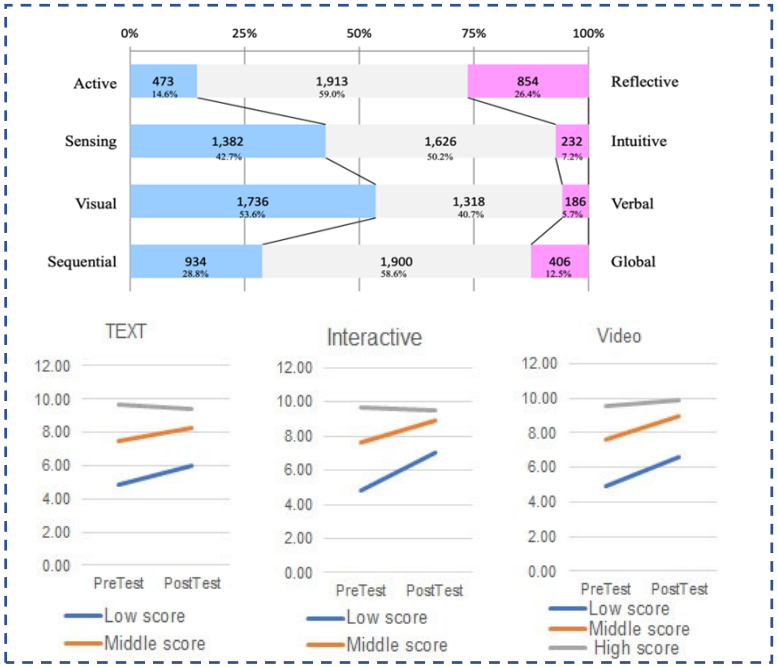
Oct 2022

- U Tsukuba : General knowledge education is important for drivers to use AD safely.
- Kumamoto U : Video teaching materials were developed based on effective educational methods.
- TU Dresden : Literature review on effectiveness of training for automated driving.
- TU Munich : Effect of training on users' knowledge about automated driving (L1 to L3).

# • Results

**Representative results and findings.**

- General knowledge education of automated driving is important for drivers to use automated driving safely.
- In order to solidify the understanding of general knowledge, it is better to give concreteness such as incorporating an explanation of the actual system.
- In the case of taking over driving, it is possible to use automated driving even in more complicated situations by experiencing it in advance (left figure).
- We developed a method for evaluating individual learning styles and proposed adaptive learning according to them (right figure).

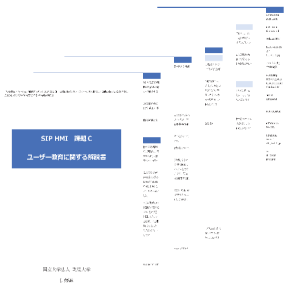


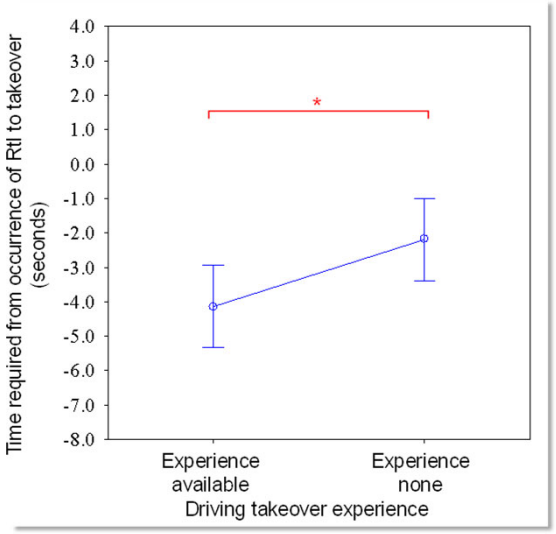

# • Implementation in society

video teaching materials

(Results provided to the National Police Agency)

Manual





# Effects of eHMIs on interaction between automated vehicles and pedestrians

TECHNISCHE UNIVERSITÄT DRESDEN

## Key conclusions from our studies

eHMIs influence pedestrians' interaction with vehicles.

Traffic context (e.g., traffic regulation, model behavior) helps to interpret eHMIs correctly.

Motion dynamics of the vehicle (e.g., approach speed) remain an important factor in interactions when eHMIs are present. At the same time, eHMIs can have effects even when they are not activated.

Messages about an AV's intention (e.g., I am yielding) can lead to safer crossing behavior than messages about an AV's current behavior (e.g., I am braking).

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| | Task C/WP 2:Education and training of users |
|---|---|
| Background | **Training** can have **positive effect** on driving performance, knowledge and attitudes. But **many factors influence training effectiveness**, e.g. (1) experience with automated system and (2) confounding of training content, length and delivery method |
| Research goal | Investigate the **effect of training on users' knowledge** about different levels of automated driving (L1 to L3). Focus of this experiment is on time between training and test about users' knowledge. |
| Method | Online survey with videos, images and text as part of the training. Between subject design with three groups. |
| Results | • Preliminary results show no difference in overall score of quiz. Differences can be found in some training categories. |

Website