



# Discussion

Can we really move the field forward by pinpointing features of immersive virtual reality that support learning?

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*Open-Minded*

# Symposium

## Moving the Field Forward: Pinpointing Features of Immersive Virtual Reality That Support Learning

- Chairs: Josef Buchner, Amédee Marchand Martella & Alyssa P. Lawson
- 1. Valdemar Stenberdt, Ban Moud Shiwalia & Guido Makransky: *A Comparison of Generative Activities in Virtual Reality: Re-experiencing or Reflecting?*
- 2. Josef Buchner, David Baberowski, Thiemo Leonhardt & Nadine Bergner: *Do Different Interaction Modes Impact Learning in Immersive Virtual Reality?*
- 3. Christian Hartmann, Christian Kosel & Maria Bannert: *Exploring Attentional Flow in IVR: Gaze-Based Process Mining to Analyze Coherence Formation*
- 4. Cynthia Y. Delgado, Amédee Marchand Martella, Alyssa P. Lawson, & Richard E. Mayer: *Integrating Immersive Virtual Reality into Learning*



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SSM

Valdemar Stenberdt, Ban Moud Shiwalia & Guido Makransky: *A Comparison of Generative Activities in Virtual Reality: Re-experiencing or Reflecting?*

BBLB

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HKB

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DMLM

Cynthia Y. Delgado, Amédee Marchand Martella, Alyssa P. Lawson, & Richard E. Mayer: *Integrating Immersive Virtual Reality into Learning*





# Goals of the symposium (and my discussion)

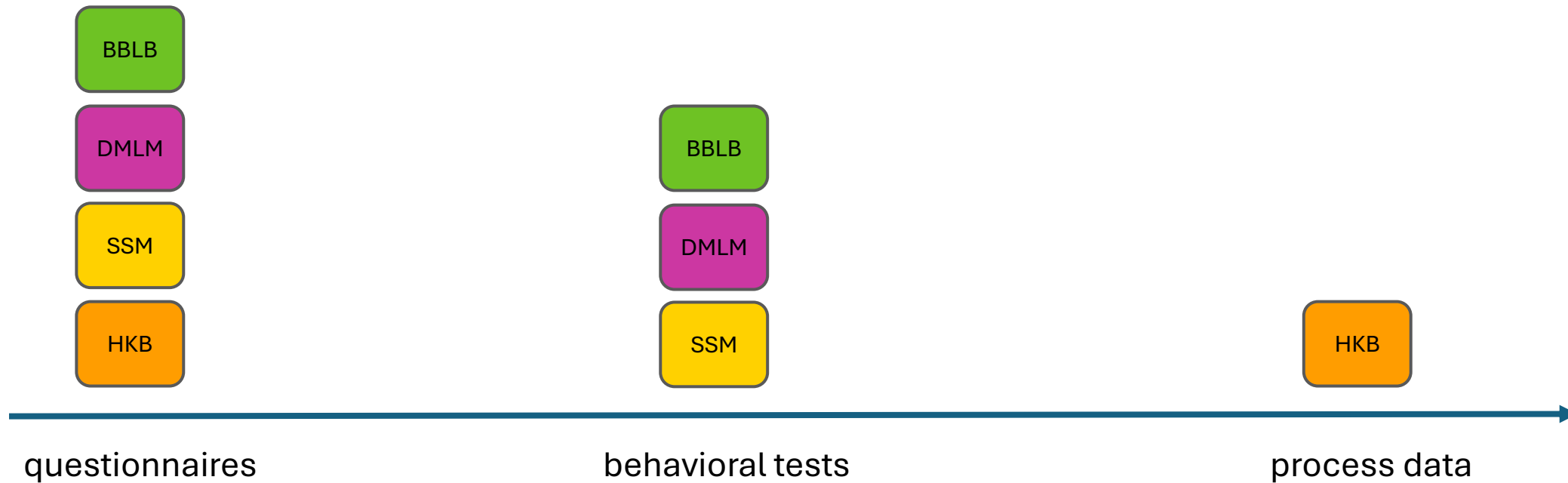
- (1) Diversity & Common Ground: Demonstrate the diversity of IVR-studies
  - research method
  - theoretical grounding
  - instructional focus
  - practical implications
- (2) Big Picture & Research Agenda: Integrate & discuss study results into a broader perspective



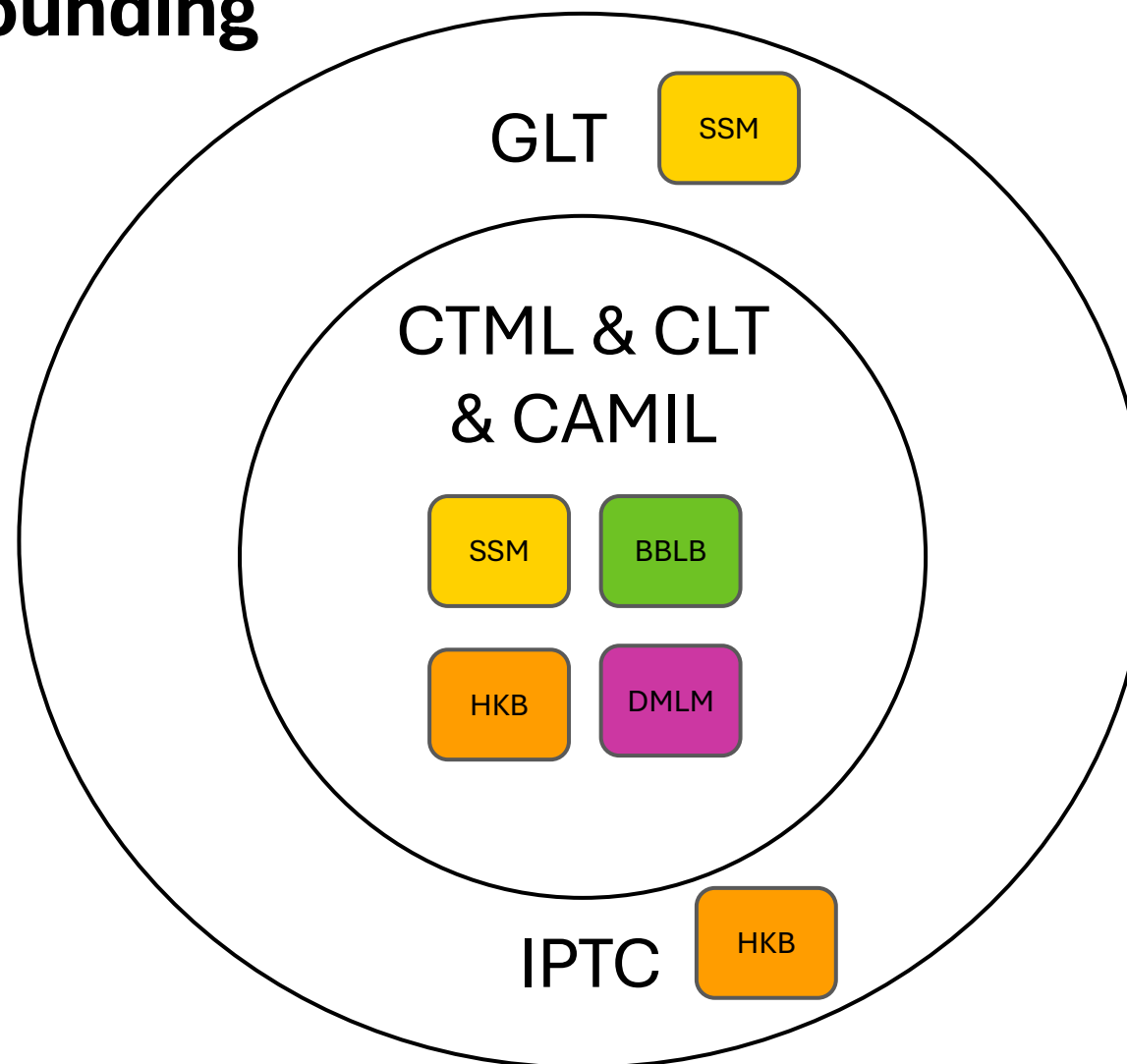
# Research method

- all studies: experimental designs
- all studies: avoid simple media-comparison studies
- different participants (high school students, university students etc. but all quite young), sample sizes vary
- different topics: procedure of pipetting (2x), IP routing and network address translation, sistine chapel
- shift regarding dependent variables: knowledge, cognitive load, behavioral tests but also situational interest, motivation, self-efficacy, enjoyment etc.

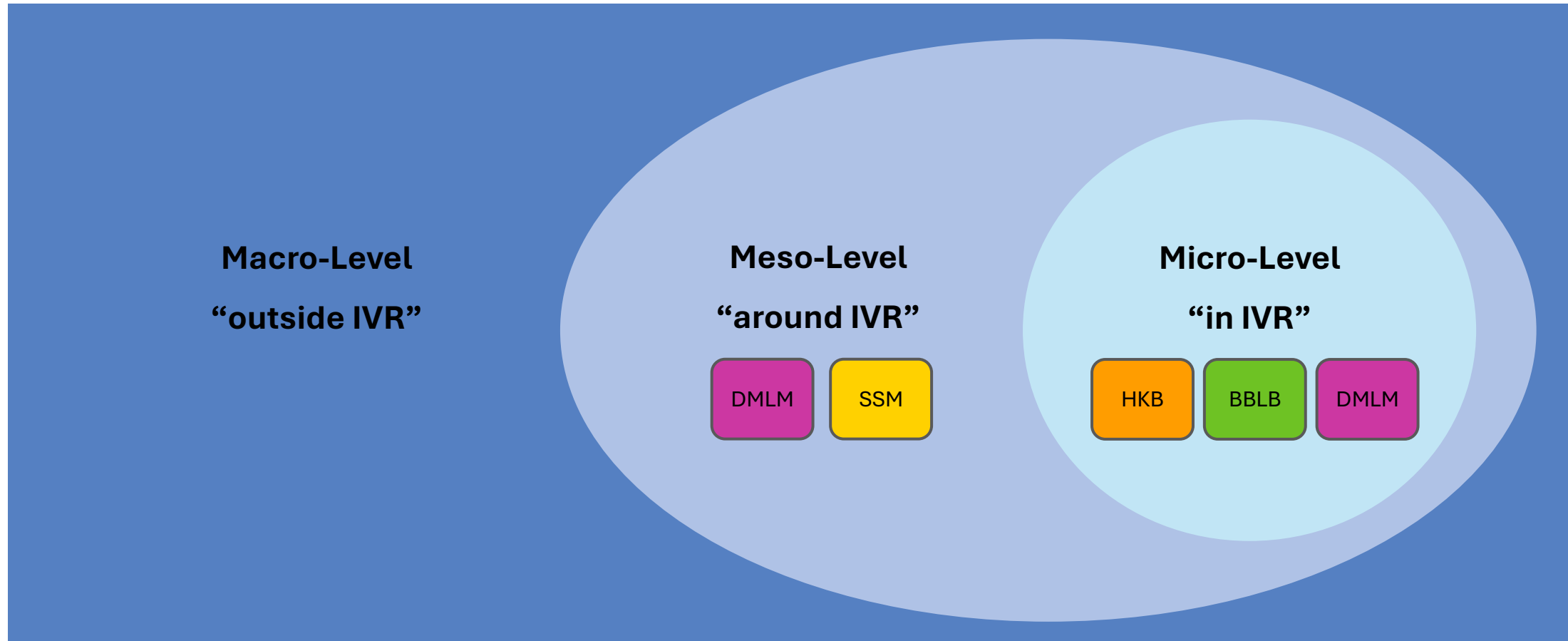
# Research method



# Theoretical grounding



# Instructional focus





# Practical implications



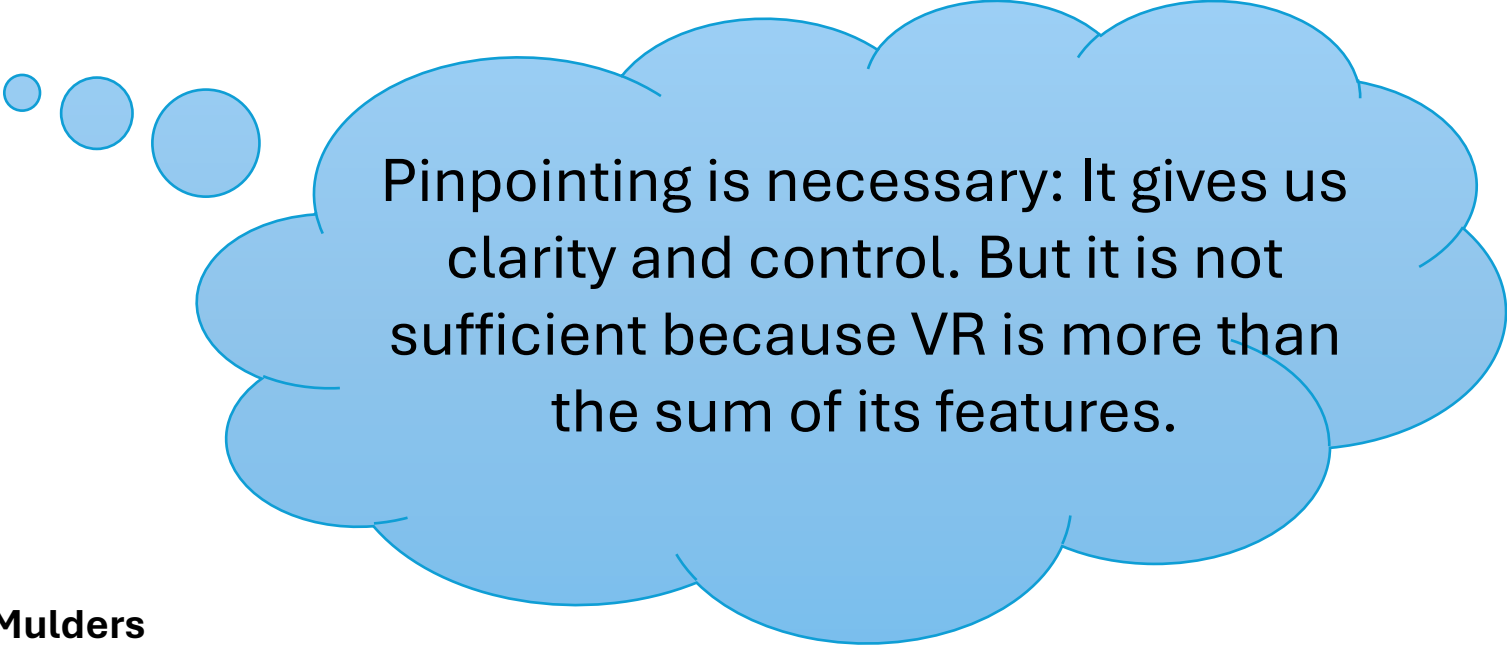


# Big Picture & Research Agenda

- **shared strength:** all four studies go beyond media-comparison: controlled, feature-focused
- **theoretical grounding:** mostly CTML/CLT, less specified theories, one study challenging existing theory
- **methodological diversity:** from large field studies to process-tracing
- **instructional implications:** moving forward means connecting micro-level feature isolation with meso-level instructional orchestration and macro-level access & equity

## Discussion

Can we really move the field forward by pinpointing features of immersive virtual reality that support learning?

A large, light blue thought bubble with a thin blue outline. It has three smaller, identical bubbles trailing off to the left. The text inside is centered and in a black sans-serif font.

Pinpointing is necessary: It gives us clarity and control. But it is not sufficient because VR is more than the sum of its features.

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**Thank you!**