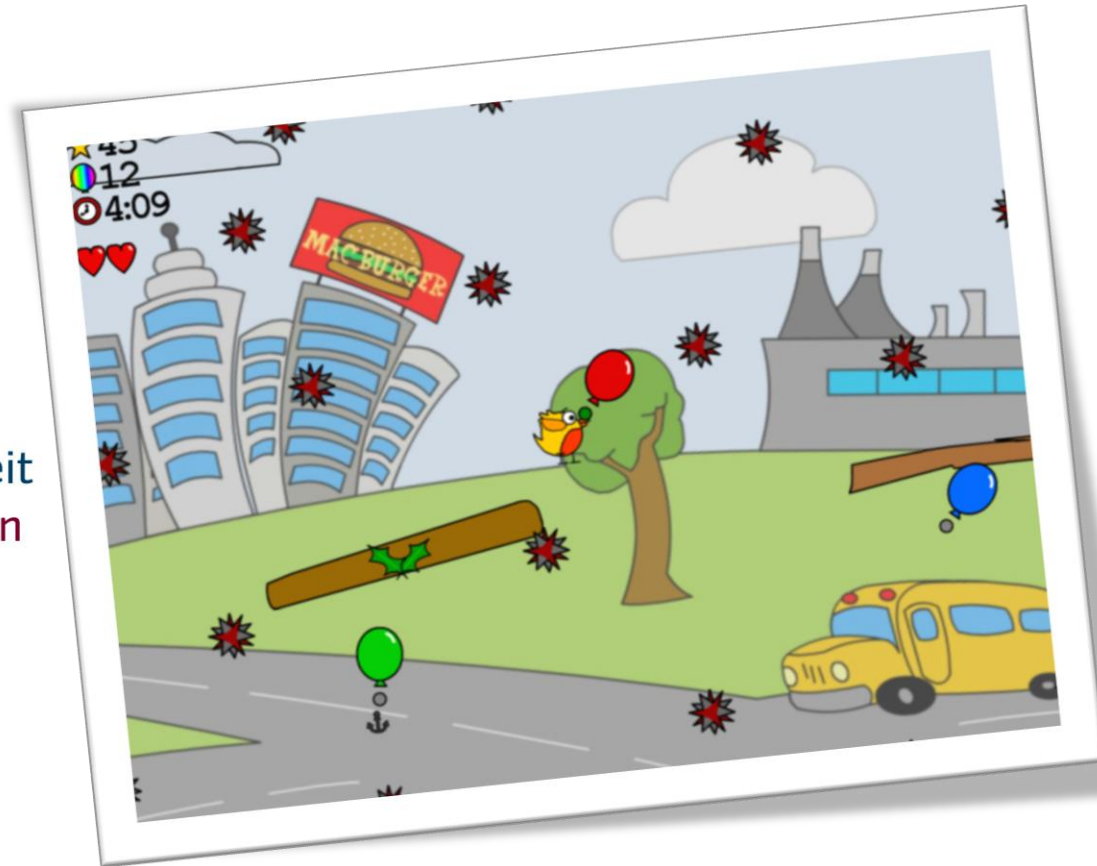


Putting Brands into Play



How Player Experiences Influence the Effectiveness of In-Game Advertising

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In-game advertising (IGA)

- **Definition:** *ads that are placed inside digital games, and are **integrated** as an element in the game environment.*
- Examples: billboards, product placements.



In-game advertising (IGA)

- IGA is **on the rise**.
 - One of the **fastest growing forms** of advertising in terms of yearly spending and anticipated growth.
 - Expected to grow to a 2 billion dollar industry by 2012.
- This sharply contrasts the **decline in advertising revenues traditional media** (e.g. print, radio, television) are currently faced with.

IGA effectiveness research

- Considered a **hot topic** among advertisers and gaming industry.
 - But how effective is it really?
- **IGA industry** (Nielsen Entertainment, Massive Inc. etc.).
 - IGA is highly effective (great influence on brand awareness, brand attitude, purchase intention).
- **Academic research**: still in its infancy.
- **Aim of study**: contribute to research on the effectiveness of IGA.

Current study

- Starting point: considerable evidence that advertising effectiveness in **traditional media** is influenced by **context characteristics**.
 - E.g. emotions, physical and social environment.
- Yet, research on the effects of context characteristics on **IGA** is **still limited**.

Current study

- Focus of present study: relationship between effectiveness of IGA and one specific context characteristic: **player experiences**.
 - Emotions and experiences people encounter while playing digital games.
- **Traditional advertising studies: emotions** influence advertising processing, even if the emotions are not evoked by the ad.
 - **High vs. low arousal:** poorer recall and recognition of commercial content (Coulter & Sewall, 1995; Coulter, 1998; Norris & Colman, 1992).
 - **Positive vs. negative emotional experiences:** more favourable brand attitude, greater intention to try advertised products (Owolabi, 2009), better recall of message stimuli (Gardner, 1985) and brand names (Lee & Sternthal, 1999).

Current study

- Effect of 3 general emotions and 3 specific player experiences on the effectiveness of IGA.
- **General, lower-order emotions:**
 - Pleasure
 - Arousal
 - Dominance
- **Specific player experiences:**
 - Challenge
 - Competence
 - Tension

Research questions and hypotheses

- **Do player experiences influence the effectiveness of IGA?**
- The intensity of different **player experiences** can change whenever **game difficulty** is increased (e.g. van den Hoogen et al., 2008).
- Experiment: manipulation of game difficulty (easy - medium - hard). Expectation that **easier (vs. more difficult) levels will lead to:**
 - Less challenge (-), arousal (-) and tension (-).
 - More pleasure (+), dominance (+) and competence (+).

Research questions and hypotheses

- **Brand processing:**

- Positive vs. negative player experiences: **hedonic contingency hypothesis.**
 - » People who are in a positive emotional state want to sustain this affective state. They will analyse messages more closely for their hedonic consequences, resulting in a greater processing of information (Lee & Sternthal, 1999; Wegener et al., 1995).
- Arousal and challenge: **limited capacity model of mediated message processing.**
 - » A person's ability to process information is limited (Lang, 2000). Highly arousing environments consume more of people's cognitive resources (Grigorovici & Constantin, 2004).

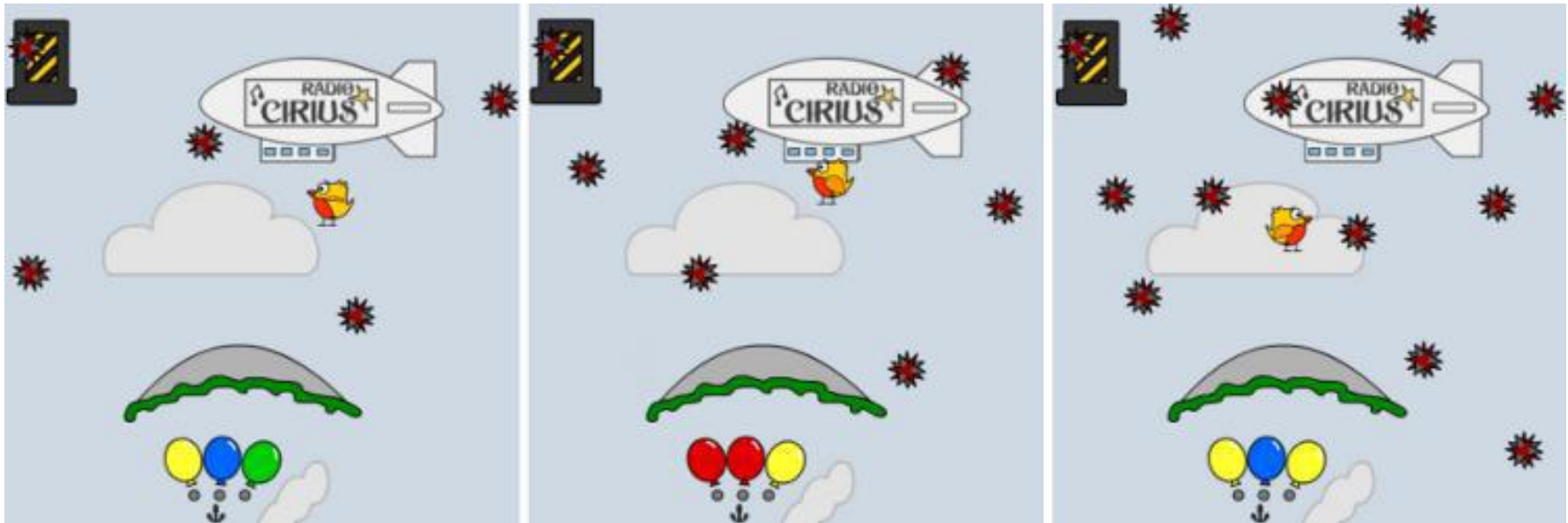
-> **H1:** Compared to the more difficult levels, the **easier levels** will lead to **better brand processing.**

Research questions and hypotheses

- **Brand evaluation:**
 - Positive vs. negative player experiences: **spill-over hypothesis.**
 - » A person's psychological response to the context spills over to his or her attitude towards the advertisement (Aylesworth & MacKenzie, 1998; Goldberg & Gorn, 1987; Murry et al., 1992).
 - > **H2: Compared to the more difficult levels, the easier levels will lead to a more favourable brand evaluation.**
- **RQ: Do differences in player experiences mediate ("explain") these effects?**

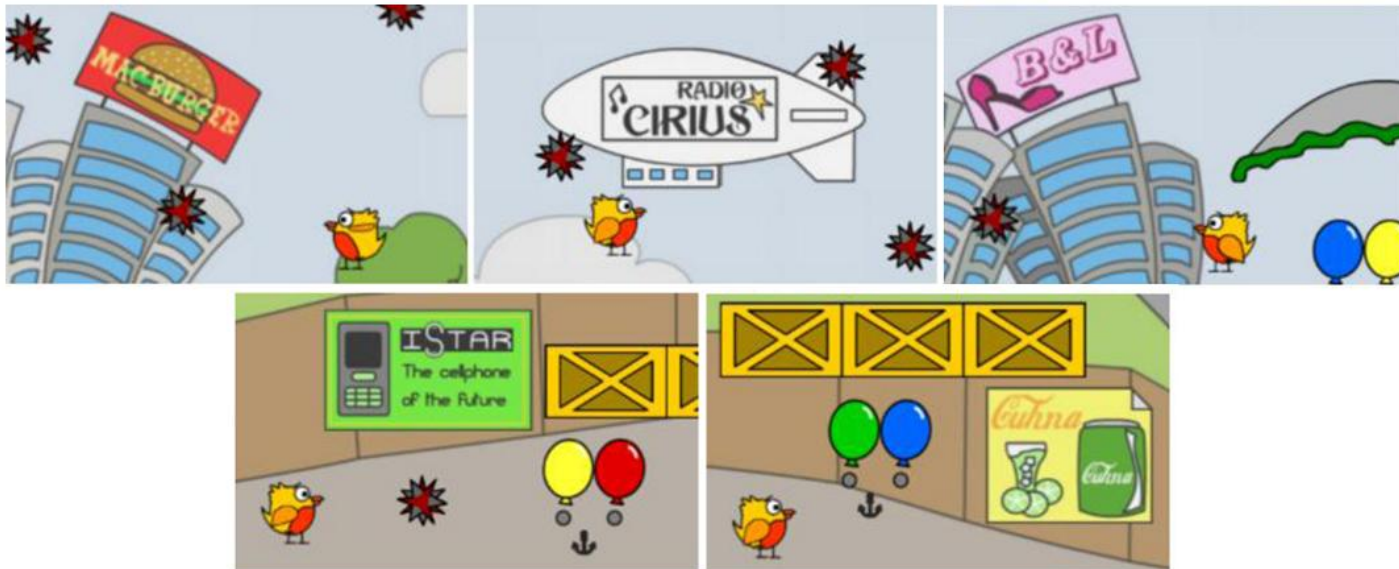
Method: experimental design

- Materials
 - Online 2D platform game: “**Flight of the Strihuhn**”.
 - Manipulation of **game difficulty**: easy – medium – hard.



Method

- Procedure
 - Level 1: tutorial level without IGA.
 - Level 2: participants were randomly assigned to one of the three experimental levels: easy – medium – hard.
 - The experimental level contained **five billboards** of fictitious brands.



Method

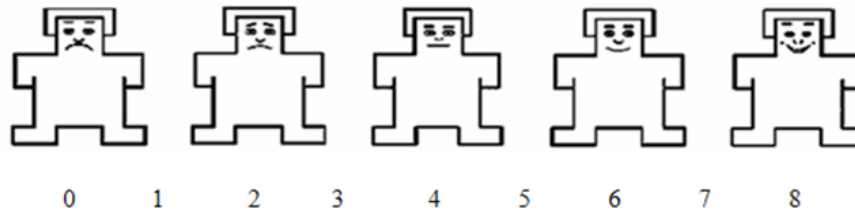
- Participants
 - 99 players (79 male, 20 female).
 - » 33 participants / experimental group.
 - Age: 16 – 50 years old. Average age category: 21 to 30 years old (59%).
 - Game frequency:
 - » < 15 hours / week: 78%
 - » > 15 hours / week: 22%

Method

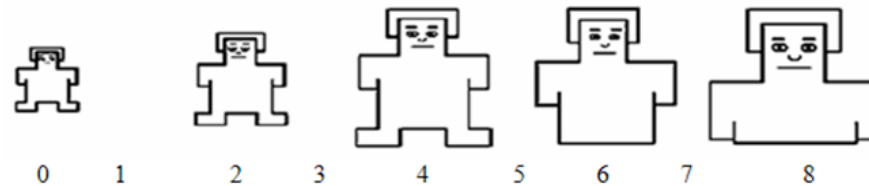
- Measures

- General emotions (pleasure, arousal, dominance):
 - » **Self-Assessment Manikin (SAM)**
(Lang, 1980; after Mehrabian & Russell, 1974)

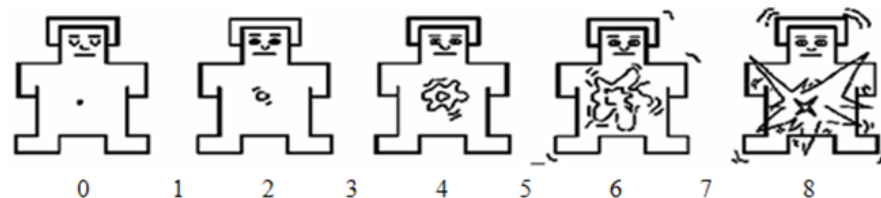
PLEASURE: VERY UNHAPPY - VERY HAPPY



DOMINANCE: VERY DOMINATED - VERY DOMINANT



AROUSAL: VERY CALM - VERY EXCITED



Method

- Measures
 - Specific player experiences (competence, tension, challenge):
 - » **In-game Game Experience Questionnaire (iGEQ)** (IJsselsteijn et al., 2008)
 - Competence (I felt successful, I felt skilful)
 - Challenge (I felt challenged, I felt stimulated)
 - Tension (I felt frustrated, I felt irritable)

Method

- Measures

- Brand effectiveness:

active-passive
↓

- » **Brand processing: brand recognition** ($\text{brand}_{\text{rec}}$)

- Brand recognition: list of brand names ($\text{rec}_{\text{brand}}$).
 - Product recognition: list of product categories ($\text{rec}_{\text{product}}$).
 - Billboard recognition: pictures of billboards ($\text{rec}_{\text{billboard}}$).

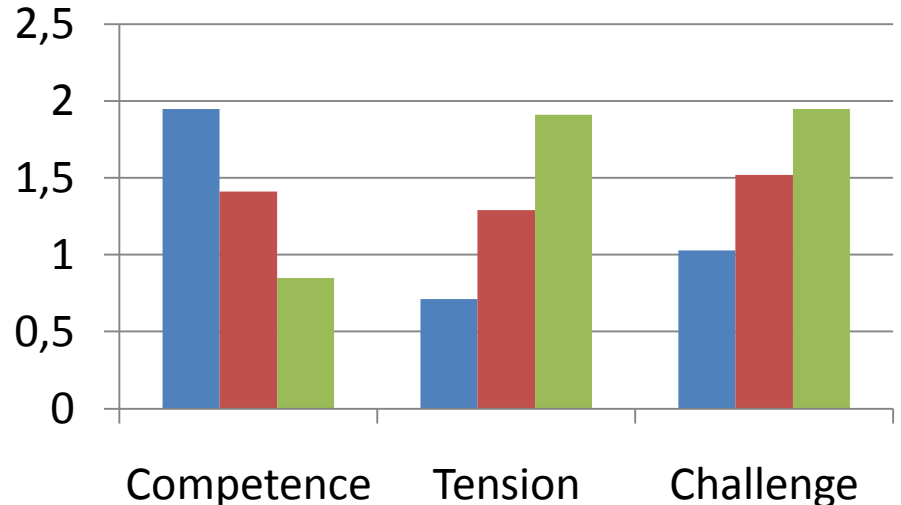
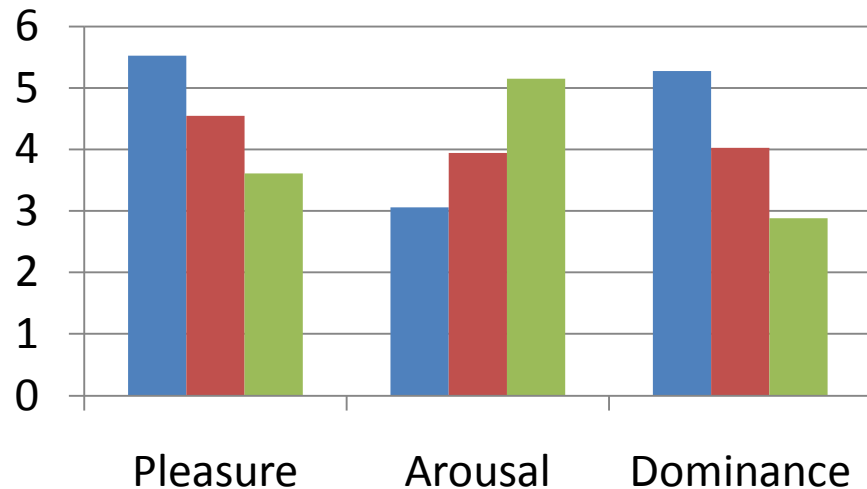
- » **Brand evaluation: brand likeability** ($\text{brand}_{\text{like}}$)

- Likeability of the 5 brands (5-point Likert scale).

Results

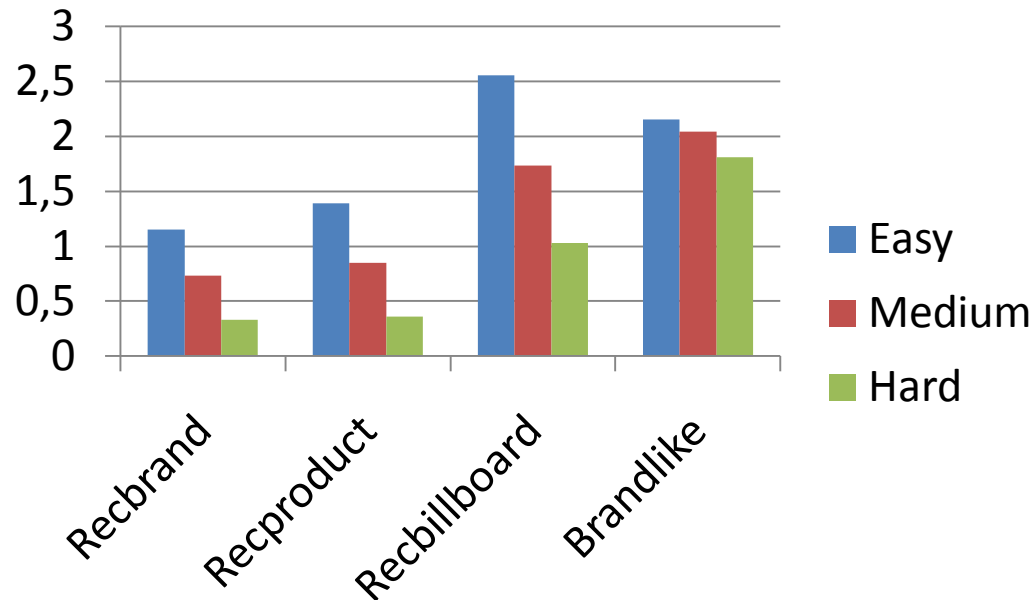
- **Player experiences** differed significantly according to **difficulty**.
- Easier (vs. more difficult) levels led to:
 - Higher levels of pleasure, dominance and competence.
 - Lower levels of arousal, tension and challenge.

■ Easy ■ Medium ■ Hard



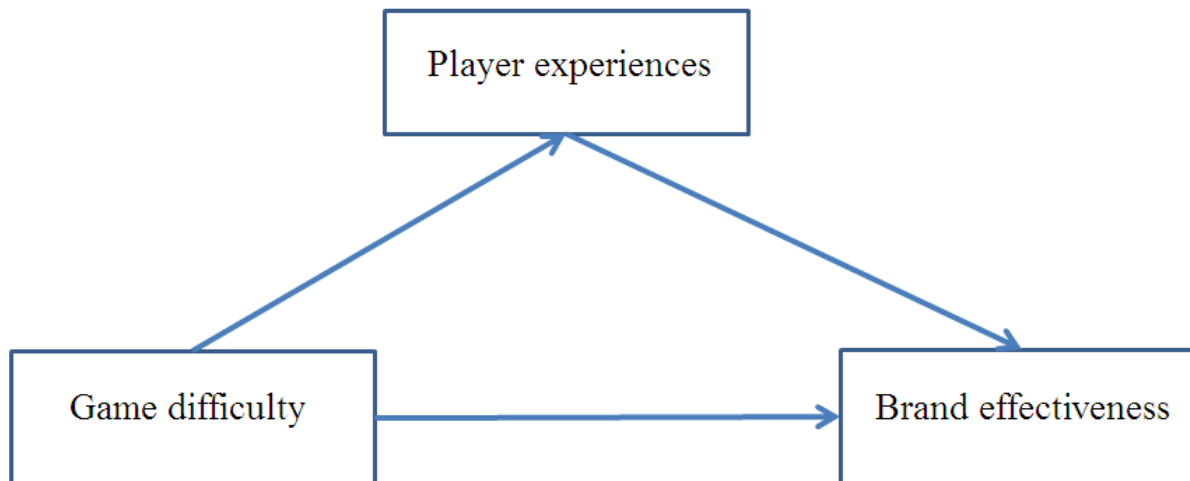
Results

- **IGA effectiveness** differed significantly according to **difficulty**.
- Easier (vs. more difficult) levels led to:
 - A better brandrec **H1**
 - A more favourable brandlike ($F(2, 96) = 3.01, p = .054$) **H2**



Results

- Can differences in player experiences **explain** these effects?
- Series of **mediation tests** (Preacher & Hayes' (2008) bootstrapping methodology) (**RQ**)



Results

- **Effect on brand recognition**
 - **Competence** significantly weakened the impact of game difficulty.
 - » Feelings of competence lead to positive emotional experiences (e.g. pride, euphoria): **hedonic contingency theory**.
 - » If better at playing the game, more **attention** can be devoted to the surroundings (e.g. billboards).
- **Effect on brand likeability**
 - **Pleasure** greatly diminished the influence of game difficulty ($p = .09$).
 - » Related to **spill-over hypothesis**? More fun while playing game: positive evaluation of experience spills over to brands integrated in the game environment.

Conclusion

- **Increasing game difficulty** had a significant effect on:
 - **Player experiences** (pleasure, arousal, dominance, competence, challenge, tension)
 - **Brand recognition** and **brand likeability**
- **Competence**: mediator of relationship between game difficulty and brand recognition.
- **Player experiences**: important context characteristics that have to be taken into account while studying the **effectiveness of IGA**.

Recommendations for future research

- More **specific manipulations** of player experiences are needed.
 - Focus on impact of **other context factors** on effectiveness of IGA (e.g. effect of physical and social setting, motoric and cognitive load,...).
- > **PhD research.**

Thank you!

- Questions?
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