

Institute of Educational Science Dept. of Teaching and Learning with Intelligent Systems

# Unveiling unconscious biases and stereotypes in students: The necessity of self-reflection in Higher Education

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Introduction

- Cultural diversity and implicit biases highly prevalent in modern societies [1] with tremendous effects
  - Interference with decision-making processes
- Unconscious and automatic features of prejudiced judgement and social behavior
- Influences of Stereotype Threat in educational settings on grades, career choices, work environments
- Critical reflection in Higher Education to bring lasting and effective change in students' lives [2]
- Concept of self-reflection encourages habits of individual and collective attention and analysis
- Societal challenges addressed by drawing on prior experiences
- Cognitive dissonance brings awareness of discrepancies between behavior and professed views, motivating behavioral change [3]

<u>Issue</u>: self-other asymmetry in people's recognition of biased thinking and behavior that results from preexisting beliefs (myside bias) and social stigmas (social biases) [5]

**Approach**: raising awareness of existence of implicit bias as important first step towards reducing bias [6]

> Can we make students aware of their own biases by provoking cognitive dissonance?

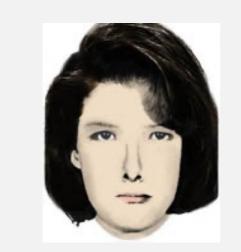
# Methods

### Sample:

404 participants, enrolled in bachelor studies (teacher training and vocational training)

## Measures:

- Implicit Association Test (IAT) on skin-tone [7], including 12 computer-generated faces (6 female, 6 male) with light or dark skin tones and 16 German adjectives (8 positive, 8 negative)
- Cognitive Reflection Test (CRT) [8,9,10] and self-rating items



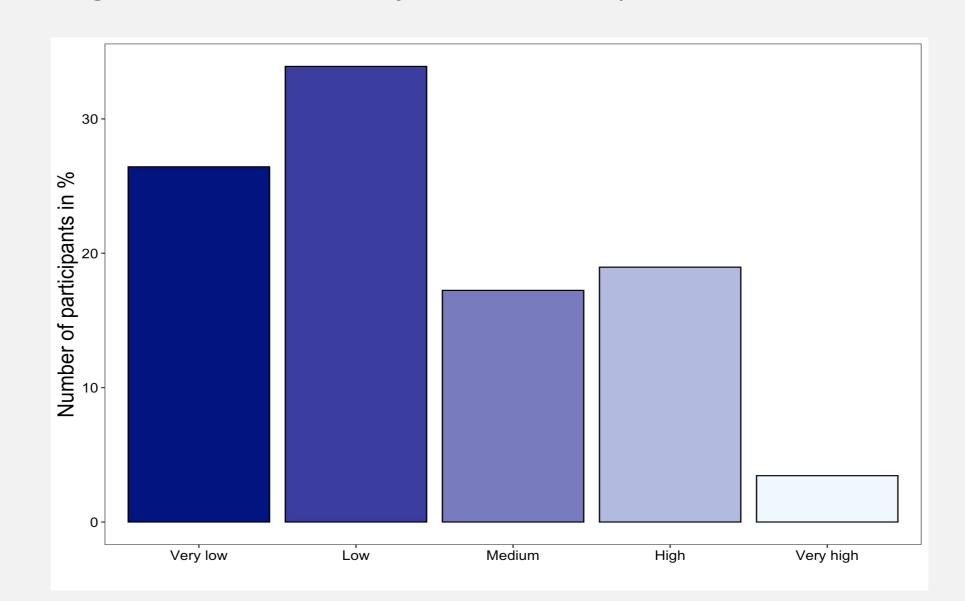


#### Procedure:

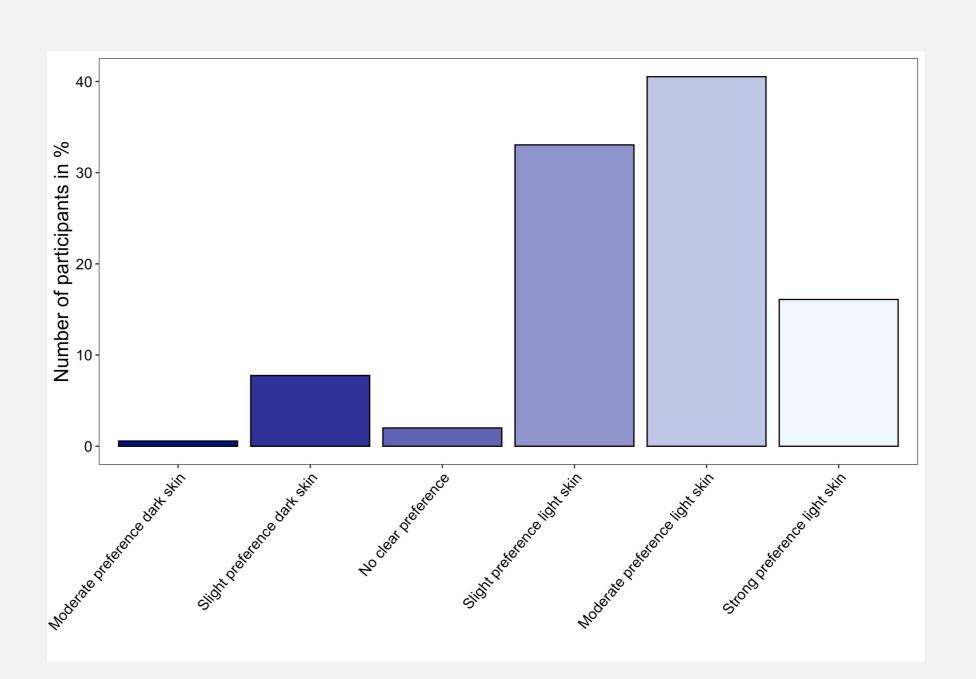
- Part of preparation process for mandatory introduction lecture on Educational Psychology for BA students
- Pre-lecture survey with two CRT items, IAT and self-rating items on stereotypes and biases
- Lecture, providing background on origins and impacts of stereotypes and biases in education; part of the debriefing process
- Post-lecture survey includes three CRT items and fosters reflection on previous IAT results

# Results

Results from pre-lecture survey based on 348 cases (due to missing cases or too many errors in IAT):



Students described tendency to having stereotypes and biases as predominantly low or very low



Evaluation of IAT results with D-Score [11] indicates students' tendency to prefer lighter skin tone

- 39% of students also participated in post-lecture survey:
- Were there changes in the approach to solving CRT-questions post online lecture?
   Yes: 29,3% No: 34,2% Unsure: 1,5% No answer: 35%
- Were there changes in interpreting IAT results post online lecture?

**Yes**: 24% **No**: 46% **No answer**: 30%

 Reported changes included taking more time to think and reflect about things

# Discussion

- Students are often not aware of their own biases
- Results evoked strong reactions towards IAT results to dissolve cognitive dissonance
- Criticism of test validity and/or results
- Anger toward the test
- > Desire to change and increase awareness of own biases

#### Limitations:

- More fine-grained response categories to determine the preference of skin-tone needed
- No randomized order of category combinations

#### Implications:

- IAT useful tool to initiate self-reflection process about (unconscious) bias and stereotypes
- Importance of guided "debriefing" after taking the IAT to support selfreflection processes
- Resulting cognitive dissonance and various strategies to deal with it need further exploration

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