

# The Association of Motivational Profiles with Affect, Engagement, and Achievement in a Problem-Based Bachelor's Program

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# The Association of Motivational Profiles with Affect, Engagement, and Achievement in a Problem-Based Bachelor's Program

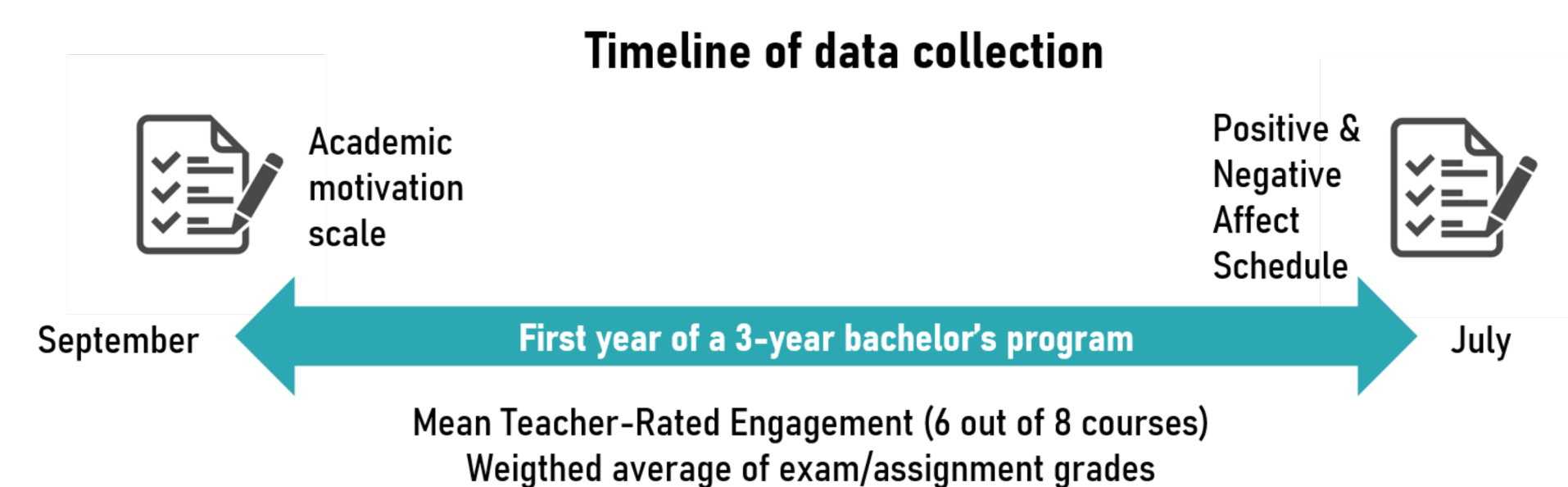
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Lisette I. S. Giel & Gera Noordzij (Erasmus University Rotterdam)

## INTRODUCTION

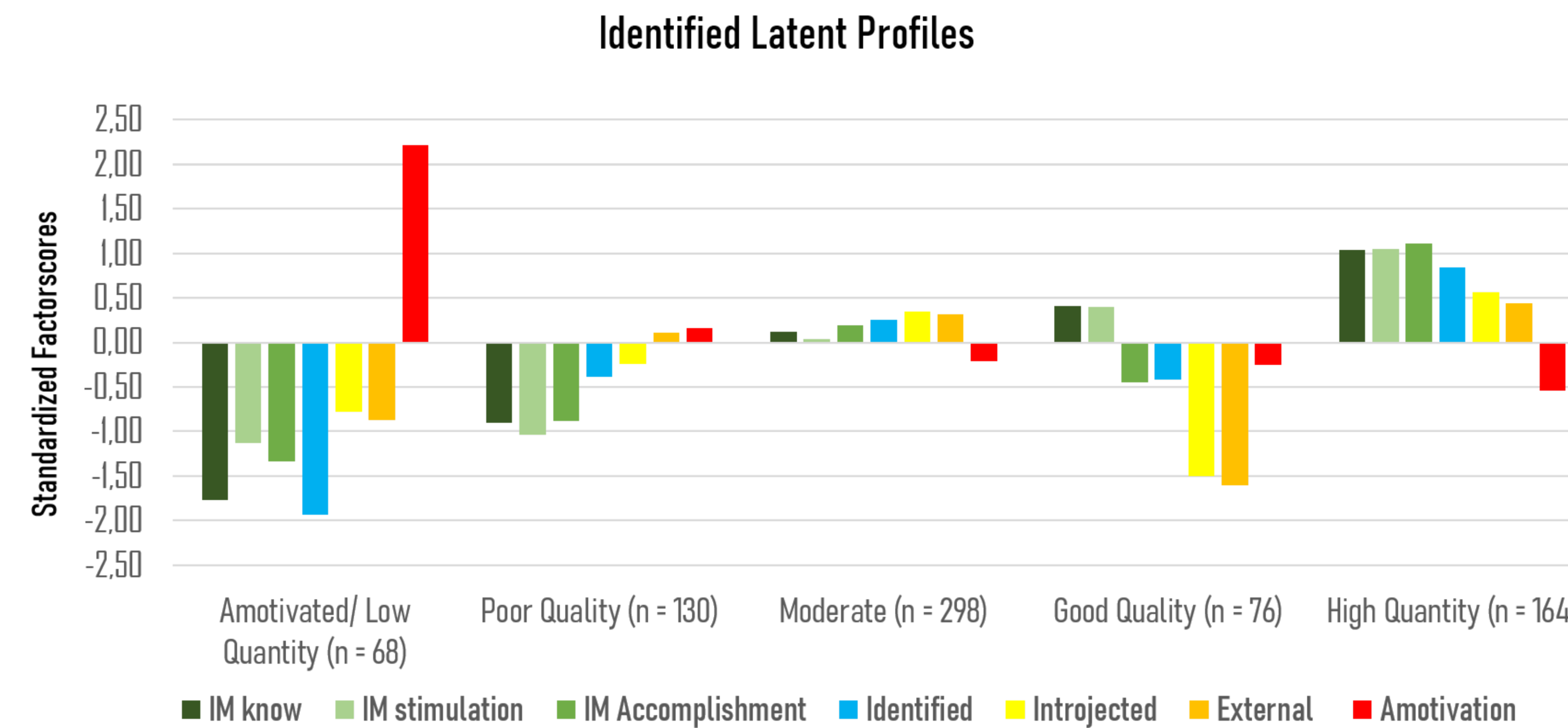
- Problem-based learning (PBL) aims to promote students' intrinsic motivation (Norman & Schmidt, 1992), but motivational problems are often reported (e.g., Wijnia et al., 2021).
- Individual differences in motivation can affect students' perception of PBL, such as problem quality (Noordzij & Wijnia, 2020).
- Do individual differences in PBL-students' motivational profiles affect their subsequent affect, teacher-rated engagement, and academic achievement?

## METHOD

- Part of a larger longitudinal study.
- 736 first-year PBL psychology students (74% female,  $M$  age = 19.70 years old).
- Setting: 7 out of 8 courses are problem-based with seven-step approach after receiving the problem.

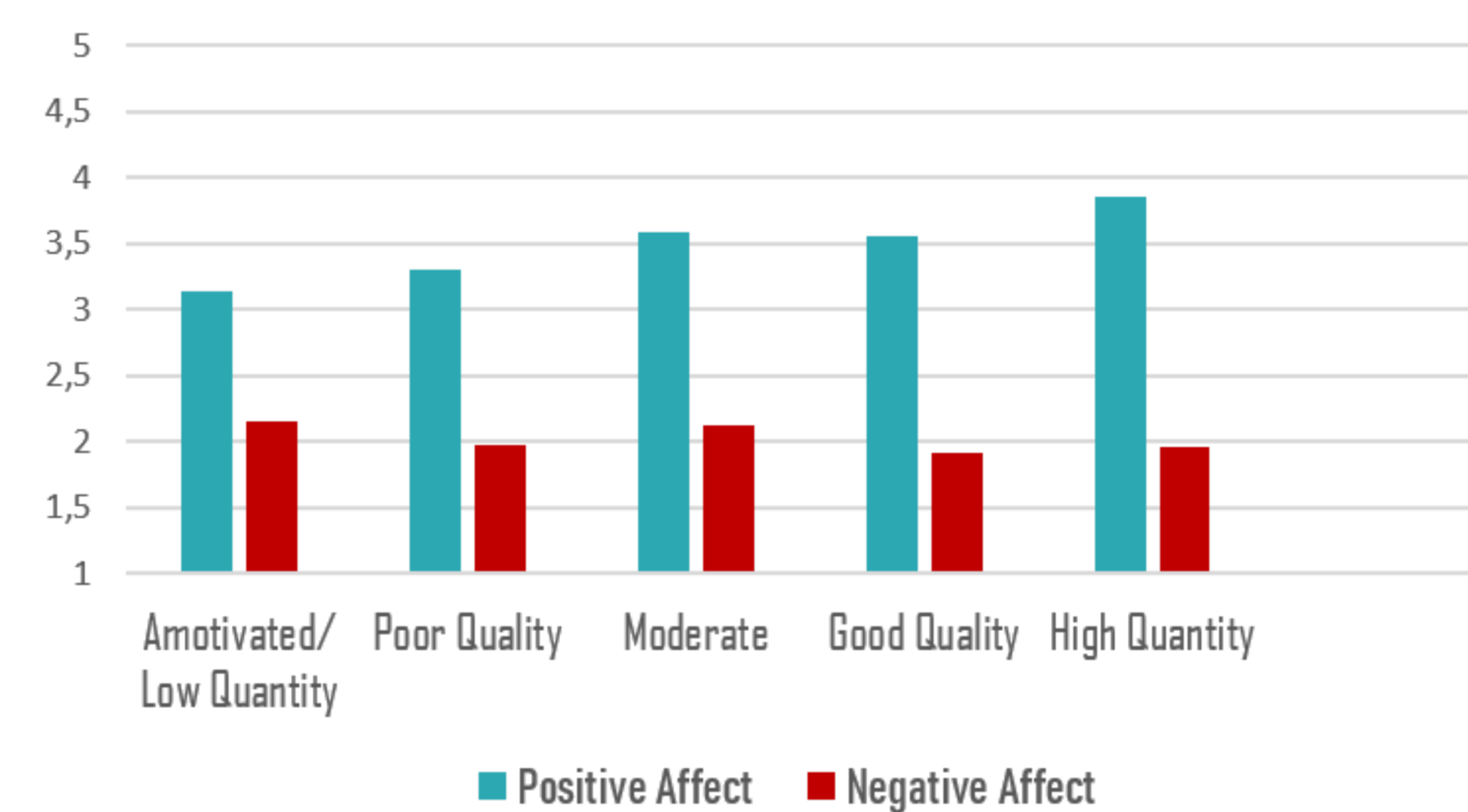


## RESULTS

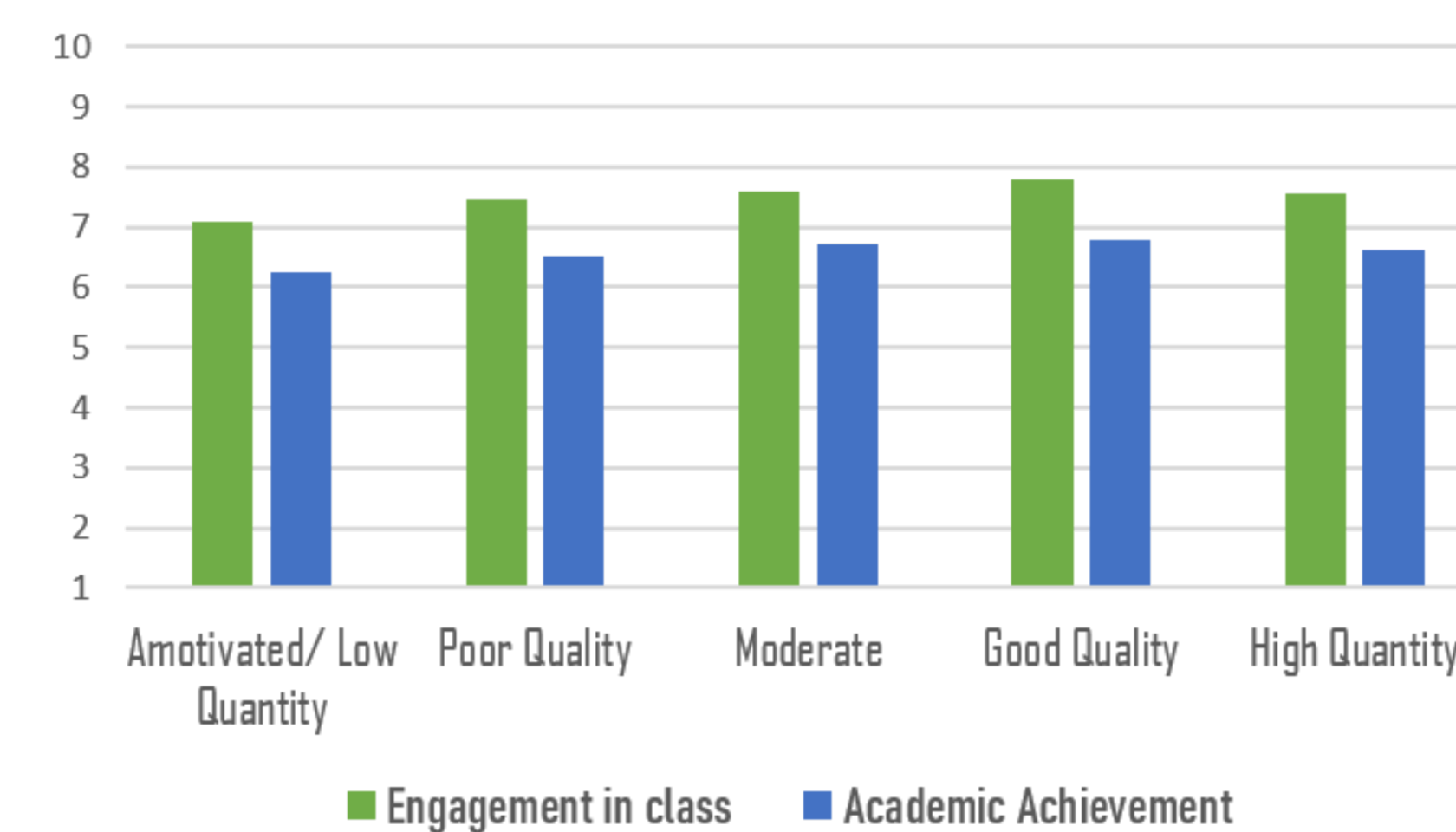


Note. IM = Intrinsic Motivation.  $M = 0$ ,  $SD = 1$ .

### Differences on Affect



### Differences on Engagement and Achievement



Statistical differences were found between student profile groups on positive affect, teacher-rated engagement, and academic achievement

- Positive affect: High quantity > moderate, low quantity, and poor quality group
- Positive affect: Amotivated/ low quantity < moderate, good, and high quality
- Engagement: Amotivated/ low quantity < all other profiles
- Achievement: Amotivated/ low quantity < moderate, good quality and high quality

## CONCLUSION

### What we learned

- Five motivational profiles were identified.
- Students with an amotivated/ low quantity profile scored lower on positive affect, engagement, and achievement during the first academic year of the PBL program.
- Students with moderate, good quality, and high quantity profiles obtained similar results.
- Poor quality and good quality profiles were less pronounced in this study (moderate scores).
- Individual differences could affect the effectiveness of problem-based learning.

### Next steps

- Examine stability and change in students' motivational profiles and associations with student outcomes.

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