

# The Effects of a Child's Gender and First Language on the Latent Profiles Emerging from the inCLASS

The Effects of a Child's Gender and First Language on the Latent Profiles Emerging from the inCLASS  
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**INTRODUCTION**

- A preschool assessment (inCLASS) in early childhood education (ECE), is more essential to better understand the nature of children's preschool experiences.
- The social interaction and learning index in which children are engaged is a daily basis to their educational context and their socio-emotional development and their academic success.
- The Individualized Classroom Assessment Scoring System (ICASS) is an instrument designed and that measures the social and behavioral interactions of children in kindergarten child within educational context (Barnard, 2008; p. 100-105).

**OBJECTIVE**

The present study aims to determine the latent profiles of the four domains of the inCLASS and an adding specific characteristics of the individual child, such as the child's gender and first language, which may influence on ICASS scores. The outcome goal of this study is to get a more accurate picture of the individual needs help of the inCLASS.

**METHODS**

**SAMPLE**

All children observed within inCLASS divided in two groups

- 201 children (100 girls) from Quebec (Canadian sample) (M = 30.36 months, SD = 2.32)
- 201 children (100 girls) from the French sample (M = 30.37 months, SD = 2.23)

**PROCEDURES**

- Recruitment took place in December 2017 to March 2017 in Montreal (Quebec) and from March 2018 to April 2018 in Caen (France)
- Observations took place when children were 3 and 3 years old (parent observers evaluated their level of engagement in the classroom)

**STATISTICAL ANALYSIS**

Latent Profile Analysis (LPA) was used to create profiles of children's engagement with teachers, peers, and/or regular assignments. The "top", "low", and "no" profile solutions were examined.

**MEASURES**

Individualized Classroom Assessment Scoring System (ICASS) observed at school

**RESULTS**

Two, three, four, five and six profile solutions were examined. Results indicated four profile solutions for both French (BIC = 2222.2, AIC = 2121.1, VLSM and Adjusted BIC value = 203) average = 72.1 and Quebec (BIC = 2151, AIC = 2050, VLSM and Adjusted BIC value = 195) average = 80.1.

**DISCUSSION**

- The latent profile analysis (LPA) revealed that more boys were among the profiles with the highest level of regular engagement.
- These results suggest a gender bias contribution in the conceptual framework of the inCLASS, where boys would score for disengagement compared to girls (e.g., et al., 2013).
- Having language barrier in the French sample also had an impact on the children being more likely to be clustered in the lower level profiles. The inCLASS language and academic competencies in the French educational system could explain this tendency (Brock, 2004; Gagnon, 2015).

**ACKNOWLEDGMENTS**

ICASS (ICASS-101)

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Qualité des contextes éducatifs de la petite enfance

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# INTRODUCTION

- As preschool turns into a typical setting in early childhood education (ECE), it seems essential to better understand the nature of children's preschool experiences.
- The social interactions and learning tasks to which children are exposed on a daily basis in their educational context are essential to their socio-emotional development and their academic success.
- The Individualized Classroom Assessment Scoring System (inCLASS) is an American observational tool that assesses the social and behavioral interactions of a three to five-year-old child in his educational context (Downer, Booren et al., 2010).
- Certain characteristics of the child, such as the child's gender and first language, might affect the level of engagement and social interactions reported by the inCLASS.

# OBJECTIVE

*The present study aims to determine the latent profiles of the four domains of the inCLASS as well as adding specific characteristics of the individual child, such as the child's gender and first language, which may also influence inCLASS scores. The ultimate goal of this study is to get a more accurate picture of the cultural sensitivity of the inCLASS.*

# METHODS

## SAMPLE

404 children observed with the inCLASS divided in two groups

- 201 children (103 girls) from Quebec (Canadian) sample (M= 38.06 months, SD = 2.32)
- 203 children (100 girls) from the French sample (M = 40.52 months, SD = 2.43)

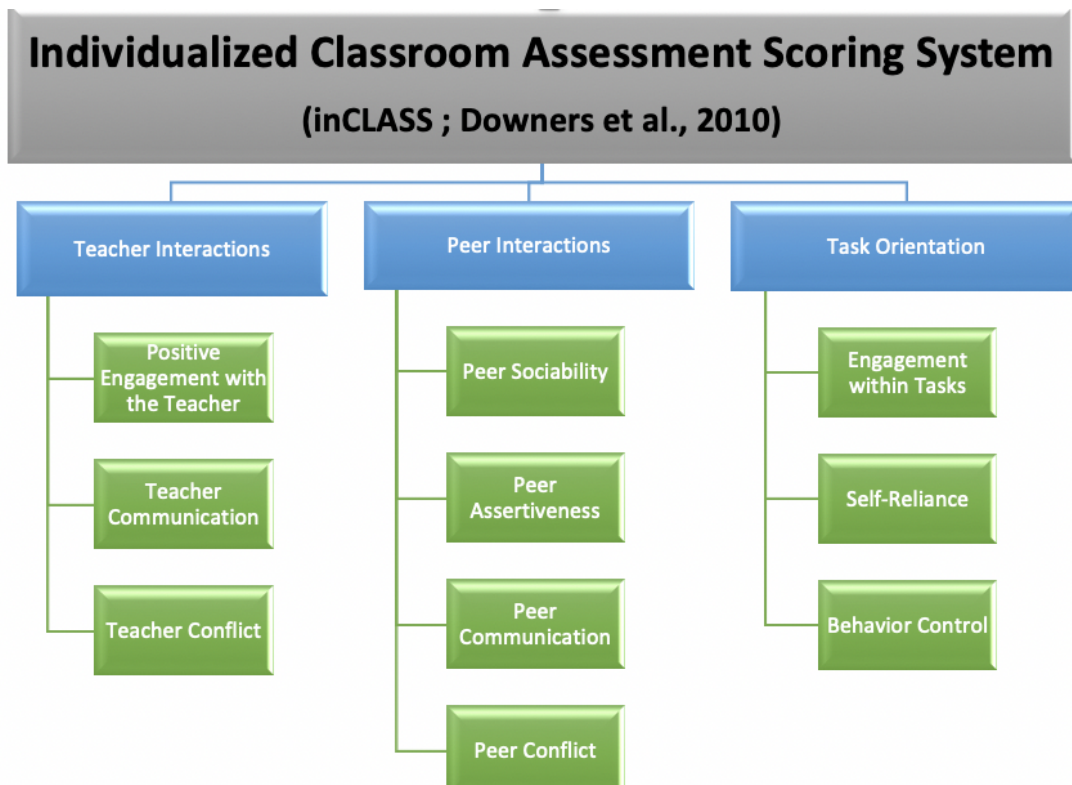
## PROCEDURES

- Recruitment took place in December 2017 to March 2017 in Montreal (Quebec) and from March 2018 to April 2018 in Grenoble (France)
- Data collection took place when children were 3 and 5 years old (trained observers evaluated their level of engagement in the classroom)

## STATISTICAL ANALYSIS

A Latent Profile Analysis (LPA) was used to create profiles of children's engagement with teachers, peers, tasks and negative engagement. One, two-, three-, four- and five-profile solutions were examined.

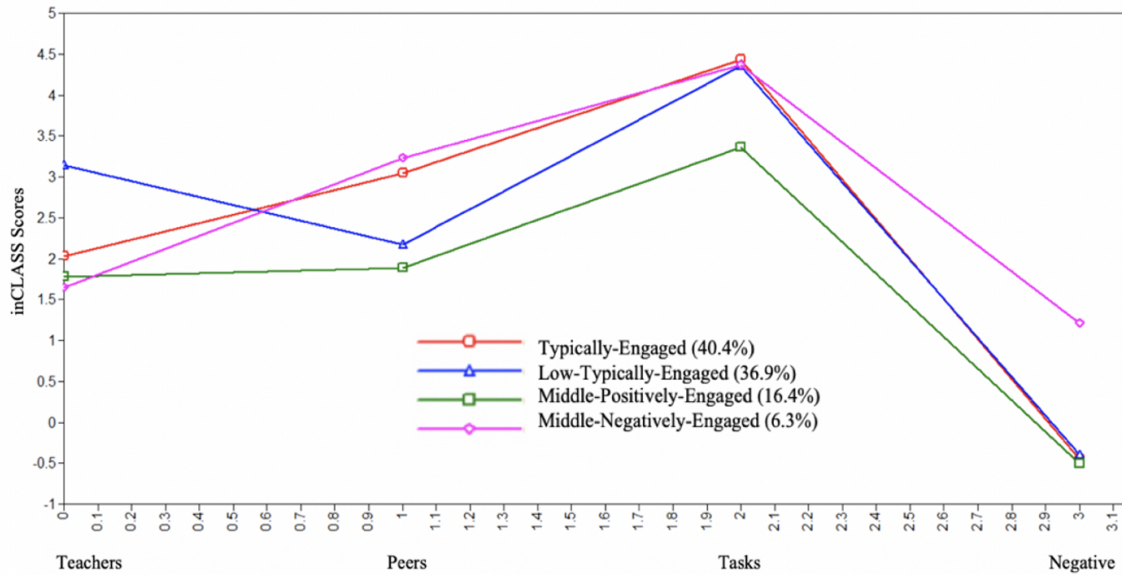
## MEASURES



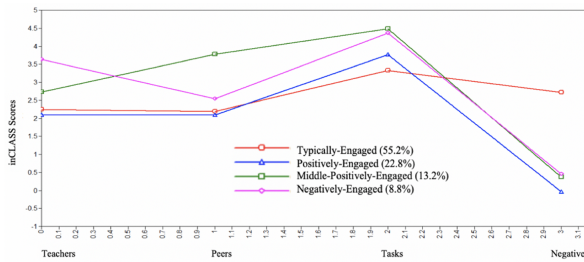
# RESULTS

One-, two-, three-, four- and five-profile solutions were examined. Results indicated a four-profile solution for both France (BIC = 2238,2, ABIC = 2133,7, VLMR and Adjusted LRT p value = .319; entropy = .755) and Quebec (BIC = 2563, ABIC = 2458,6, VLMR and Adjusted LRT p value = .186; entropy = .805).

## FRANCE



## QUEBEC



Predictors of **first language** and **gender** were added to the four-profile solution.

**FIRST LANGUAGE:** Children whose first language is French were more likely to be regrouped in the Middle-Negatively-Engaged profile than in the Typically-Engaged, Middle-Positively-Engaged and Low-Typically-Engaged profiles in the French sample. No significant differences were found regarding language in the Quebec sample.

**GENDER :** Boys were more likely than girls to be regrouped in the Middle-Negatively-Engaged profile than in the Middle-Positively-Engaged profile in the French sample. Boys were more likely than girls to be regrouped in the Negatively-Engaged profile than in the Positively-Engaged and the Middle-Positively-Engaged profiles in the Quebec sample.

|                              | Canada (Quebec) |       |                 |        | France (Grenoble) |       |                 |             |           |      |
|------------------------------|-----------------|-------|-----------------|--------|-------------------|-------|-----------------|-------------|-----------|------|
|                              | Profile 3 vs. 1 |       | Profile 4 vs. 1 |        | Profile 4 vs. 1   |       | Profile 4 vs. 2 |             |           |      |
|                              | Est. (s.e.)     | OR    | Est. (s.e.)     | OR     | Est. (s.e.)       | OR    | Est. (s.e.)     | OR          |           |      |
| <b>First language</b>        | ----            | ----  | ----            | ----   | 19,710***         | 3,506 | 18,616**        | 111,747,82. | 20,449*** | ---- |
|                              |                 |       |                 |        | (0,632)           |       | (1,693)         |             | (0,000)   |      |
| <b>Gender</b>                | -1,426*         | 3,319 | -2,569**        | 11,693 | ----              | ----  | 1,843*          | 8,628       | ----      | ---- |
|                              | (0,714)         |       | (1,045)         |        |                   |       | (0,855)         |             |           |      |
| <b>Model fit information</b> |                 |       |                 |        |                   |       |                 |             |           |      |
| Akaike (AIC)                 |                 |       | 1894,498        |        |                   |       | 1684,216        |             |           |      |
| Bayesian (BIC)               |                 |       | 1970,474        |        |                   |       | 1760,419        |             |           |      |
| Sample-Size Adjusted BIC     |                 |       | 1987,006        |        |                   |       | 1687,550        |             |           |      |

\*p < .05; \*\*p < .01; \*\*\*p < .001

## DISCUSSION

- The latent profile analysis (LPA) revealed that more boys were among the profiles with the highest level of negative engagement.
- Those results suggest a gender bias confirmation in the conceptual framework of the inCLASS, where boys could often be disadvantaged compared to girls, particularly regarding aggressive behaviors (Vitello et al., 2012).
- Having a language barrier in the French sample also had an impact on the children being more likely to be clustered in the lower level profiles. The focus on language and academic competencies in the French educational systems could explain this tendency (OECD, 2004; Garnier, 2013).

## ACKNOWLEDGMENTS

### ACKNOWLEDGMENTS

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*All references will be furnished upon request.*