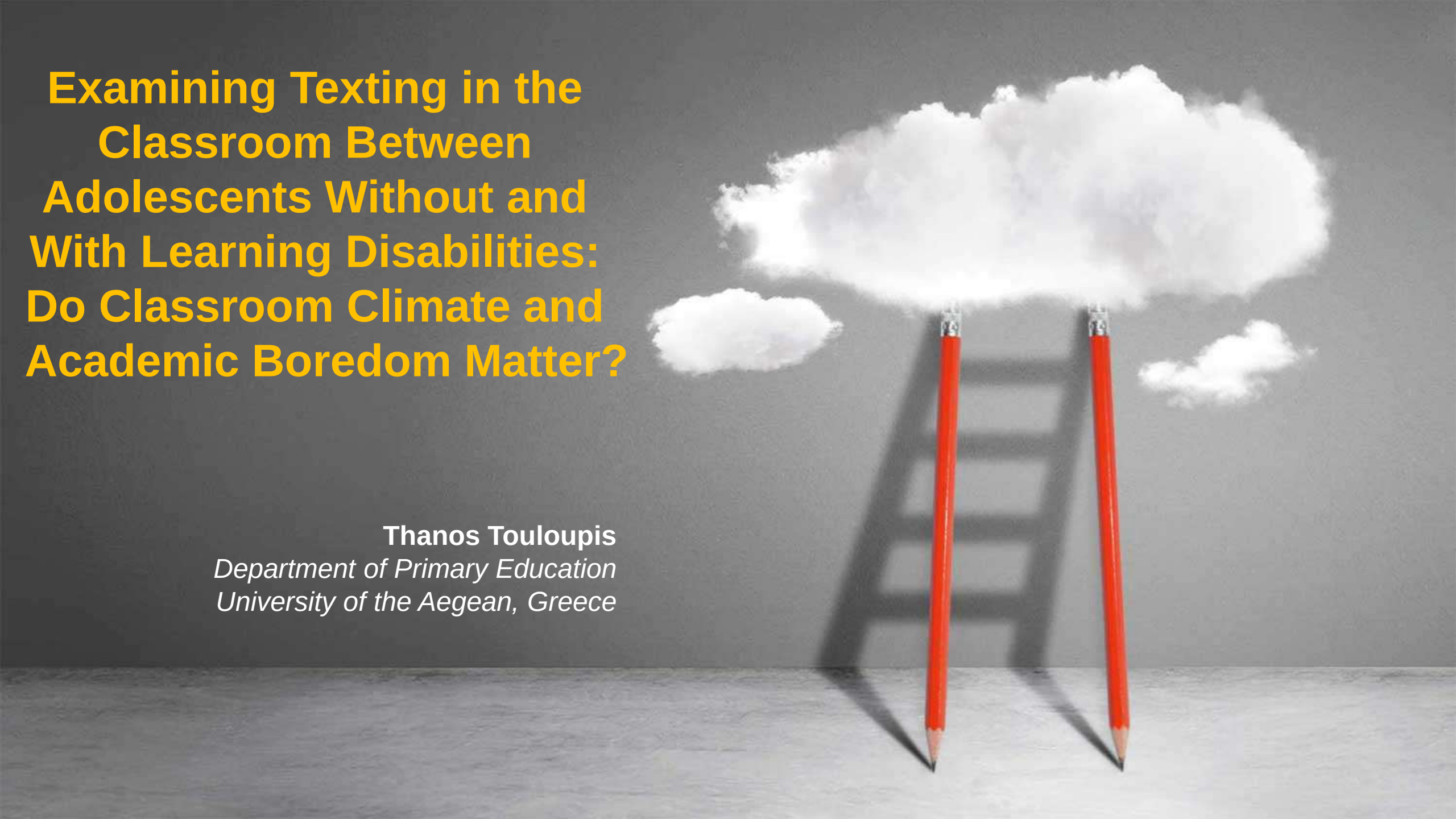
Examining Texting in the Classroom Between Adolescents Without and With Learning Disabilities: Do Classroom Climate and Academic Boredom Matter?



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1 Literature gaps



1

Adolescents' texting in the classroom: Significantly limited findings

2

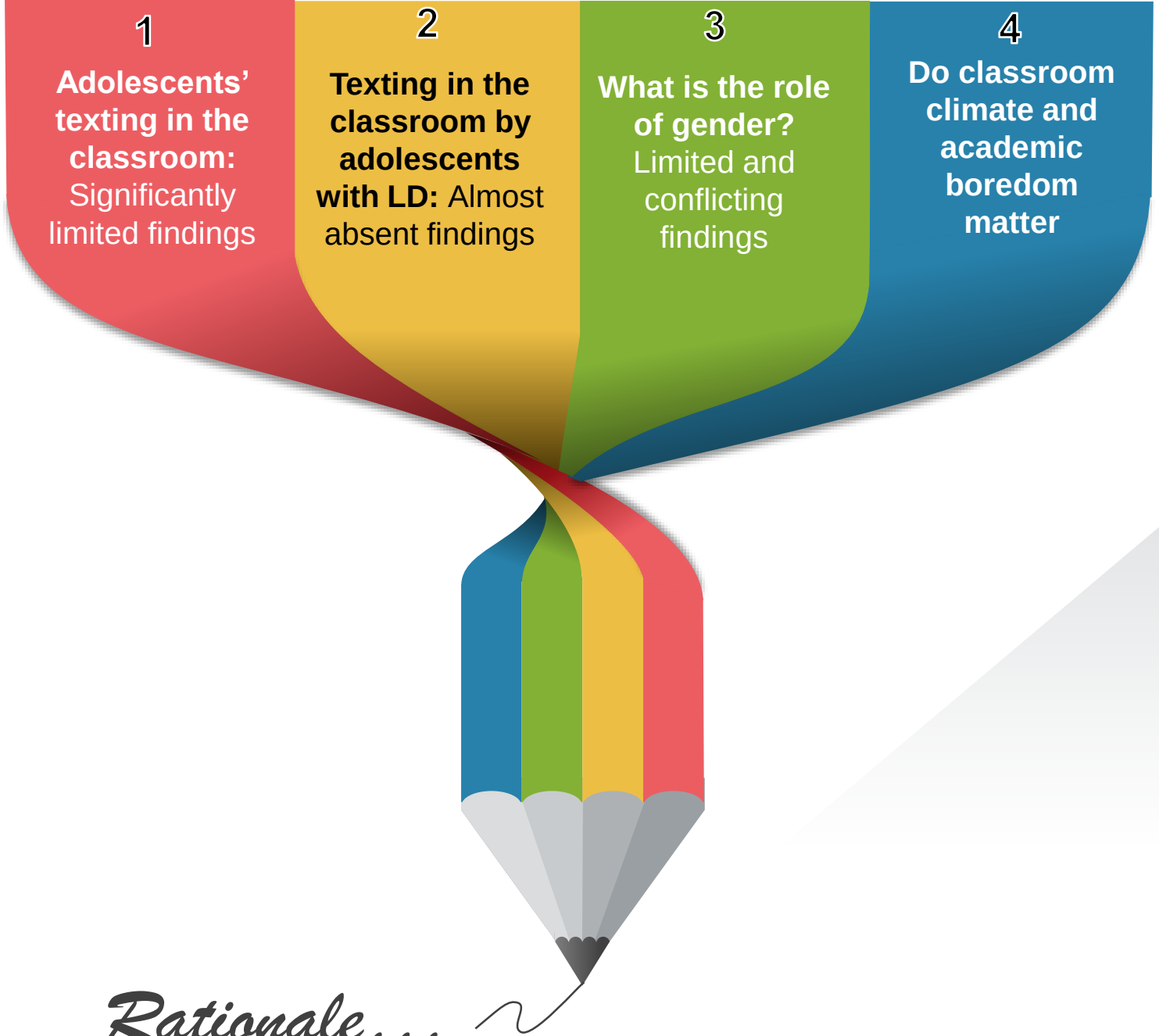
Texting in the classroom by adolescents with LD: Almost absent findings

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What is the role of gender? Limited and conflicting findings

4

Do classroom climate and academic boredom matter

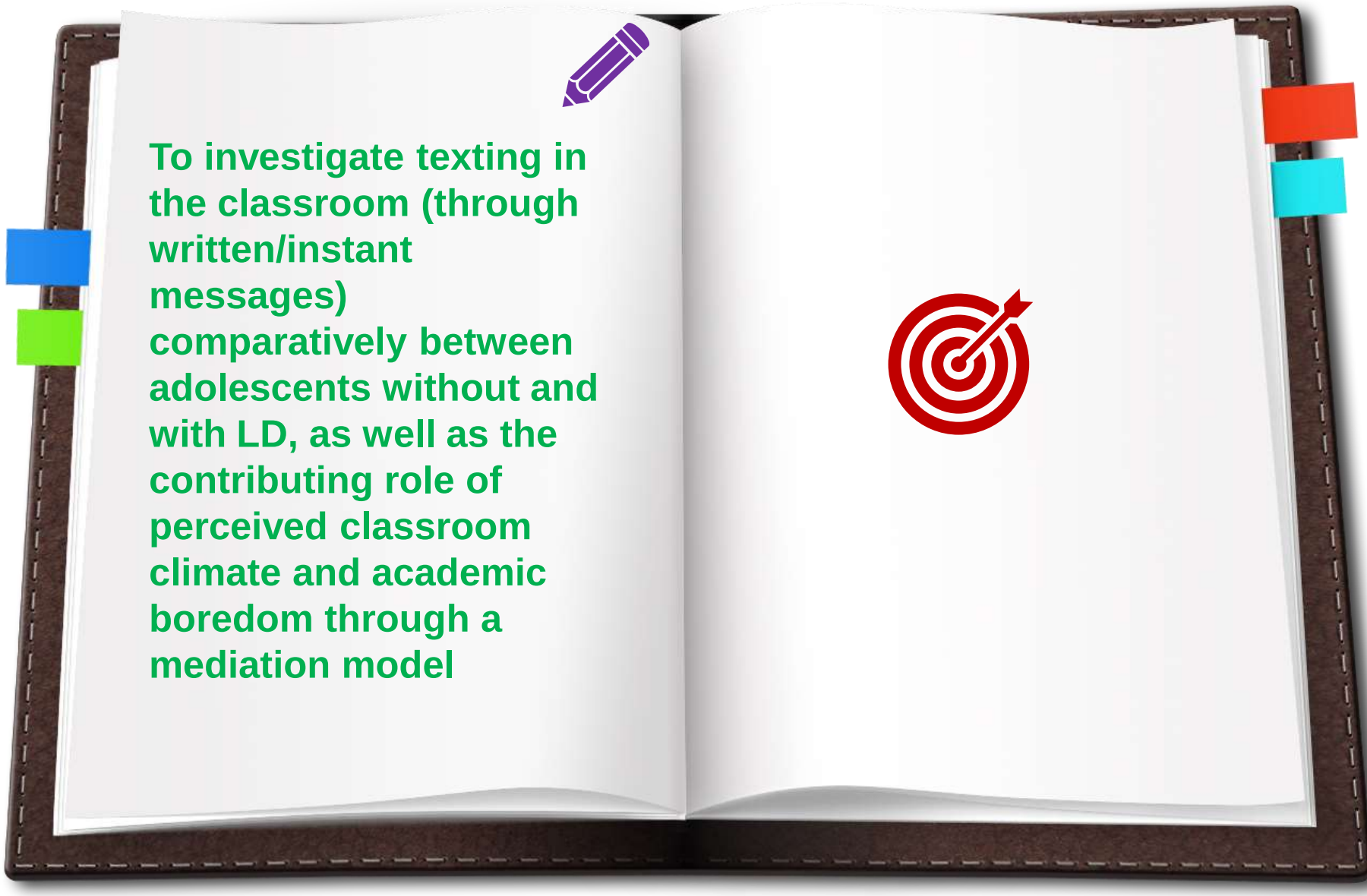


Rationale…



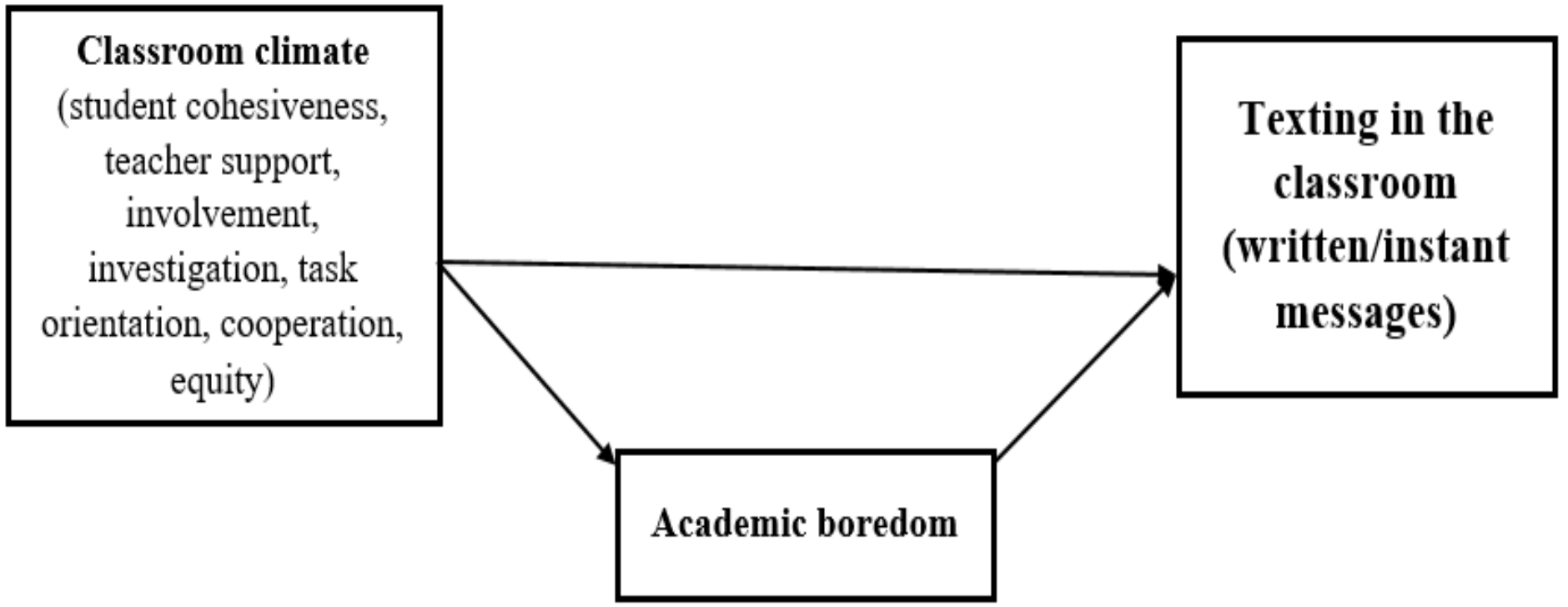
(Dietz & Henrich, 2014; Elpidorou, 2018; Liu, 2020; Lenhart, 2012; Lenhart et al., 2010; Selwyn & Aagaard, 2021; Thomas et al., 2009, 2013; Yang et al., 2023)

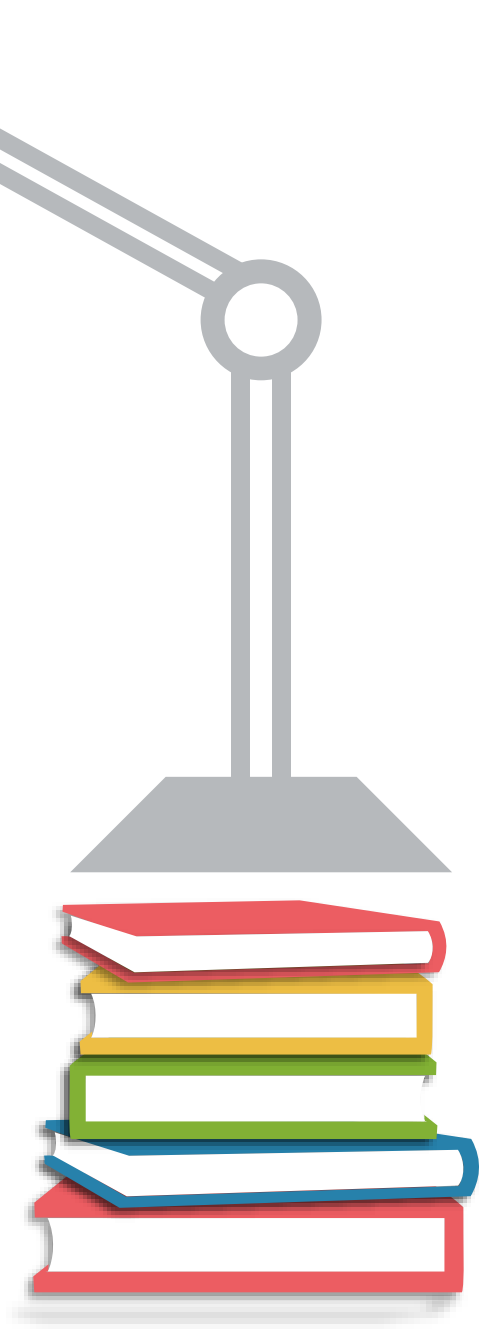
The present study



To investigate texting in the classroom (through written/instant messages) comparatively between adolescents without and with LD, as well as the contributing role of perceived classroom climate and academic boredom through a mediation model

Proposed Mediation Model





2 Method



Sample



- Total sample:

439 students without LD, 59% girls (M_{age} = 15.2, *SD* = .49)

408 students with LD, 47% girls (M_{age} = 14.7, *SD* = .49)

- *From 27 randomly selected Greek junior high schools of Mainstream Education*
- *All students processed their own mobile phone*
- Pilot sample

24 students without LD (54% girls)

24 students with LD (58% girls)

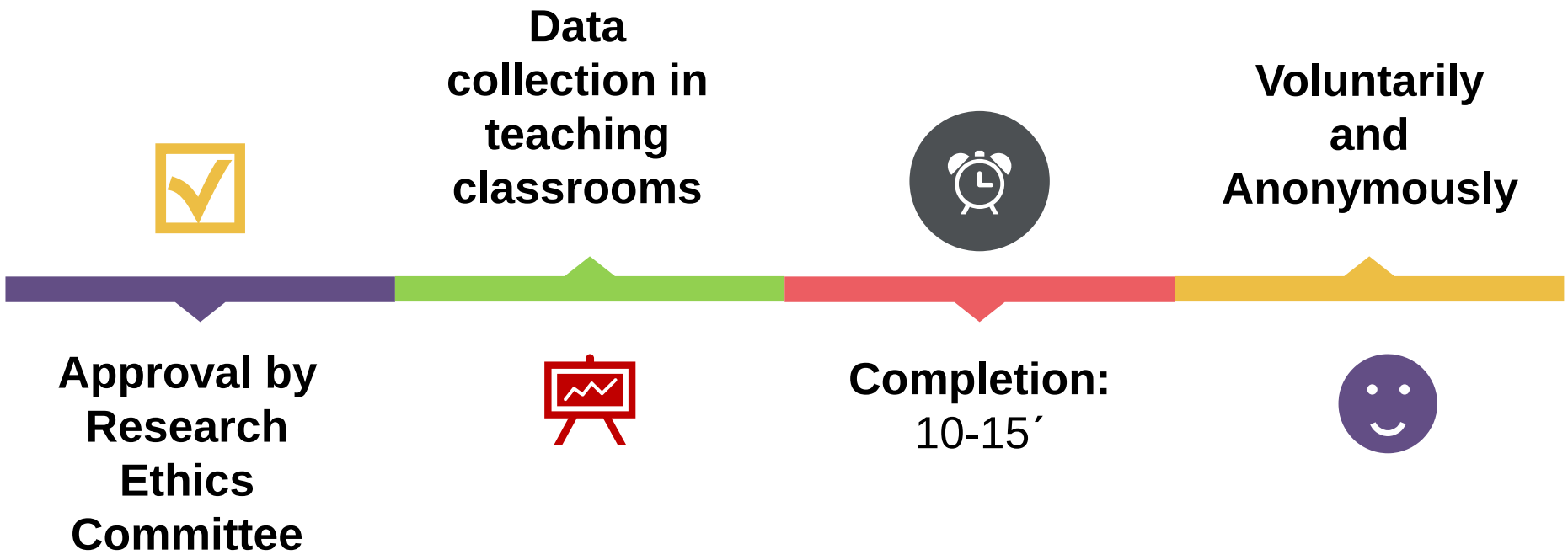
Questionnaire

3. **Boredom subscale from the Achievement Emotions Questionnaire** (Pekrun et al., 2011)

2. **What Is Happening In this Class** (Fraser et al., 1996)

1. **Texting in the classroom** (Hayashi and Nenstiel, 2021)

Procedure


Approval by Research Ethics Committee
Data collection in teaching classrooms
Completion: 10-15´
Voluntarily and Anonymously

3 Results



Texting in the Classroom Between Students Without and With LD

- **The absence/existence of LD affected significantly the extent of students' texting in the classroom**: Pillai's trace = .334, $F(4, 843) = 8.359$, $p = .000$, partial $\eta^2 = .47$
- Applying Bonferroni correction ($p < .025$), **the above effect proved significant only for texting in the classroom through instant (social media) messages**: $F(2, 845) = 5.487$, $p = .003$, partial $\eta^2 = .41$
- **Students with LD mentioned that they are involved in texting in the classroom through instant (social media) messages during the Modern Greek language course to a greater extent** (*Mean* = 4.29, *SD* = .58), **compared to their peers without LD** (*Mean* = 3.84, *SD* = .64).
- Regarding texting in the classroom through written messages (SMS), no statistical differences were found between students without and with LD: $F(2, 845) = 4.935$, $p = .063$

Gender-based Differences in the Extent of Texting in the Classroom

- **Gender was not a significant differentiating factor regarding the extent of texting through written/instant (social media) messages in the classroom during the Modern Greek language course, neither for students without LD**, Pillai's trace = .193, $F(4, 843) = 4.909$, $p = .069$, **nor for students with LD**, Pillai's trace = .208, $F(4, 843) = 3.871$, $p = .082$.
- *Consequently, students' gender was not included in the path models for the two student-subgroups.*



Correlations Among the Variables

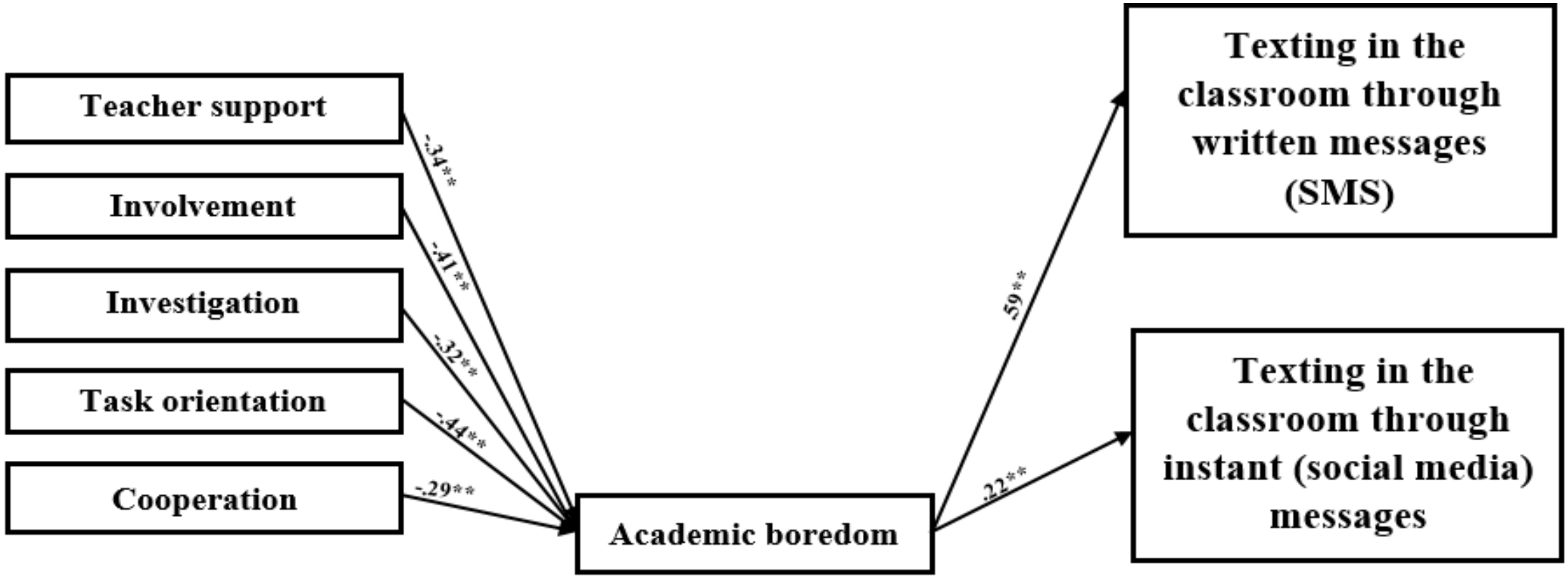
The correlation analyses were performed for the total sample as well as separately for student without LD and for students with LD. The results showed a similar pattern of correlations in each case.

- The seven dimensions of classroom climate **were correlated positively** with each other.
- The two factors of texting in the classroom scale (through written/instant messages) **were positively correlated** with each other.
- The seven dimensions of classroom climate **were negatively correlated** with academic boredom.
- The seven dimensions of classroom climate **were negatively correlated** with the two factors of texting in the classroom (through written/instant messages).
- There was a **positive correlation** between academic boredom and the two factors of texting in the classroom (through written/instant messages).



Schematic Representation of the Path Model for Texting in the Classroom Among Students without LD

$\chi^2(58, N = 439) = 3287.93, p > .05$ (CFI = .994, TLI = .941, RMSEA = .062, SRMR = .052)

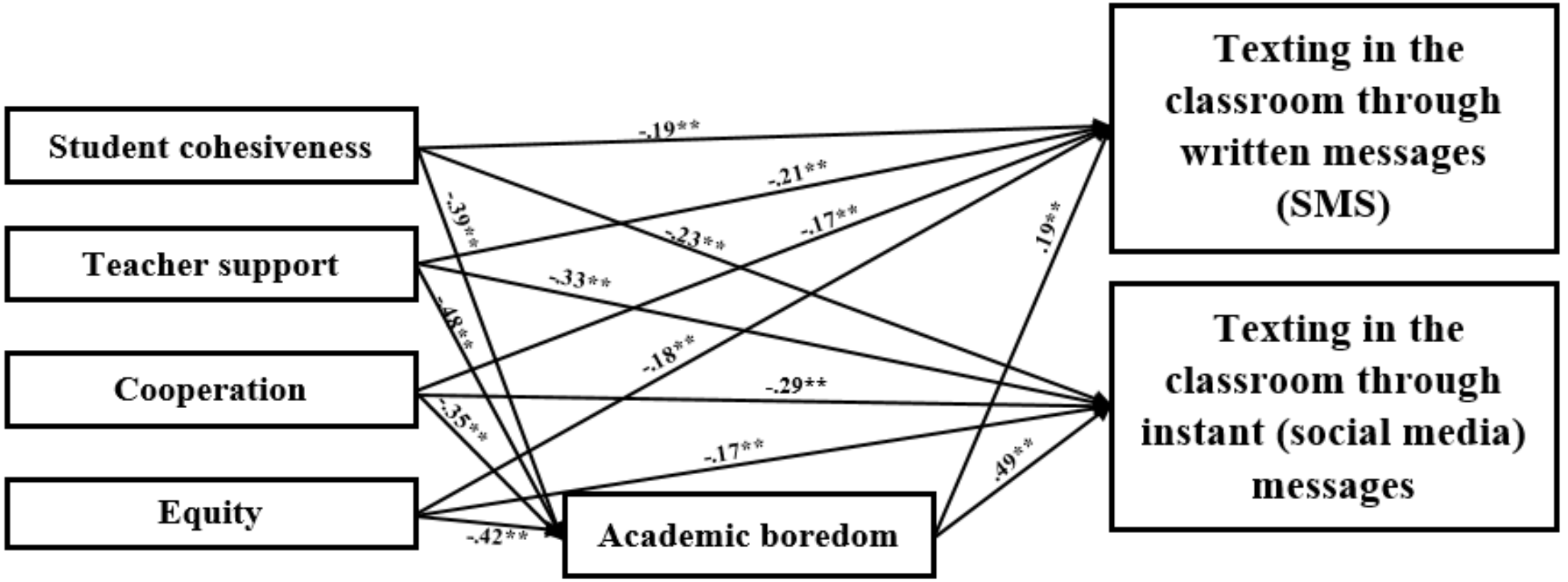


Note 1: The values on the arrows are standardized coefficients of the model. The following correlations were included in the model but not depicted in the Figure for clarity reasons:
Teacher support - Involvement = .60**, Teacher support - Investigation = .53**, Teacher support - Task orientation = .49**, Teacher support - Cooperation = .38**, Involvement - Investigation = .42**, Involvement - Task orientation = .51**, Involvement - Cooperation = .39**, Investigation - Task orientation = .35**, Investigation - Cooperation = .41**, Task orientation - Cooperation = .37**

Note 2: ** $p < .01$

Schematic Representation of the Path Model for Texting in the Classroom Among Students with LD

$\chi^2(62, N = 408) = 4049.58, p > .05$ (CFI = .997, TLI = .938, RMSEA = .063, SRMR = .054)



Note 1: The values on the arrows are standardized coefficients of the model. The following correlations were included in the model but not depicted in the Figure for clarity reasons:
Teacher support - Involvement = .54**, Teacher support - Investigation = .63**, Teacher support - Task orientation = .51**, Teacher support - Cooperation = .48**, Involvement - Investigation = .37**, Involvement - Task orientation = .41**, Involvement - Cooperation = .33**, Investigation - Task orientation = .39**, Investigation - Cooperation = .44**, Task orientation - Cooperation = .31**
Note 2: ** $p < .01$

4 Discussion

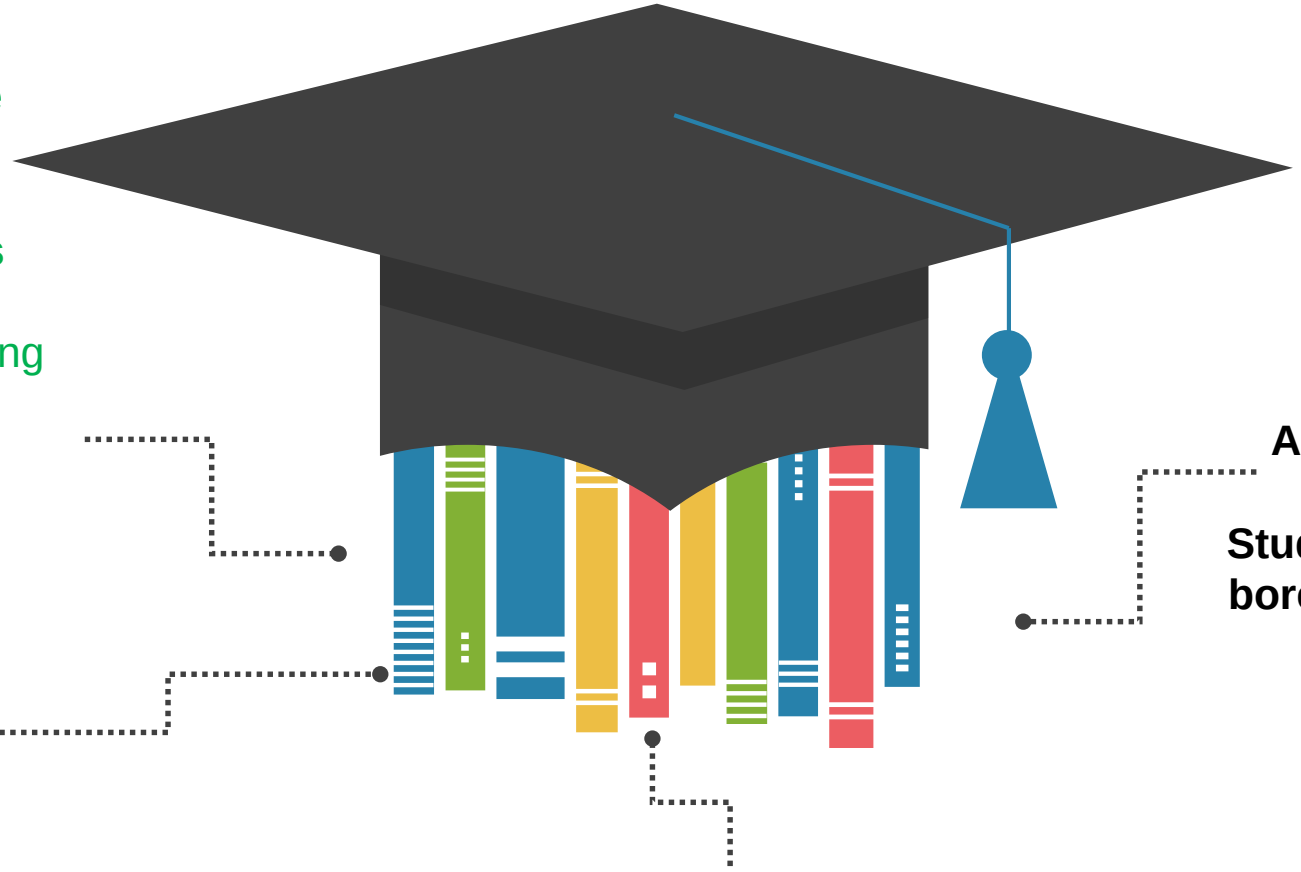




Conclusions

Students with LD texted in the classroom through instant (social media) messages to a greater extent than their peers without LD during the Modern Greek language course (labelling issues, familiar with online platforms?)

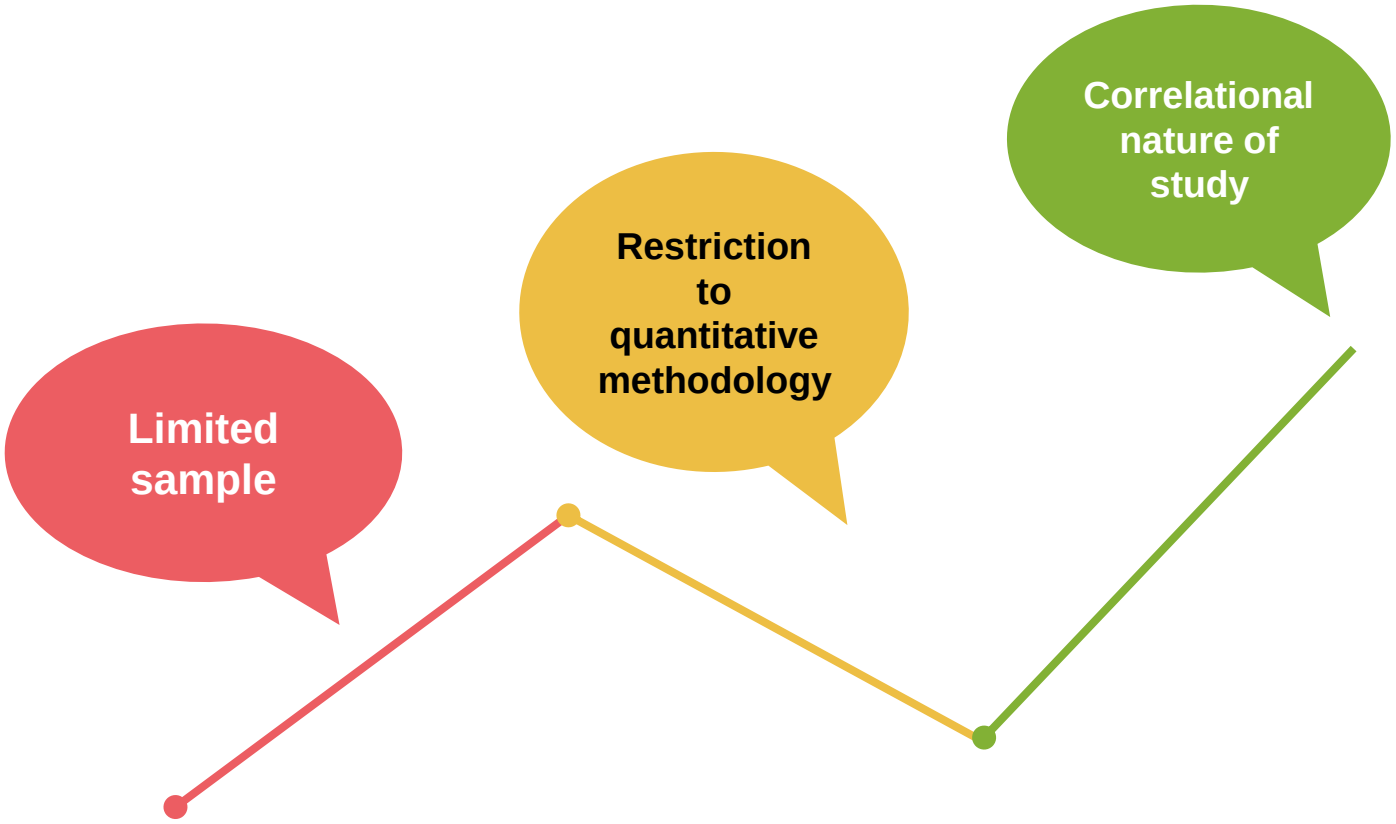
Both male and female students without and with LD seemed to engage in texting in the classroom via written (SMS) and instant (social media) messages (post-Covid period?)



Students without LD: Academic boredom ➔ full mediator
Students with LD: Academic boredom ➔ partial mediator

For both student subgroups their sense of academic boredom seemed to mediate the relationship between their perceived classroom climate and their texting in the classroom (underlying psychological mechanism?)

Limitations & Future Research Directions



- Larger (arithmetically, geographically) sample
- Semi-structured interviews
- Confirmation of the mediation model via longitudinal studies

Contribution

The study enriches the international literature as it investigates comparatively a distracting behavior in the classroom in a significantly under-investigated age period (adolescence) and student subgroup (students with LD).



The study informs the junior high school community and especially the teachers of specific specialties (e.g., language/literature teachers) about the differentiated patterns of interaction among underlying psychological factors that contribute to texting in the classroom by students without and with LD.

Within the context of the SCT (Bandura, 2002), the study offers a differentiated explanatory mediation model including known perceived context-related and individual contributors to explain texting in the classroom between students without and with LD better.

Thank you…

