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SUDUS

Production and Perception of Classroom Disturbances

Personal and Contextual Facets

EARLI Biennial Conference, Tampere, Finland

30th August 2017

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Classroom disturbances
Approach towards a theoretical framework

Allthough classroom disturbances can arise from different sources...

- students (e.g. disciplinary issues, aggression)
- teachers (e.g. unprepared instruction, unprofessional remarks)
- exterior sources (e.g. construcion noise)

(Wicki & Kappeler, 2007)

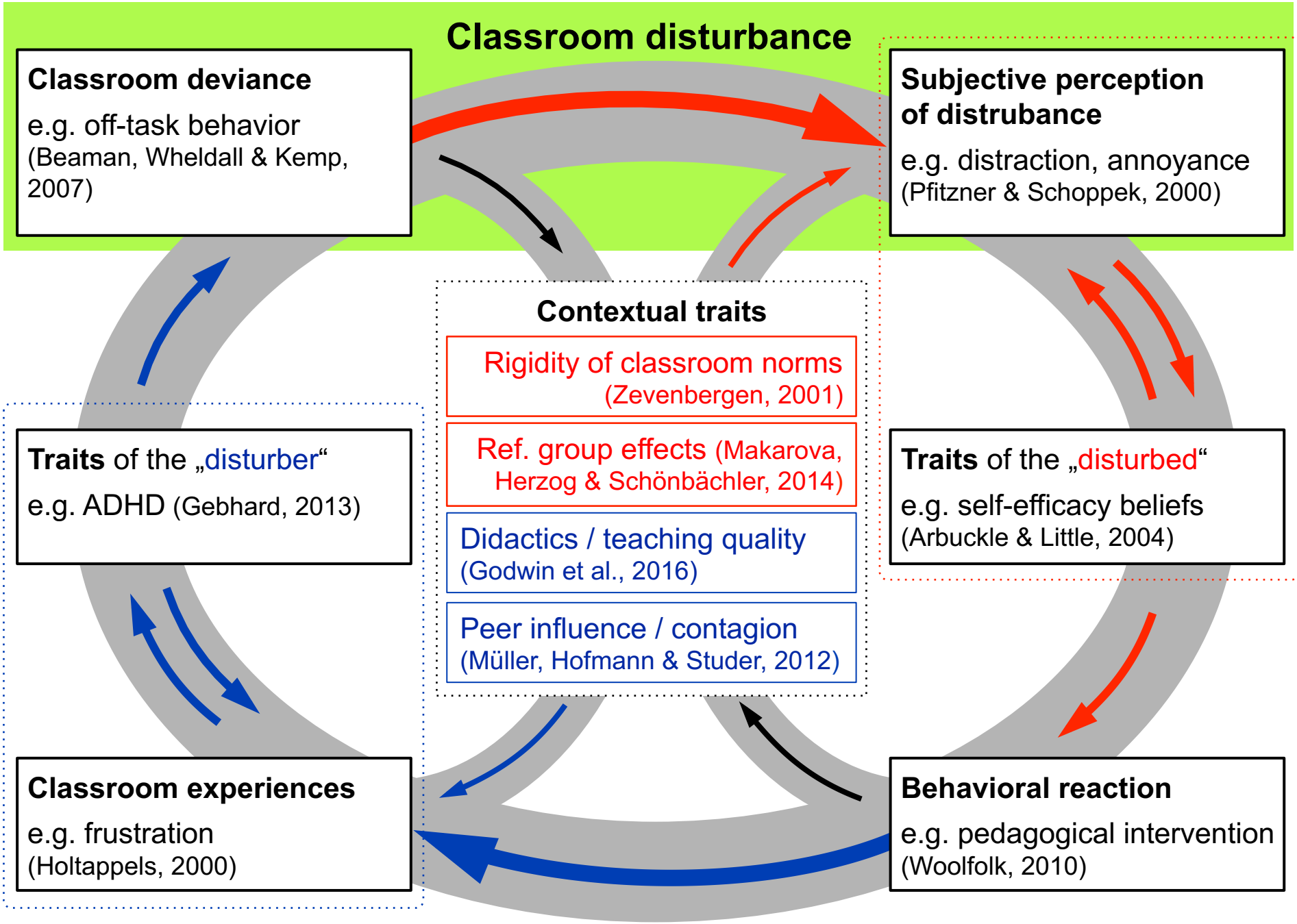
...student‘s behavior problems are commonly highlighted – e.g. as

- trouble to teachers and classmates (Infantino & Little, 2005)
- source of teacher burnout (Kokkinos, 2007)
- most challenging type of SEN with regard to inclusive schooling
  (de Boer, Pijl & Minnaert, 2011; Meijer, 2003; Reusser, Stebler, Mandel & Eckstein, 2013)

However, various teachers or students do NOT consider the same behaviors as equally problematic or disturbing
(Pfitzner & Schoppek, 2000; Arbuckle & Little, 2004)

Therefore, we study classroom disturbances according to an **interactionist theoretical framework**

(Eckstein, Grob & Reusser, 2016; after Nickel, 1985; Stein & Stein, 2014; Wettstein, 2012)


Classroom disturbance
Classroom deviance
e.g. off-task behavior
(Beaman, Wheldall & Kemp, 2007)
Subjective perception of distrubance
e.g. distraction, annoyance
(Pfitzner & Schoppek, 2000)
Contextual traits
Rigidity of classroom norms
(Zevenbergen, 2001)
Ref. group effects (Makarova, Herzog & Schönbächler, 2014)
Didactics / teaching quality
(Godwin et al., 2016)
Peer influence / contagion
(Müller, Hofmann & Studer, 2012)
Traits of the „disturber“
e.g. ADHD (Gebhard, 2013)
Traits of the „disturbed“
e.g. self-efficacy beliefs
(Arbuckle & Little, 2004)
Classroom experiences
e.g. frustration
(Holtappels, 2000)
Behavioral reaction
e.g. pedagogical intervention
(Woolfolk, 2010)

Research desiderata
Behavior problems vs. problematic behavior assessment

Subjective perception of different raters may lead to

→ **diverging ratings for the same behavior**
(Korsch & Petermann, 2012; Wettstein, Ramseier, Scherzinger & Gasser, 2016)

→ Violation of validity

→ Ethical problems regarding the (inaccurate?) labeling of „problem students“

➔ **Solution approach 1: develop robust assessment techniques**
e.g. low-inferent operationalization to minimize bias by interpretation

➔ **Solution approach 2: research on confounding conditions**
e.g. assessment of and controlling for personal and contextual influences

The SUGUS project

German: **S**tudie zur **U**ntersuchung **g**estörten **U**nterrichts

English: Study to investigate classroom disturbances

www.ife.uzh.ch/SUGUS

Project supervisor:	Prof. Dr. Kurt Reusser
Quantitative study:	lic. phil. Boris Eckstein
Qualitative study:	Dr. K. Vasarik Staub, MSc A. Hofstetter, MA C. Marusic-Wuerscher
Duration:	September 2014 – August 2018

Main research questions

1. Which students show what forms and degrees of deviance under which classroom conditions?
2. Who perceives deviance under which classroom conditions as how disturbing?
3. What kind of teaching-related courses of action could be taken according to the teachers?

The quantitative SUGUS study

- Questionnaire survey in May & June 2016 in 10 different Swiss cantons
- Two time points of data collection (t2 one week after t1)
- 85 classes of primary school, 5th grade
  including 8 classes with mixed grades: 4th/5th or 5th/6th
  - 85 regular teachers
  - 1‘677 students (mean age: 11.7 years)
    - 1‘407 participating actively
    - 270 not participating actively
- Each participant got a personalized questionnaire
  (because they had to describe students of their class by name; anonymity guaranteed)
- Teacher-questionnaire ≈ long version of the student-questionnaire
  (slight linguistic adjustments)

Instruments: Frequency of classroom deviance

Teacher-rating, self-rating, 4 peer-ratings (low inference, t1)

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strip
to ripp off

„How often did this child those things during the preceding last two weeks?“

Donald Trump

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18 items, e.g.

- Made noise in class
- Answered insolently to the teacher
- Insulted an other child
- Beat an other child

Response format: hybrid

0 = never; 1 = one time ... 5 = five times; more often, namely:_____

Further development of the pretest-version: Eckstein, Grob and Reusser (2016)

Referring to: Casale, Hennemann, Huber & Grosche, 2015; Christ, Riley-Tillman & Chafouleas, 2009; Hartke & Vrban, 2008; Müller, Begert, Gmünder & Huber, 2012; Wettstein, 2008

Donald Trump

strip to ripp off

Instruments: Subjective perception of disturbance

Teacher-rating, self-rating, 4 peer-ratings (high inference, t2)

Rater-target-paires t2 = t1

„What were your recent experiences with those children?“

9 items, e.g.

...was always nice to me (r)

...annoyed me

...distracted me in class

...disturbed my concentration

4 response categories

0 = „completely disagree“ ... 3 = „completely agree “

Positively worded items preventing stigmatisation were reversed (r) subsequently

Further development of the pretest-version: Eckstein, Grob and Reusser (2016)

Data analysis

Basic analyses for the purpose of teacher feedback (SPSS 24)

- Descriptive analyses: distribution issues
- Correlation analyses: relationship between theoretical constructs
- ANOVA, t-tests: differences between raters

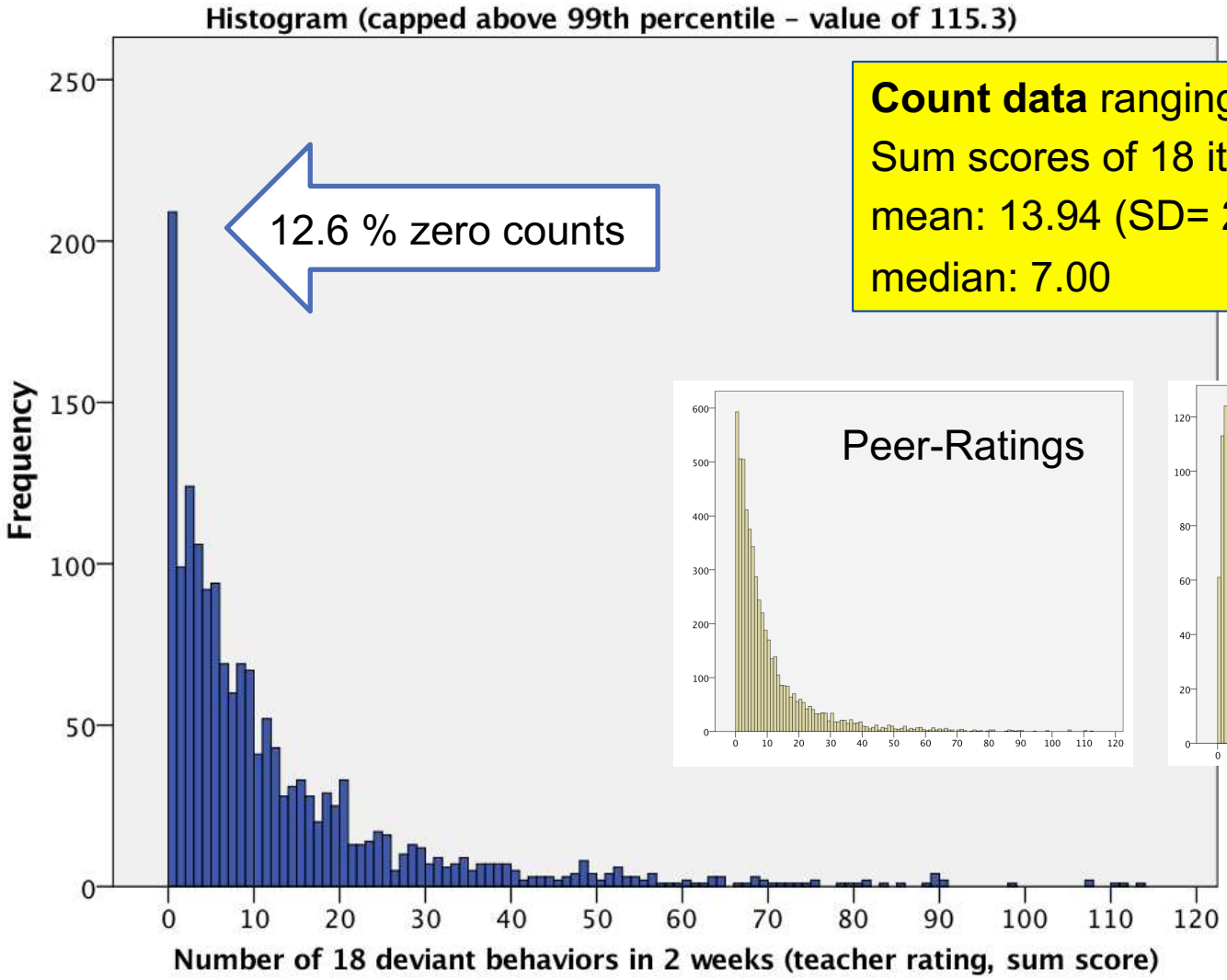
(Eckstein, Luger, Reusser & Grob, 2016; Eckstein, in press)

Structural equation modeling (Mplus Version 8)

- Rater specific confirmatory factor analyses (CFA)
- Multilevel multitrait-multimethod (MTMM) analyses: CT-C(M-1)
  (Eid et al., 2003; Carretero-Dios et al., 2009)
- Modeling influences (work in progress)

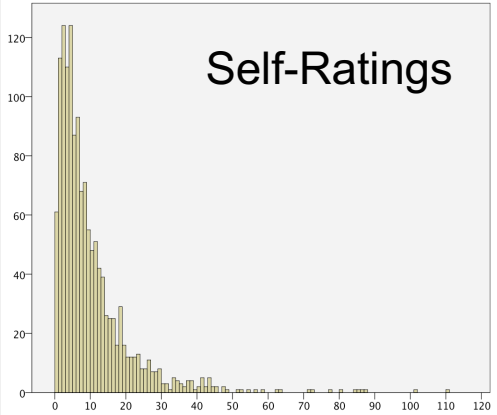
Results

Classroom deviance – exemplary descriptives
Teacher ratings of n = 1‘660 target students

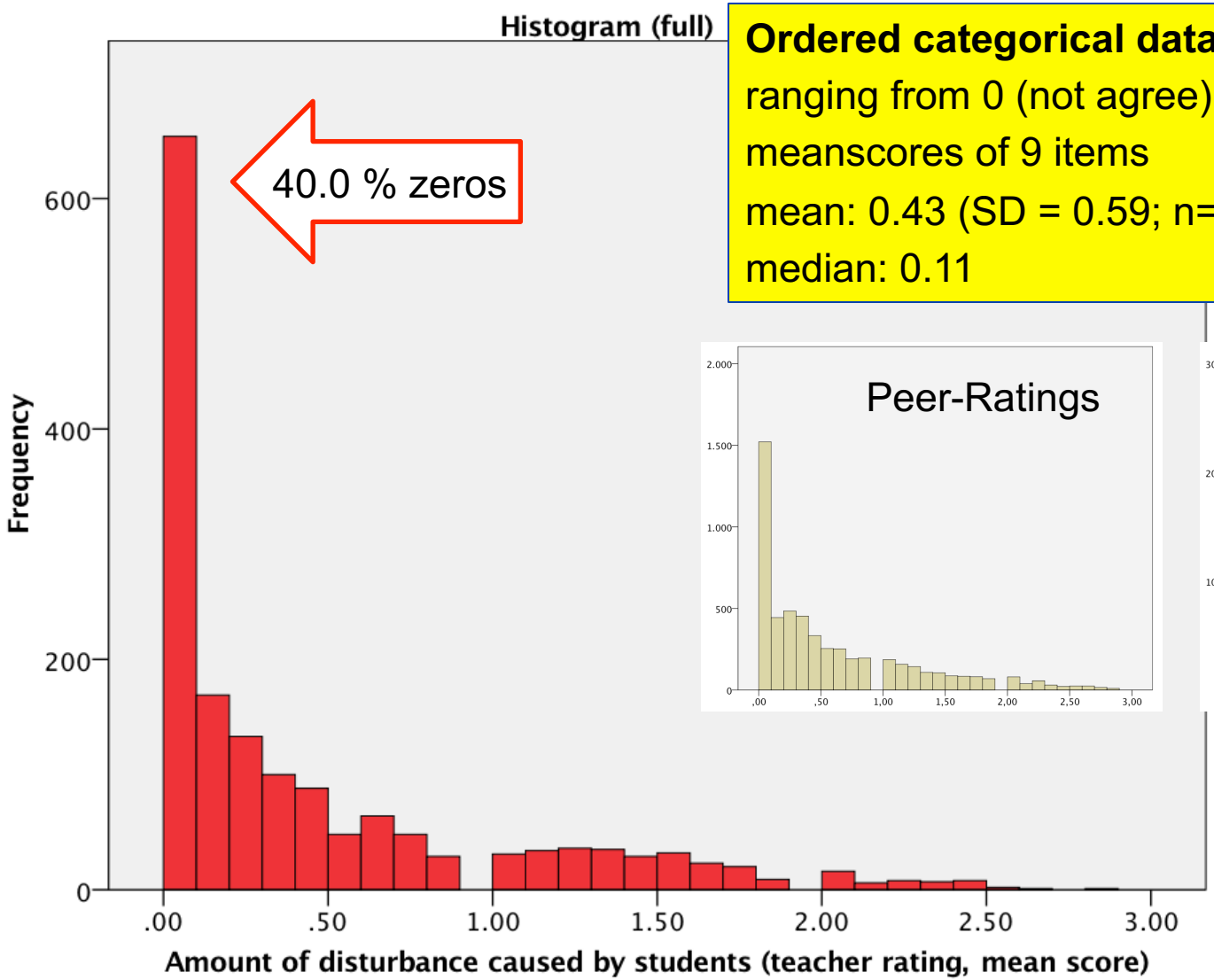


12.6 % zero counts

Count data ranging from 0 to 60 per item
Sum scores of 18 items
mean: 13.94 (SD= 22.42; n=1‘660)
median: 7.00



Perception of disturbance – exemplary descriptives
Teacher ratings of 1‘633 students



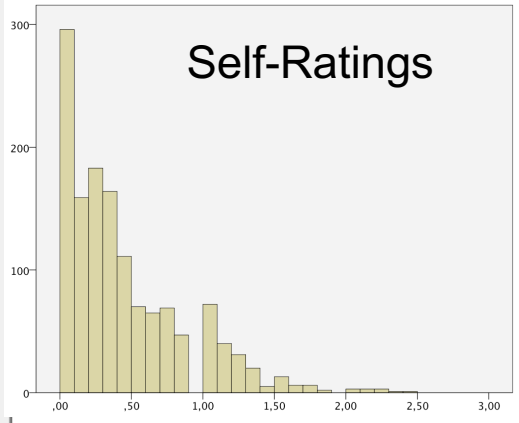
Ordered categorical data

ranging from 0 (not agree) to 3 (completely agree)

meanscores of 9 items

mean: 0.43 (SD = 0.59; n=1‘633)

median: 0.11



Interim Conclusion:
Classroom disturbances seem to be exceptional

Encouraging with regard to pedagogical praxis!

Challenging with regard to data analysis due to non-normal distribution

Solution approaches:

1) Different type of theoretical distribution, e.g. negative binomial
   - Extensive computational effort
   - Standardized parameters not available

2) Estimator with robust standard errors

   → MLR
   (Muthén & Muthén, 1998-2017)

3) Reduction of model complexity to simplify estimation

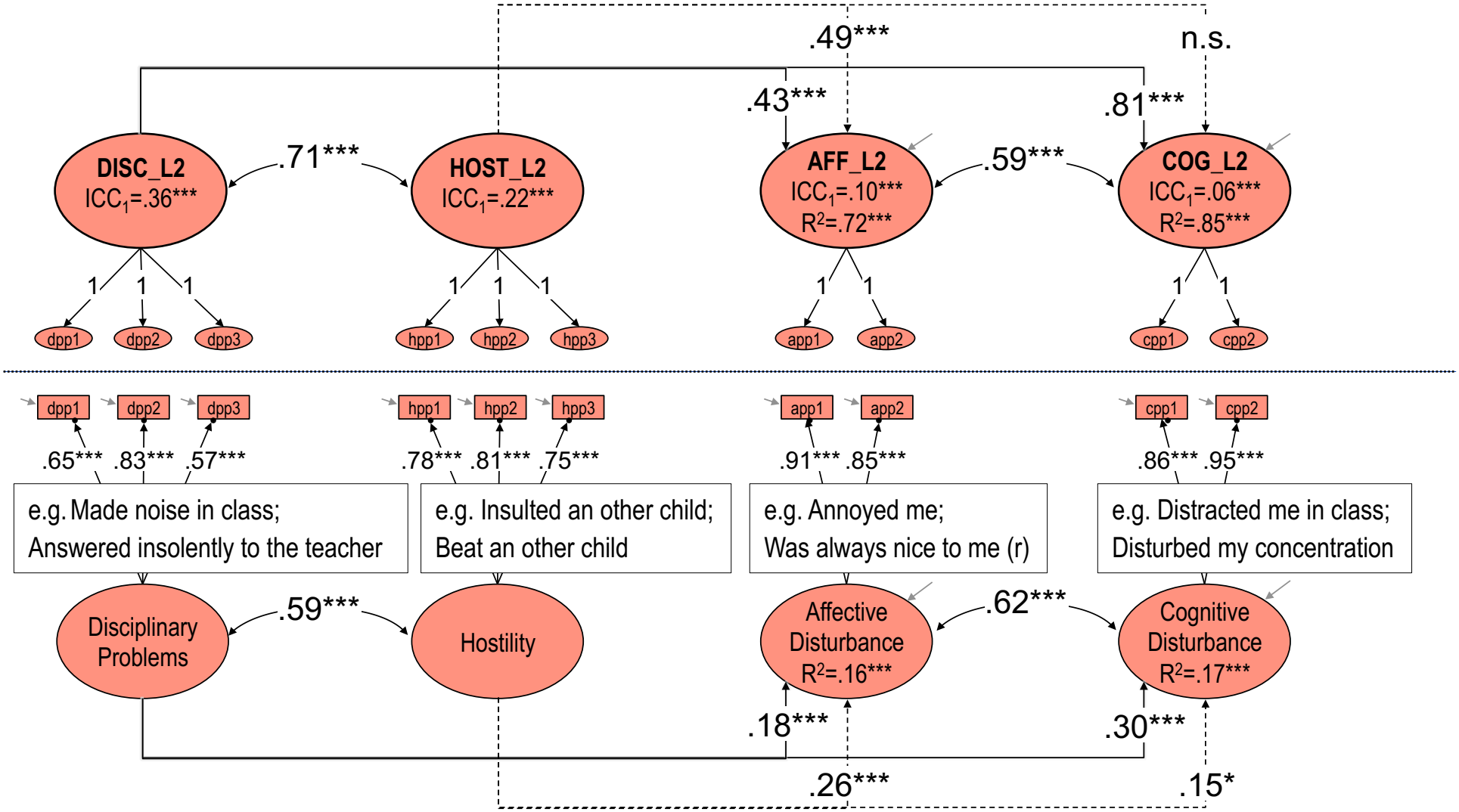
   → Parceling
   (Hau & Marsh, 2004)

Two Level Regression Model with Random Intercepts (peer ratings)

Chi^2 [MLR]= 240.82, df=74, p<.001; RMSEA=.020; CFI=.952; SRMR$_{L1}$=.037, SRMR$_{L2}$=.071

All figures in the presentation show standardized parameters with asterisks for the p-value: *** for p<.001; ** for p<.01; * for p<.05

Level 2: 1‘407 target students (3.94 peer raters are, on average, nested in single target students)

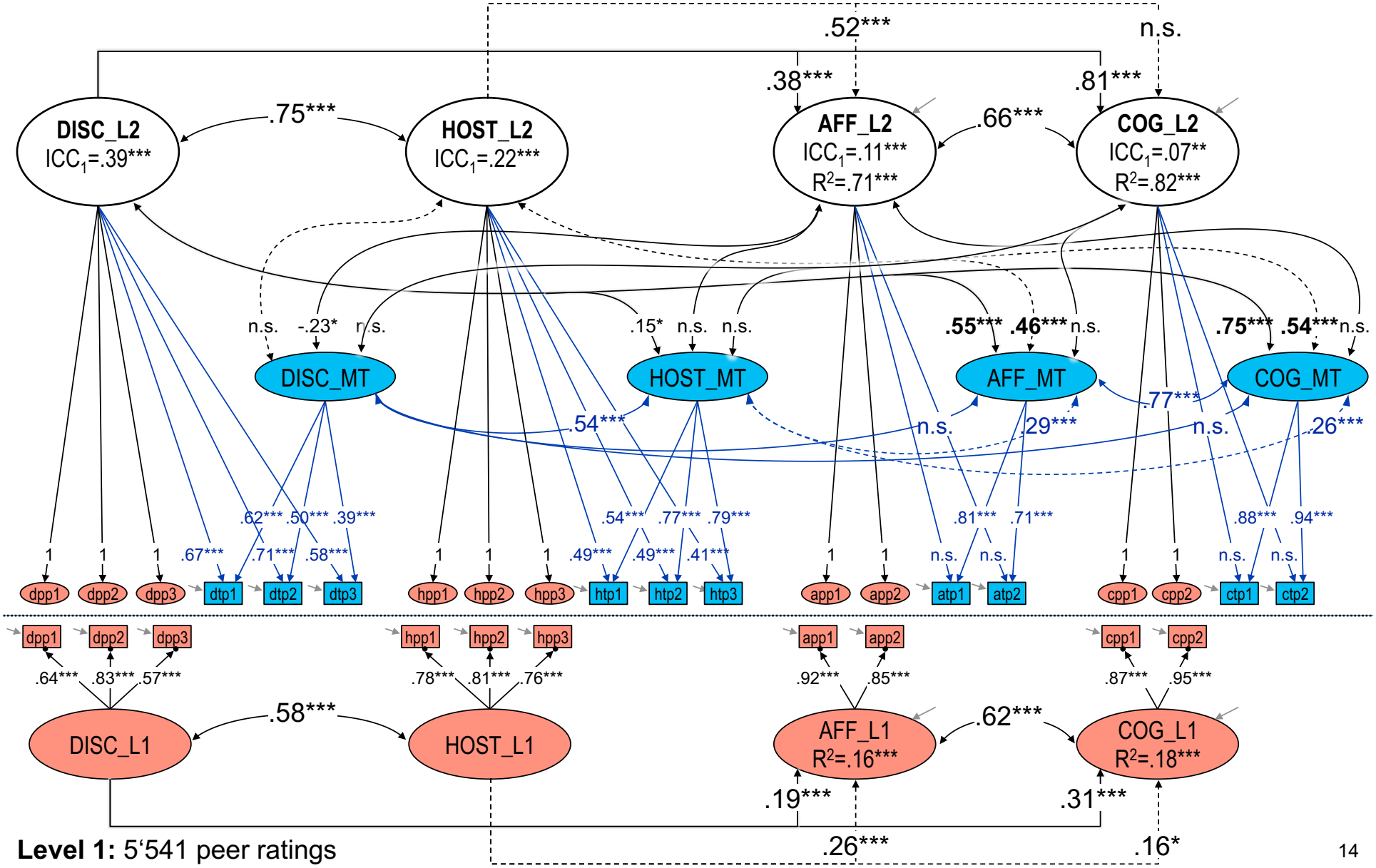


Level 1: 5‘541 peer ratings (each student rated, on average, 3.94 target students)

Two Level CT-C(M-1) Model with Random Intercepts (peer- and teacher-ratings)

Chi^2 [MLR]= 562.55, df=181, p<.001; RMSEA=.019; CFI=.956; $SRMR_{L1}$=.038, $SRMR_{L2}$=.052

Level 2: 1‘677 target students (rated by 3.47 peers, on average (nested), and by their **teacher** (non-nested))



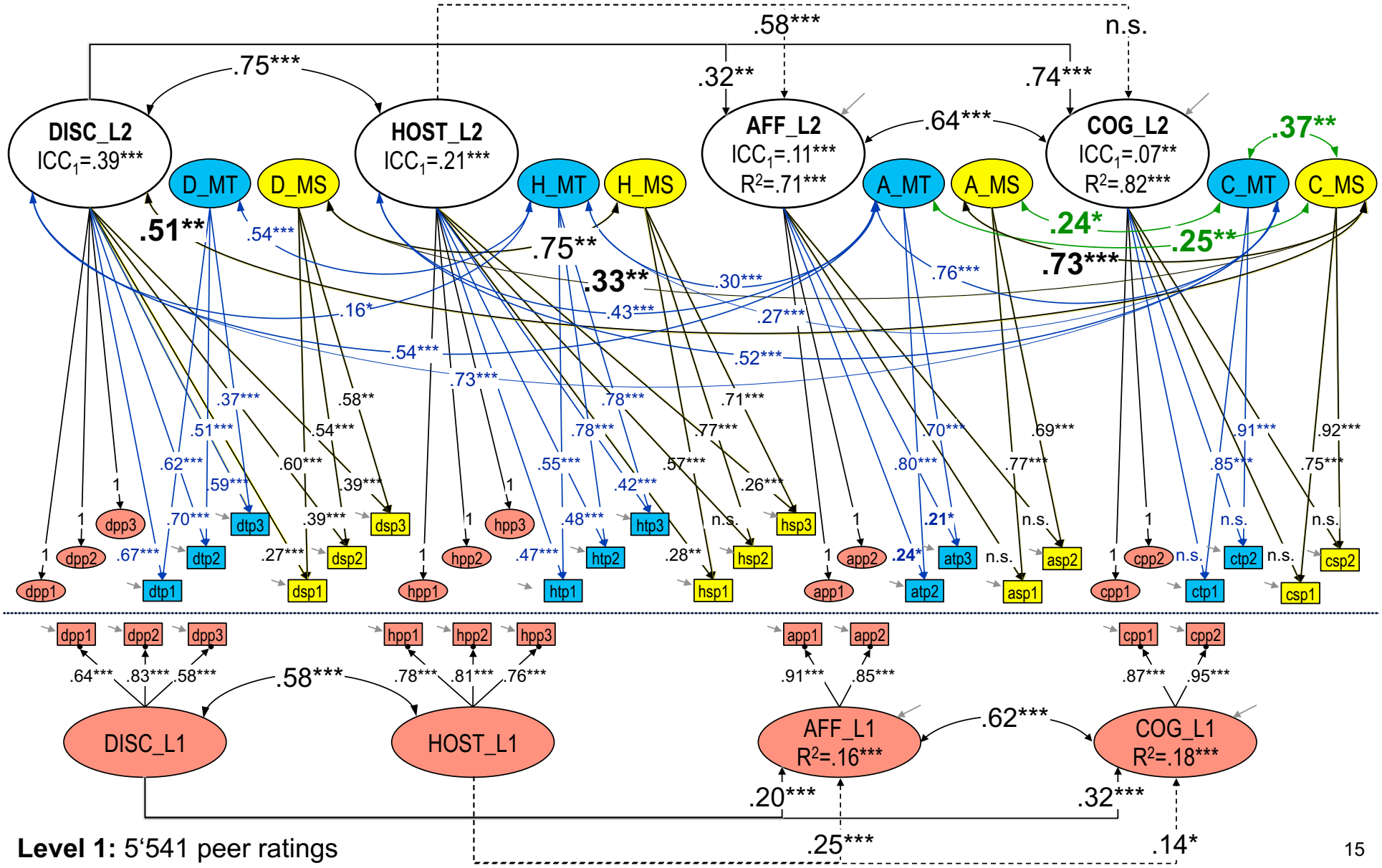
Level 1: 5‘541 peer ratings

Two Level CT-C(M-1) Model with Random Intercepts (peer-, teacher- and self-ratings)

Chi^2 [MLR]= 1355.41, df=378, p<.001; RMSEA=.021; CFI=.931; $SRMR_{L1}$=.037, $SRMR_{L2}$=.044

Non significant correlations are not depicted (all factors are allowed to correlate exept method-factors with corresponding trait)

Level 2: 1‘677 target students (rated by 3.47 peers, on average, by their teacher, and by **themselves**)



Level 1: 5‘541 peer ratings

Discussion

Conclusion: Classroom disturbances are not objective matters of fact!

- With regard to the (low-inferent) assessment of *deviant behaviors*, the reports from the three rater groups (teacher, peers, self) converge only to some extent – although the raters witnessed the same events
- With regard to the assessment of the *perception of disturbance*, the ratings diverge even systematically (which was expected)

The next step will be to examine what kind of *pedagogical measures* can reduce the frequency of deviant behaviors (production of disturbance) – and what kind of traits influence the subjective perception of disturbance

Limitations

- pseudo-longitudinal data (only 1 week between t1 and t2; retrospective assessment of past events)

Prospects

- Triangulation of the quantitative and the qualitative SUGUS-study
- Threelevel model (cf. slide 17)

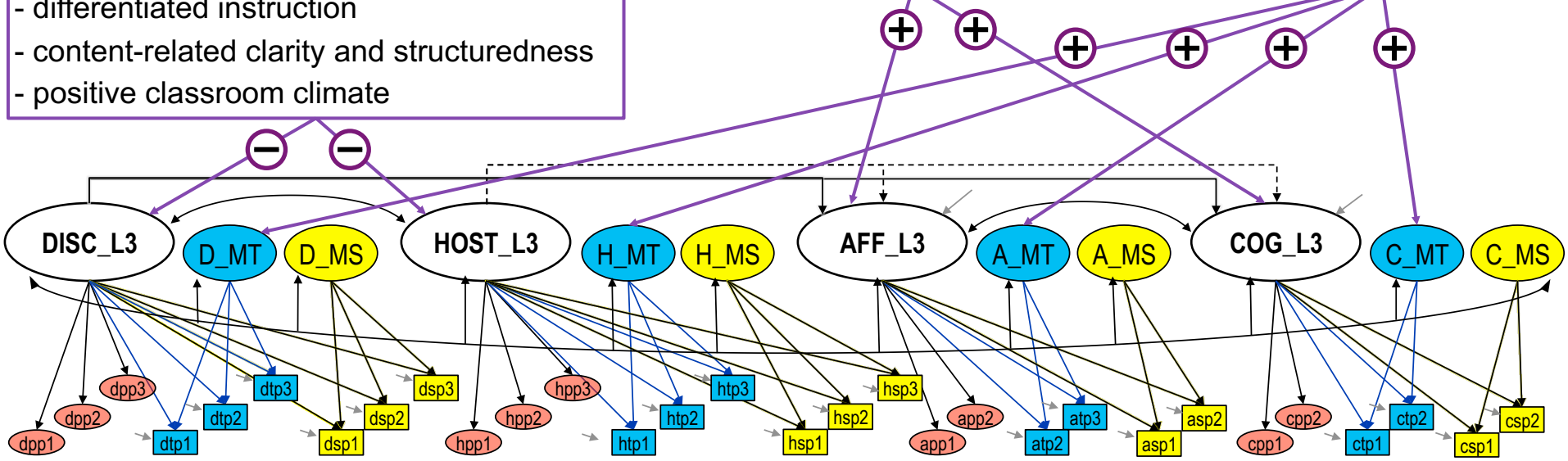
Analysis Strategy: Three level CT-C(M-1) model with classroom and teacher effects

Level 3: classes / teachers

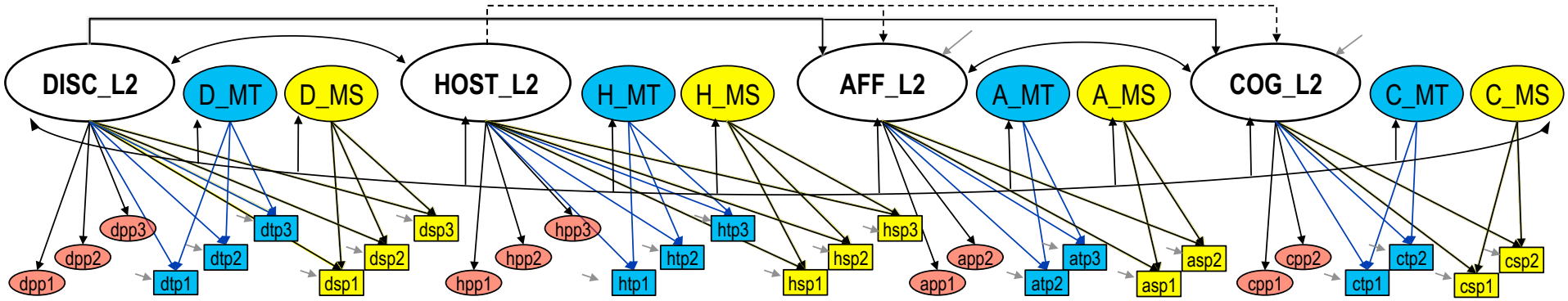
„Good teaching“
- differentiated instruction
- content-related clarity and structuredness
- positive classroom climate

High amount of **direct instruction**

Teachers sensitivity



Level 2: targets (aggregated peer ratings; single teacher- and self-ratings)



Level 1: peer ratings

Thank you for your attention!

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www.ife.uzh.ch/SUGUS

and on our profiles on www.researchgate.net

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