

SELF-EFFICACY OF PRE-SERVICE MATHS/SCIENCE TEACHERS WITH RESPECT TO CHALLENGES IN LINGUISTICALLY DIVERSE CLASSROOMS

ILSE STANGEN

HF2 : LINGUISTIC-CULTURAL HETEROGENEITY

CONTEXT

- more and more students with German as a second language (GSL/DaZ).
- more and more students with deficits in the area of (academic) language skills.
- (subject) teachers do not feel properly prepared for the challenges in linguistically diverse classrooms.
- self-efficacy plays a crucial role for work performance and learning outcomes (Tschannen-Moran & Woolfolk Hoy, 2001).

AIMS OF THE STUDY

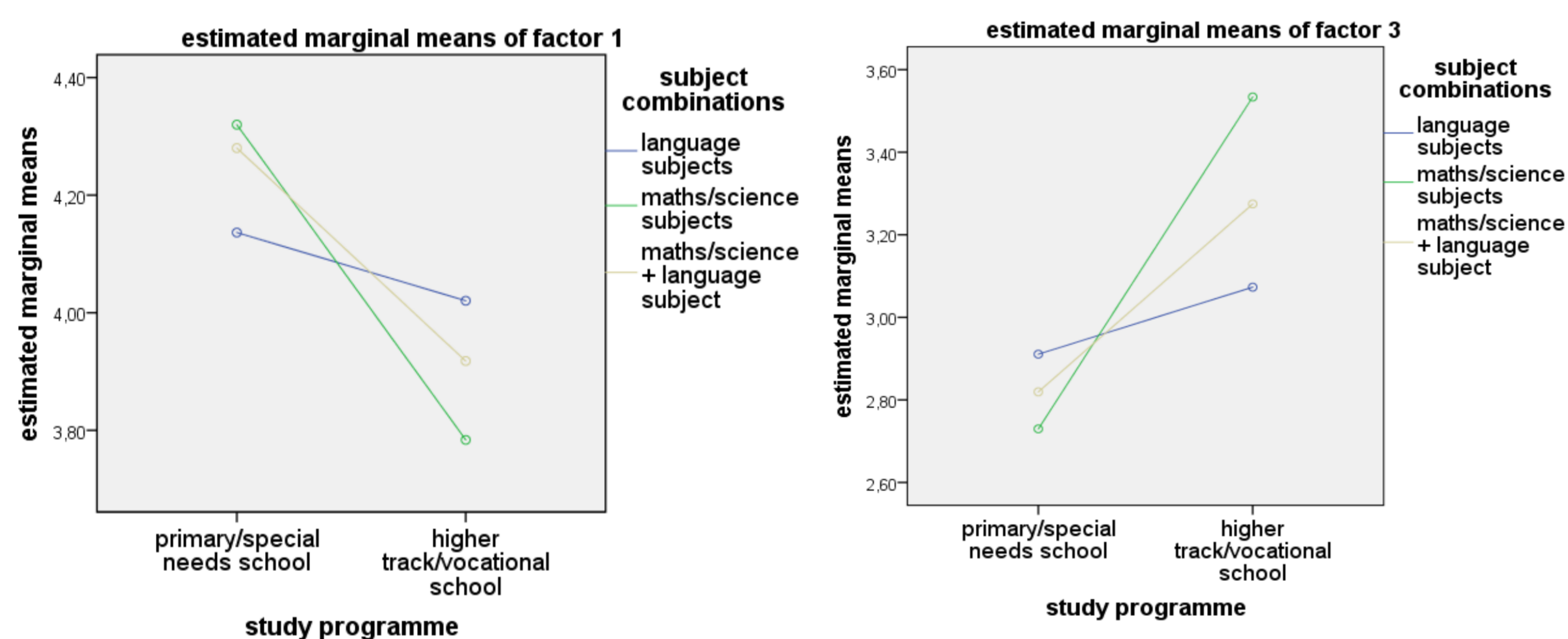
- explore factors which can reflect aspects of self-efficacy with respect to challenges in linguistically diverse classrooms.
- explore how pre-service science teachers feel about teaching GSL-students in their mainstream classroom.
- explore if having an (additional) language subject or study programme has an influence on self-efficacy.
- examine other factors influencing self-efficacy.

I. FACTORS

item	1 lesson planning and teaching methods	2 diagnostic performance	3 attribution of responsibility to home environment	4 influence on class intern relationships
1	0,758			
2	0,752			
3	0,742			
4	0,719			
5	0,615			
6	0,609			
7	0,547			
8		0,799		
9		0,740		
10		0,735		
11	0,343			
12	0,421			
13		0,540		
14		0,435		
15	0,456	-0,355	0,832	
16			0,818	
17			0,625	
			0,594	0,519
				-0,415
				0,771

only loadings above .3 are reported
Rotation: Promax with Kaiser-Normalisierung
factors correlate minimally with $r = .05$ and maximally with $r = .53$

II. SELF EFFICACY



III. INFLUENCE OF LANGUAGE SUBJECT/STUDY PROGRAMME

- we found **no** significant influence of an (additional) language subject **alone**
- BUT :**
- all pre-service teachers for primary/special needs schools felt **more** confident in the factor of lesson planning and teaching method (1) and were **less** convinced that the home environment plays a crucial role in language learning (3), with **no significant** differences between the subjects.
- all pre-service teachers for higher track/vocational schools felt **less** confident in factor 1 and were **more** convinced about the role of home environment in factor 3, with math/science teachers having the lowest sense of self-efficacy.

IV. OTHER INFLUENCES

- **no** influence of other background data such as sex, age or stage of study.

FIRST EXPLANATIONS: the curriculum evens out subject specific differences, with primary/special school teachers of all subjects learning **more** about didactics and language, whereas higher track/vocational schools teachers learn **less** about didactics and language and **more** about subject specific contents in the curriculum at the University of Hamburg.

WHAT'S NEXT: online study with active teachers and a pre-post testing in a seminar about multilingualism in subject teaching in the winter term 2017/18.

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„Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.“
(Bandura, 1994:71)

DESIGN/METHOD

ITEM DEVELOPMENT

- translate English items into German (Fraser 2014)
- adapt German items on heterogeneity in general (Kopp 2009)
- take existing German items (Schulte 2008)
- construct own items (in cooperation with Jörg Doll)
- pilot with 35 participants and 49 items in February 2017
- first factor analyses in March 2017
- reduce item number for main testing

EXAMPLE (ENGLISH TRANSLATION)

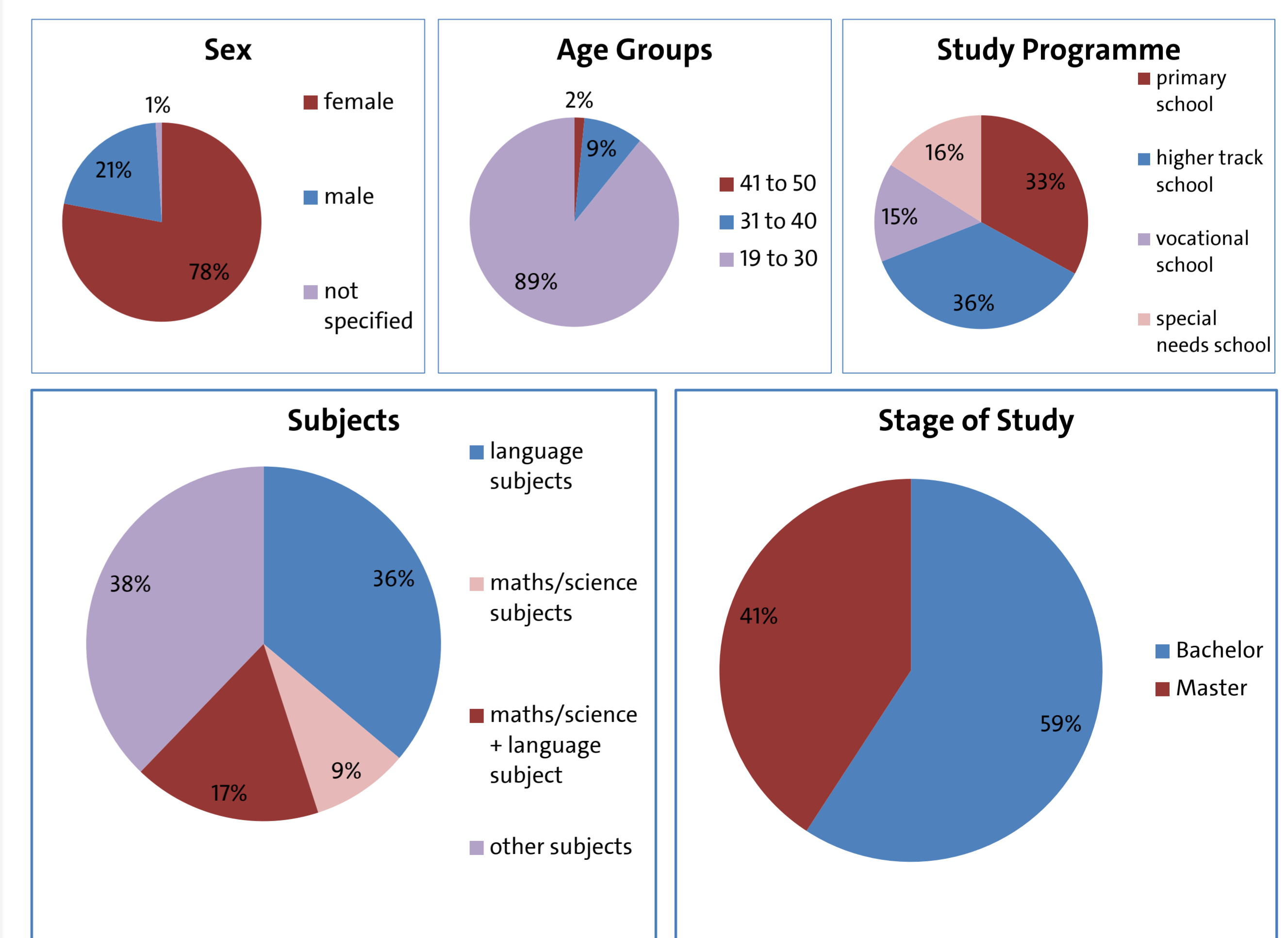
How convinced are you, that you are able to detect the language based learning conditions of every child, even in very heterogeneous classes?

not at all convinced	very little convinced	little convinced	partly convinced	quite convinced	totally convinced
1	2	3	4	5	6

TESTING WITH PRE-SERVICE TEACHERS IN JULY '17 (ONLINE)

participants n= 833
items n= 17

BACKGROUND DATA



ANALYSES