

## Codebook of Dataset

**Dataset for:** Thomm, E., Gold, B., Betsch, T. & Bauer, J. (2021). When preservice teachers' prior beliefs contradict evidence from educational research. In: British Journal of Educational Psychology.

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### Duration, demographics, consent

Label	Description	Scale
index	participant number	
duration	time to complete survey (in seconds)	
gender	gender	0 = male 1 = female
age	age	
study_program	study program	1= teacher education bachelor 2 = teacher education master 3 = teacher education states examination 4 = Other master program 5 = Other 6 = Other bachelor program
semester	semester engaged in	
consent_T1	informed consent T1 (at beginning of experiment)	1 = yes 0 = no
consent_T2	informed consent T2 (after having finished the experiment)	1 = yes 0 = no

### Prior belief in effectiveness of grade retention (GR)

Label	Description	Scale
evidence	evidence condition	0 = pro GR effectiveness 1 = con GR effectiveness
GR_T1	Repeating a grade helps struggling students to compensate for their achievement deficits. [prior belief on GR effectiveness, T1]	1 = do not agree at all 2 3 4 5 6 7 8 9 = very much agree
GR_T1_c	Mean centered GR_T1	
GR_T2	Repeating a grade helps struggling students to compensate for their achievement deficits. [belief on GR effectiveness]	1 = do not agree at all 2 3 4 5 6 7 8 9 = very much agree

**Assessments of scientific potency for topic (grade retention, GR) related & unrelated topics**

Label	Description	Scale
<b>(Doubt over) scientific potency to study grade retention (GR)</b>		
SP_GR	The question whether grade retention helps struggling students to compensate their deficits in achievement is one that cannot be answered using scientific methods. [doubt over scientific potency to study GR effectiveness]	1 = do not agree at all 2 3 4 5 6 7 8 9 = very much agree
SP_GR_lg	log transformed doubt on scientific potency to examine GR effectiveness	
<b>Scientific potency to study related educational topics</b>		
How far can scientific methods answer the question whether...		
SP_RT1	...an active form of learning (e.g., problem-based learning) is more effective for learning than teacher-centred teaching?	1 = not at all 2 3 4 5 6 7 8 9 = very well
SP_RT2	...computer-based learning supports knowledge acquisition in pupils?	
SP_RT3	...class size influences the learning results of pupils?	
SP_RT4	...girls get better marks than boys do, although they have an equal proficiency level?	
SP_RT5	...parental support influences the performance of pupils?	
SP_RT6	...results in assessments of student achievements (e.g., PISA, TIMSS) can predict future success in training and careers?	
SP_ED	scientific potency to research related educational topics (mean of SP_RT1, SP_RT2, SP_RT3, SP_RT4, SP_RT5)	
SP_ED_rv	reverse score transformed scientific potency to research related educational topics (with log & anew reflection)	

(Table continues on the next page.)

Label	Description	Scale
<b>Scientific potency to study unrelated (medical &amp; pseudo-scientific) topics</b>		
How far can scientific methods answer the question whether...		
SP_UT1	...clairvoyance is possible?	1 = not at all 2 3 4 5 6 7 8 9 = very well
SP_UT2	...personality can be predicted by astrology?	
SP_UT3	...herbal medication improves physical and mental health?	
SP_UT4	...taking vitamin D compounds prevents illnesses?	
SP_UT5	...energy drinks containing caffeine should be used to improve performance in sports?	
SP_UT6	...cell phone radiation can cause cancer?	
SP_PS	scientific potency to research unrelated pseudo-scientific topics (mean of SP_UT1 & SP_UT2)	
SP_PS_lg	log transformed scientific potency to research unrelated pseudo-scientific topics	
SP_ME	scientific potency to research unrelated medical topics (mean of SP_UT3, SP_UT4, SP_UT5 & SP_UT6)	

#### Assessments of source preferences & source choice

Label	Description	Scale
<b>Source preferences (rating)</b>		
I would use the following information sources:		
SR1	opinion of a teacher with many years of working experience	1 = do not agree at all 2 3 4 5 6 7 8 9 = very much agree
SR2	opinion of a former school student who repeated a grade	
SR3	results of scientific research on various aspects regarding the topic (e.g., whether pupils having repeated a grade leave school more often without graduating)	
SR4	estimate of an education researcher who has done research on the topic	
SR5	position of the teacher's association as the representative of their interest group	
SR6	position of an opponent of grade retention	
SR7	position of a proponent of grade retention	
SR8	combined preference score for opponent & proponent sources (mean of SR6 & SR7)	

(Table continues on the next page.)

Label	Description	Scale
SR_SC	source preference for scientific sources (mean of SR3 & SR4)	
SR_SC_rv	reverse score transformed source preference of scientific sources (with log & anew reflection)	
SR_NSC	source preference for non-scientific sources (mean of SR1, SR2 & SR8)	
<b>Source choice (single choice)</b>		
SC	source choice	1 = Opinion of a teacher with many years of working experience 2 = opinion of a former school student who repeated a grade 3 = results of scientific research on various aspects regarding the topic 4 = estimate of an education researcher who has done research on the topic 5 = position of the teachers' association as the representative of their interest group 6 = position of an opponent of grade retention 7 = position of an proponent of grade retention
SC_re	choice of non-scientific vs. scientific source [recoded source choice]	0 = non-scientific source (SR1, SR2, SR5, SR6, SR7) 1 = scientific source (SR3, SR4)