

Difficulty of sample tasks and the threat of instruction texts: Effects on test anxiety and performance

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Poster presented at the 15th DPPD 2019

INTRO

- Test anxiety is a strain on those affected and can prevent them from achieving their full potential¹
- Situational test anxiety can be influenced by test instructions, e.g. evaluative test instructions²
- Evaluative instructions can also reduce test performance³
- A possible influence of sample tasks has been neglected so far

AIM

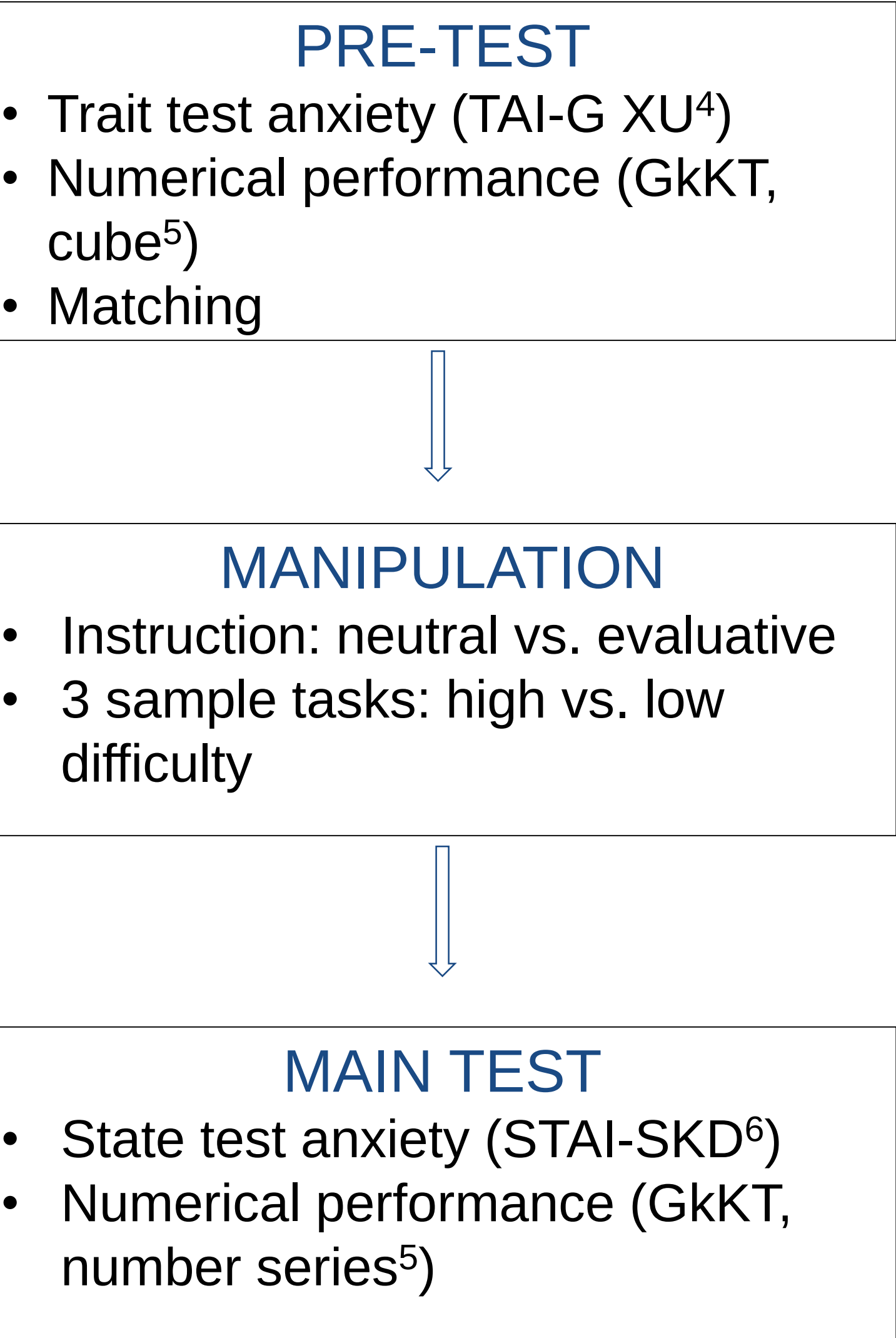
Find out if evaluative instructions and sample tasks with an empirically higher difficulty raise test anxiety and have a disadvantageous effect on performance

METHODS

PARTICIPANTS

N=132 (29% pupils, 69% students, 2% others), 80% female
Age: 14-34 years ($M=20.19$)

DESIGN AND MEASURES



RESULTS

DISTRIBUTION

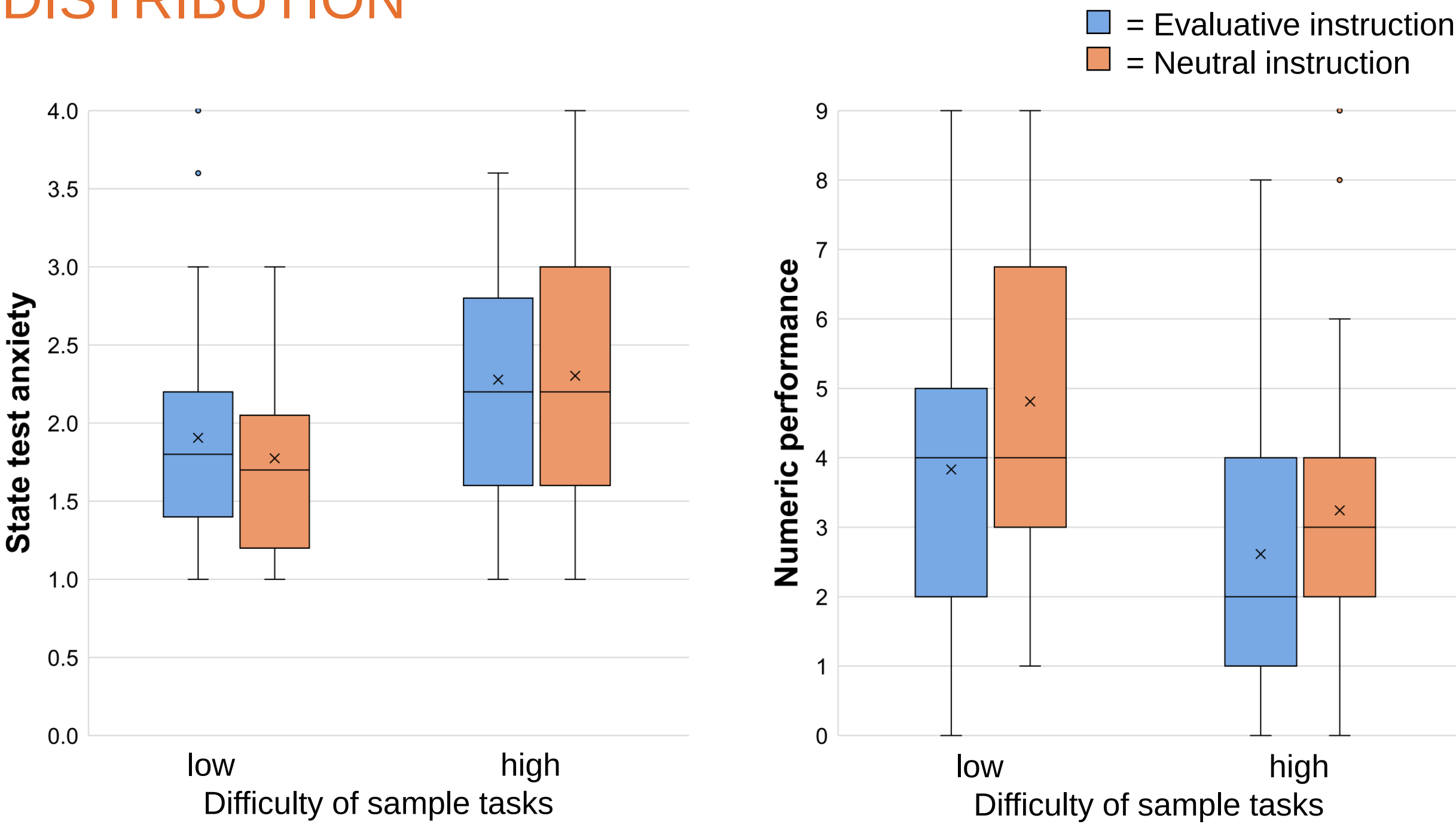


Figure 1. Distributions of the mean test anxiety (left) and the mean numerical performance (right) of the four trial conditions. The means of every conditions is shown by the crosses.

2-WAY ANOVA

Test anxiety:

- Main effect only significant for the factor “sample tasks” (Sample tasks: $F(1,128)=11.336, p=.001$)
- (Instruction: $F(1,128)=0.154, p=.695$)
- (Interaction: $F(1,128)=0.341, p=.560$)

Performance:

- Main effect significant for the factor “sample tasks”
- Main effect significant for the factor “instruction” (Sample tasks: $F(1,128)=11.756, p=.001$)
- (Instruction: $F(1,128)=3.907, p=.050$)
- (Interaction: $F(1,128)=0.185, p=.668$)

→ Difficulty of sample tasks influences test anxiety while evaluative instructions do not

→ Difficulty of sample tasks and evaluative instructions influence performance

DISCUSSION

LIMITATIONS

- Test situation realistic? (low stake situation)
- Test experience not controlled

FUTURE RESEARCH

- Only the difficulty of the sample tasks increases test anxiety, evaluative instruction does not
→ contradictory to previous research about the influence of test instructions
- Is the influence of sample tasks on test anxiety stronger than the influence of test instructions?

MORE RESULTS:

Table 1. Sample characteristics

	Evaluative instruction	Neutral instruction
Sample	N=36	N=32
tasks with	31% pupils, 67% students	28% pupils, 72% students
low	78% female	81% female
difficulty	Age: $M=19.97$ ($SD=4.51$)	Age: $M=20.19$ ($SD=3.71$)
	Pre-test:	Pre-test:
	TA: $M=2.16$ ($SD=0.50$)	TA: $M=2.15$ ($SD=0.53$)
	Perf.: $M=5.31$ ($SD=2.34$)	Perf.: $M=5.56$ ($SD=1.95$)
	Post-test:	Post-test:
	TA: $M=1.91$ ($SD=0.71$)	TA: $M=1.78$ ($SD=0.61$)
	Perf.: $M=3.83$ ($SD=2.25$)	Perf.: $M=4.81$ ($SD=2.38$)
Sample	N=31	N=33
tasks with	26% pupils, 71% students	30% pupils, 67% students
high	81% female	79% female
difficulty	Age: $M=20.45$ ($SD=3.92$)	Age: $M=20.18$ ($SD=3.30$)
	Pre-test:	Pre-test:
	TA: $M=2.10$ ($SD=0.48$)	TA: $M=2.15$ ($SD=0.52$)
	Perf.: $M=5.48$ ($SD=2.25$)	Perf.: $M=5.55$ ($SD=2.14$)
	Post-test:	Post-test:
	TA: $M=2.28$ ($SD=0.79$)	TA: $M=2.30$ ($SD=0.92$)
	Perf.: $M=2.61$ ($SD=2.30$)	Perf.: $M=3.24$ ($SD=2.41$)

Note. TA: Test anxiety, Perf.: Performance

Table 2. Means, standard deviations and correlations, reliabilities (Cronbach's alpha) in parenthesis along the diagonal

Variable	M	SD	1.	2.	3.	4.
1. Trait test anxiety	8.03	1.89	(.873)			
2. State test anxiety	2.06	0.79	.530**	(.901)		
3. Performance (cube)	5.47	2.16	-.165**	-.085**	(.749)	
4. Performance (number series)	3.64	2.44	-.201**	-.291**	-.382**	(.793)

3-WAY ANOVA, dependent variable: state test anxiety

- Factor 1: Instruction (evaluative vs. neutral)
- Factor 2: Sample tasks (high vs. low difficulty)
- Factor 3: Trait test anxiety (upper vs. lower 30% of distribution)

Results:

- Main effect significant for the factor “sample task”: $F(1,45)=6.244, p=.016, M=2.38$ vs. $M=1.94$ (high vs. low)
- Main effect significant for the factor “trait test anxiety”: $F(1,45)=42.773, p<.001, M=2.73$ vs. $M=1.58$ (upper vs. lower)

3-WAY ANOVA, dependent variable: performance

- Factor 1: Instruction (evaluative vs. neutral)
- Factor 2: Sample tasks (high vs. low difficulty)
- Factor 3: Trait test anxiety (upper vs. lower 30% of distribution)

Results:

- Main effect significant for the factor “sample task”: $F(1,45)=7.789, p=.008, M=2.76$ vs. $M=4.36$ (high vs. low)
- Main effect significant for the factor “trait test anxiety”: $F(1,45)=6.209, p=.016, M=2.84$ vs. $M=4.27$ (upper vs. lower)

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