

**Moderating effects of domain-specific self-efficacy on the relationship between intelligence and information-seeking skills**

16<sup>th</sup> Biennial EARLI Conference for Research on  
Learning and Instruction  
Limassol, August 25-29, 2015

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- **Information-seeking skills / Information Literacy:** Set of skills required to search for (scholarly) information in order to satisfy an information need
- **(Domain-specific) self-efficacy:** “the belief in one's capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3)

- **Information-seeking requires many abilities commonly measured by intelligence tests:**
  - Analytical skills (Lenox & Walker, 1993)
  - Problem-solving skills (Brand-Gruwel, Wopereis, & Vermetten, 2005)
  - Cognitive flexibility (Stern & Neubauer, 2013)

- **But:** “...competence in a domain requires *both* some ability in the domain and a self-schema for this ability”  
(Markus, Cross & Wurf, 1990, p. 206)
  - Cognitive ability as a basic requirement for information literacy, but only students with a high sense of self-efficacy will benefit from their cognitive ability
- Moderating effect of domain-specific self-efficacy on the relationship between intelligence and academic performance? (e. g., Leclerc, Larivée, Archambault, & Janosz, 2010)

Information literacy self-efficacy moderates the relationship between intelligence and information-seeking knowledge

- **High self-efficacy:** positive relationship between intelligence and performance
- **Low self-efficacy:** relationship between intelligence and performance lower to non-significant

(Intelligence = both fluid and verbal intelligence)

- $N = 121$  psychology freshmen from a German university
- Age:  $M = 20.36$  years ( $SD = 2.55$ )
- 83% females, 17% males

- **Information literacy self-efficacy:** SES-IB (Behm, 2015)
  - *“When searching for information on a specific subject, I am able to use different sources of information in a way to obtain a maximum of relevant information.”*
- **Fluid intelligence:** Raven’s Advanced Progressive Matrices (APM; Raven, Raven, & Court, 1998)
- **Verbal intelligence:** 20 verbal analogies from the IST-2000R (Liepmann, Beauducel, Brocke, & Amthauer, 2007)
- **Information-seeking knowledge:** PIKE-P (Rosman, Mayer, & Krampen, 2015); scenario-based multiple-choice test

*Sample item of sub skill 6—Selection of search tools*

<b>During the writing of your Bachelor thesis, you need several empirical articles about learning strategies of school children aged between 6 and 12 years. How suited are the following tools in order to find the articles?</b>	not useful at all			very useful	
	1	2	3	4	5
A) Online Library Catalog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Reference database PsycINFO™	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Google Scholar™	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Reference database PSYINDEX™	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Note.* With regard to the rather specific sample (school children aged between 6 and 12 years) and the complex nature of the intended search, bibliographic databases (Approaches B and D) are the best choices. Google Scholar (C) is an option, but its hit ratio on complex searches is reduced. Searching the library catalog (A) is useless, as it only indexes books and is not suited for complex information searches.



## Fluid intelligence

### PIKE-P

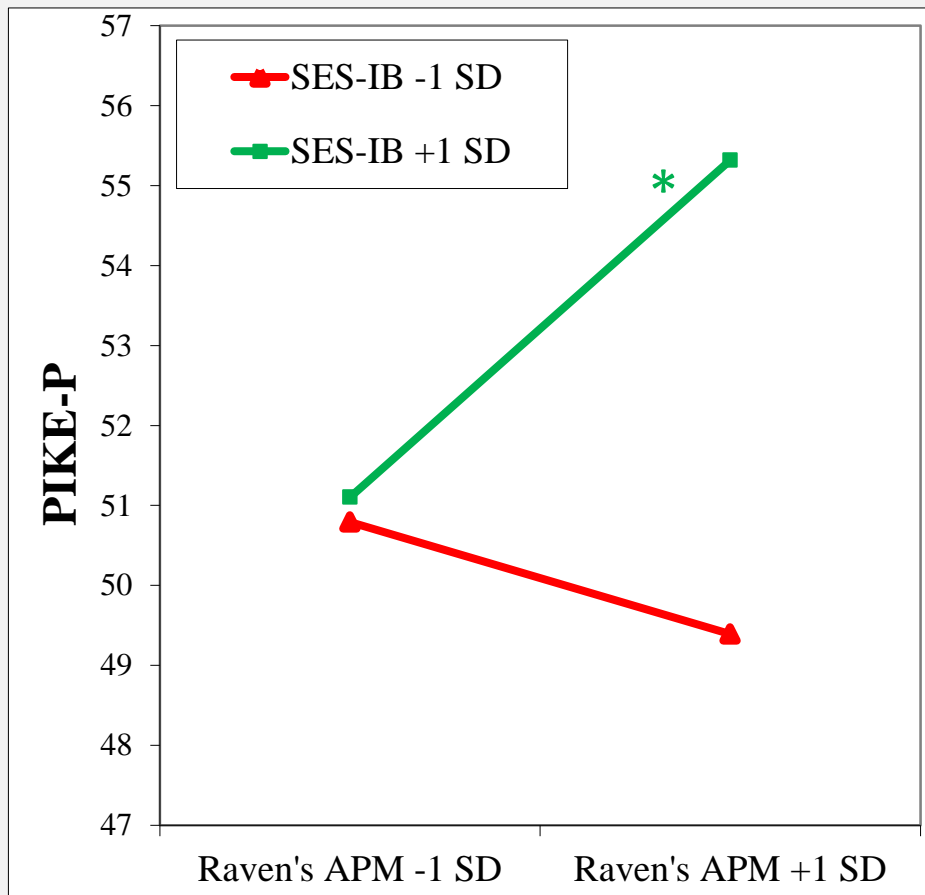
	$\beta$	$R^2$	$\Delta R^2$
(Constant)		.07*	.03 <sup>+</sup>
Raven's APM	.09		
SES-IB	.20*		
APM*SES-IB	.17*		

## Verbal intelligence

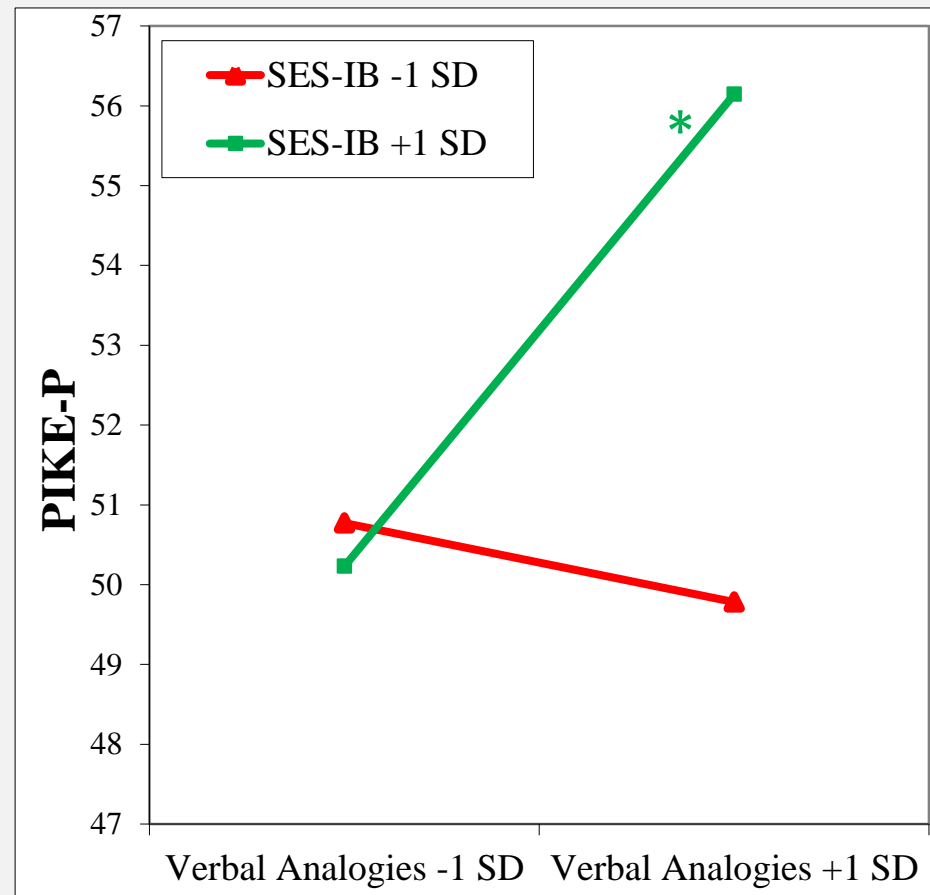
### PIKE-P

	$\beta$	$R^2$	$\Delta R^2$
(Constant)		.09*	.03*
Verbal analogies	.14		
SES-IB	.19*		
VA*SES-IB	.19*		

## Fluid intelligence



## Verbal intelligence



## Conclusions and Implications

- High self-efficacy expectations allow students to make use of their potential
- Enhance domain-specific self-efficacy through praising („verbal persuasion“; Bandura, 1997)? Only when effective techniques are used!
- Information literacy instruction might even be more important → „Mastery experiences“ (Bandura, 1997)

# Thank you for your attention!

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