

Validity and accuracy of self-assessments about information searching skills in information literacy assessment

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Clarification of terms

Information Literacy (IL): Set of skills required to search for (scholarly) information (books, articles, etc.) in order to satisfy an information need

Assessment of IL:

Achievement tests: Multiple choice, often isolated declarative knowledge (exception: PIKE-Test)

Information search tasks: Information search about a given topic, results are evaluated, highest validity, procedural knowledge

Self-assessments: Student self-ratings on their subjective performance (self-efficacy), questionable validity

Self-assessments have diverse benefits. They ...

- expand the range of the assessment,
- shed light on the motivational reasons of success and failure,
- allow learners to identify individual strengths and weaknesses, and
- promote *'meta-cognitive competencies such as self-reflection and self-evaluation'* (Dochy, Segers, & Sluijsmans, 1999, p. 332).

BUT ...

'... self-report and ability scales only modestly correlate because people are notoriously bad at assessing their own capacities'

(Brackett & Mayer, 2003, p. 1155)

Research Question

Under which circumstances do self-assessments explain incremental variance over achievement tests in information search task performance?

Rationale:

Information literacy test and information search task completion provide *intrinsic feedback* about individual skills (Ackerman & Wolman, 2007; Rosman, Mayer, & Krampen, 2014)

Hypotheses

- 1) Self-assessments that take place **after** the administration of IL-related tasks (literature searches or standardized tests):
 - ➔ • will correlate with 'objective' measures
 - explain incremental variance over standardized tests
- 2) This shift towards a more realistic skill appraisal is attributable to performance on the objective measures.

Study Participants

- $N = 81$ psychology students from a German university
- Mean age: $M = 22.33$ years ($SD = 2.99$)
- 91 % female and 9 % male
- 67 % undergraduates and 33 % in master's degree program

Study Design

Phase 1: Self-Assessment

- Information literacy self-efficacy: SES-IB-16 (Behm, in press)

Phase 2: IL-related tests and tasks (“objective measures”)

- Information search tasks (Leichner et al., 2014); two scoring rubrics
- Information literacy achievement test: PIKE-P (Rosman, Mayer, & Krampen, in press); scenario-based multiple-choice test

Phase 3: Self-Assessment

- Re-administration of the SES-IB-16

Scale	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1 SES-IB-16 – T1	3.36	0.50	(.87)					
2 SES-IB-16 – T2	3.17	0.53	.67***	(.87)				
3 SES-IB-16 – T2T1 (Residualized gain)	-0.19	0.42	-.00	.74***	(.60)			
4 PIKE-P	53.06	9.82	.02	.15 ⁺	.18 ⁺	(.72)		
5 Information search tasks – Outcome score	6.53	2.15	-.09	.13	.26**	.62***	(.59)	
6 Information search tasks – Process score	6.34	2.16	.08	.30**	.34**	.64***	.66***	(.75)

Note. $N = 81$; SES-IB-16_T1 = Information literacy self-efficacy at the first measurement point; SES-IB-16_T2 = Information literacy self-efficacy at the second measurement point; PIKE-P = Procedural Information-Seeking Knowledge Test for Psychology Students; M = mean; SD = standard deviation; values in bold on the diagonal = Cronbach's Alpha; ⁺ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

	Information search tasks: Outcome rubric			Information search tasks: Process rubric		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Block 1		.39***			.41***	
PIKE-P	.62***			.64***		
Block 2		.39***	.00		.45***	.05*
PIKE-P	.62***			.61***		
SES-IB-16_T2	.04			.22*		

Note. $N = 81$; Method: Enter; PIKE-P = Procedural Information Literacy Knowledge test for psychology students; SES-IB-16_T2 = Information literacy self-efficacy at the second measurement point; β = standardized regression weight; R^2 = total variance explained; ΔR^2 = change in R^2 from block 1 to block 2. * $p < .05$; *** $p < .001$.

Conclusions and Implications

Include objective and subjective measures of information literacy in assessment batteries

Test order plays a crucial role: Self-Assessment measures should be administered *after* objective tests.

Low to moderate correlations of self-assessments with objective measures → Self-assessments should not be used as a sole measure for information literacy!

Thank you for your attention!

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