Individual findings of the meta-analysis at a glance

According to Abrami et al. (2015): Strategies for Teaching Students to Think Critically: A Meta-analysis.

Moderator variable	Moderator levels	Effect size g	Number of studies (k)
1. Methodological Moderators - Initial analysis phase to obtain the most robust selection of primary studies:			
Study Design of the Primary Study (sig.)	Pre-experiments (one group pretest/posttest comparison)	0.39	363
	Quasi-Experimental Studies (experiment without random assignment)	0.33	361
	True Experimental Studies	0.30	128
Testing Procedure for Measuring Critical Thinking (sig.)	Standardized Test	k.A.	k.A.
	Non-Standardized Test: Developed by a teacher	k.A.	k.A.
	Non-Standardized Test: Developed by researchers	k.A.	k.A.
	Non-Standardized Test: Developed by researchers teaching the course	k.A.	k.A.
	Other Measure from a Secondary-Source	k.A.	k.A.
2. Content Analysis - Based on the reduced number of studies only with high quality, the following moderators are examined:			
Education Level (n.s.)	Elementary school: Ages 6 to 10	0.37*	49
	Middle school: Ages 11 to 15	0.37*	78
	High school: Ages 16 to 18	0.25*	71
	Undergraduate students	0.26*	126
	Graduate and Adult students	0.21*	17
Subject Matter (n.s.)	Health / Medical education	0.20*	29
	STEM subjects	0.31*	73
	Non-STEM subjects	0.29*	123
Duration of Intervention (n.s.)	Short: Between 1 hr and 2 days	0.66*	13
	Medium: Between 2 days and 1 semester	0.33*	99
	Long: 1 semester	0.27*	130
	Longest: More than 1 semester	0.23*	96
Learning Outcome Criterion (-)	Generic critical thinking skills	0.30*	341
	Content-specific critical thinking	0.57*	97
	Critical thinking dispositions	0.23*	25
	Achievement in subject-specific content	0.33*	140
Critical Thinking Support Approaches (sig.) [1]	Authentic / Anchored instruction (A)	0.25*	22
	Dialogue-based learning (D)	0.23*	43
	A + D	0.32*	45
	A + D + Mentoring	0.57*	19
Type of Instruction (n.s.) [2]	Direct Instruction: Explicit teaching of critical thinking without a specific topic (1)	0.26*	44
	Infusion: Teaching critical thinking using a specific topic; critical thinking made explicit (2)	0.29*	152
	Immersion: Teaching of critical thinking using a specific topic; critical thinking not made explicit (3)	0.23*	61
	Mixed Combinations of (1), (2), and (3)	0.38*	84

* significant difference between the condition with and without explicit promotion of critical thinking ($p < 0.05$)
sig = Overall, the moderator variable has a significant influence on the effect sizes found in the studies.
(n.s.) = Overall, the moderator variable has no significant influence on the effect sizes found in the studies, even if the values of the moderator levels vary significantly in some cases.
(-) no significance test performed

Notes:
[1] The support approaches are each compared with Individual Learning as a control condition.
[2] The results on the type of instruction are not statistically calculated in the short review, but only verbally explained.
On the Type of Instruction:

- Generic critical thinking instruction is instruction in which a cross-curricular approach to critical thinking is taught exclusively.
- Infusion is instruction in which critical thinking is taught through a specific content, with the principles of critical thinking made explicit and revealed.
- Immersion is instruction in which a specific content is taught and elements of critical thinking are implicitly woven in.
- Mixed mode of instruction combines the generic approach with immersion or infusion; that is, both general principles of critical thinking are taught and combined with instructional content in one of the ways described above.