

Supplemental Material 1

Full Overview of the Component Search Strings, Fields, and Thesaurus Used in Each Database

Database	Search Field	Search String	Field Selection**	Thesaurus***
ERIC	1	((cooperati* N2 learn*) OR (collaborati* N2 learn*) OR (team* N2 learn*))	TI, AB, KW	DE = “Cooperative learning”
	2	(“higher education” OR college* OR universit* OR postsecondary OR “post secondary” OR graduate* OR undergraduate* OR tertiary OR bachelor*)	TI, AB, KW	DE = “Higher Education” “Collages” “Undergraduate Study” “College Students” “Universities” “Postsecondary Education” “Graduates” “Bachelor’s Degrees” “Undergraduate Students”
	3	(stem OR math* OR physic* OR chemi* OR biolog* OR geolog*)	TI, AB, KW	DE = “STEM Education” “Mathematics” “Physics” “Chemistry” “Biology” “Molecular Biology” “Radiation Biology” “Marine Biology” “Biological Sciences” “Genetics” “Zoology” “Ecology” “Botany” “Geology”
	4	(Outcome* OR result* OR effect OR effects OR skill* OR competenc* OR knowledge OR achievement* OR performanc* OR benefit* OR impact*)	TI, AB, KW	DE = “Outcome Measures” “Outcomes of Education” “Test Results” “Scores” “Skills” “Thinking Skills” “Writing Skills” “Speech Skills” “Basic Skills” “Science Process Skills” “Communication Skills” “Listening Skills” “Information Skills” “Study Skills” “Research Skills” “Reading Skills” “Competence” “Academic Ability” “Knowledge Level” “Learning” “Achievement” “Academic Achievement” “Achievement Gains” “Performance” “Performance Tests” “Educational Benefits”
Proquest Education	1	((cooperati* NEAR/2 learn*) OR (collaborati* NEAR/2 learn*) OR (team* NEAR/2 learn*))	TI, AB, SU	MAINSUBJECT = (“Cooperative learning”)
	2	((“higher education” OR college* OR universit* OR postsecondary OR “post secondary” OR graduate* OR undergraduate* OR tertiary OR bachelor*))	TI, AB, SU	MAINSUBJECT = (“Higher education”) (“University graduates”) (“University students”) (“College students”)
	3	((stem OR math* OR physic* OR chemi* OR biolog* OR geolog*))	TI, AB, SU	MAINSUBJECT = (“STEM education”) (“Mathematics education”) (“Physics”) (“Chemistry”) (“Biology”) (“Geology”)

	4	((Outcome* OR result* OR effect OR effects OR skill* OR competenc* OR knowledge OR achievement* OR performanc* OR benefit* OR impact*))	TI, AB, SU	MAINSUBJECT = (“Effects”) (“Skills”) (“Educational Tests & measurements”) (“Academic achivement”) (“Performance evaluation”) (“Human influences”)
PsycINFO	1	((cooperati* ADJ3 learn*) OR (collaborati* ADJ3 learn*) OR (team* ADJ3 learn*))	TI, AB, ID	Subject heading = Cooperative learning/ or Collaborative learning/
	2	(“higher education” OR college* OR universit* OR postsecondary OR “post secondary” OR graduate* OR undergraduate* OR tertiary OR bachelor*)	TI, AB, ID	Subject heading = higher education/ graduate education/ undergraduate education/colleges/ graduate schools/
	3	(stem OR math* OR physic* OR chemi* OR biolog* OR geolog*)	TI, AB, ID	Subject heading = stem/mathematics/physics/chemistry/ biology/botany/ ecology/ genetics/ neurobiology/ zoology/
	4	(Outcome* OR result* OR effect OR effects OR skill* OR competenc* OR knowledge OR achievement* OR performanc* OR benefit* OR impact*)	TI, AB, ID	Subject heading = treatment process and outcome measures/ treatment outcomes/knowledge management/knowledge level/ knowledge transfer/generation effect (learning)/ learning/ cognitive processes/ memory/skill learning/ communication skills training/ social skills training/ critical thinking/competence/ ability/achievement/ performance/academic achievement/ school learning/
Web of Science	1	(cooperati* NEAR/2 learn* OR collaborati* NEAR/2 learn* OR team* NEAR/2 learn*)	TS	No thesaurus
	2	(“higher education” OR college* OR universit* OR “postsecondary” OR “post secondary” OR graduate* OR undergraduate* OR “tertiary” OR bachelor*)	TS	No thesaurus
	3	(“stem” OR math* OR physic* OR chemi* OR biolog* OR geolog*)	TS	No thesaurus
	4	(Outcome* OR result* OR “effect” OR “effects” OR skill* OR competenc* OR “knowledge” OR “achievement*” OR “performanc*” OR benefit* OR impact*)	TS	No thesaurus

Database	Component	Search String	Field**	Thesaurus***
Google Scholar****	Swedish search string	“kooperativt lärande”/samarbetslärande/ teamlärande effekt biologi matematik fysik kemi geologi elever	(med alle ordene) (med minst ett av ordene) (uten ordene)	No thesaurus
	Norwegian search string	Samarbeidslæring/“kooperativ læring”/ elevteam effekt biologi matematikk fysikk kjemi geologi elever	(med alle ordene) (med minst ett av ordene) (uten ordene)	No thesaurus
	Danish search string	Samarbejds læring/“kooperativ læring”/“læring i team” effekt biologi matematik fysik kemi geologi elever	(med alle ordene) (med minst ett av ordene) (uten ordene)	No thesaurus
OpenGrey	No separate components	(“cooperative learning” OR “collaborative Learning” OR “team NEAR/2 learning”) AND (Outcome* OR result* OR effect OR effects OR skill* OR competenc* OR knowledge OR achievement* OR performanc* OR benefit* OR impact*) AND (stem OR math* OR physic* OR chemi* OR biolog* OR geolog*) AND (“higher education” OR college* OR universit* OR “postsecondary” OR “post secondary” OR graduate* OR undergraduate* OR tertiary OR bachelor*)	No fields	No thesaurus

**Title (TI), Abstract (AB), Keyword (KW), Subject (SU), Key phrase identifier (ID), Topic (TS)

***Descriptors (DE), Main subject, Subject heading

**** No thesaurus and no possibility for combining Boolean operators. Therefore, only free text search and multiple searches. As Google Scholar is inexhaustive, it was decided to only perform searches in Danish, Norwegian and Swedish. English would have yielded too many results for a systematic approach.

Grey literature online source

Higher Education Academy, under HEA-Z (https://www.advance-he.ac.uk/knowledge-hub?field_content_type_target_id=3754):

- With search string: “Cooperative Learning” STEM = 0 results
- With search string: “Collaborative Learning” STEM = 2 results