

Supplementary file 3. Draft search strategy step 1 and 2**1. Search strategy step 1****PubMed (9 May 2018)**

Search	Query	Items found
#1	"Students, Nursing"[Mesh] OR "Internship, Nonmedical"[Mesh:noexp] OR (nursing[tiab] AND student*[tiab]) OR ((nursing[tiab] OR nurse[tiab] OR nurses[tiab]) AND internship*[tiab])) AND (((("Clinical Competence"[Mesh] OR "Clinical Medicine"[Majr] OR clinical*[ti] OR clinical*[ot] OR practice*[ti] OR practice[ot]) AND ("Learning"[Mesh] OR learning*[tiab])) OR clinical learning*[tiab])	3,586

Ebsco/ERIC (9 May 2018)

Search	Query	Items found
S7	S1 AND S6	408
S6	S4 OR S5	70,505
S5	TI ("clinical learning*") OR AB ("clinical learning*")	84
S4	S2 AND S3	70,505
S3	DE "Learning" OR DE "Active Learning" OR DE "Adult Learning" OR DE "Associative Learning" OR DE "Aural Learning" OR DE "Cooperative Learning" OR DE "Discovery Learning" OR DE "Discrimination Learning" OR DE "Electronic Learning" OR DE "Experiential Learning" OR DE "Incidental Learning" OR DE "Intentional Learning" OR DE "Interference (Learning)" OR DE "Lifelong Learning" OR DE "Mastery Learning" OR DE "Multisensory Learning" OR DE "Nonverbal Learning" OR DE "Observational Learning" OR DE "Prior Learning" OR DE "Problem Based Learning" OR DE "Rote Learning" OR DE "Second Language Learning" OR DE "Sequential Learning" OR DE "Serial Learning" OR DE "Student Centered Learning" OR DE "Symbolic Learning" OR DE "Transfer of Training" OR DE "Transformative Learning" OR DE "Verbal Learning" OR DE "Visual Learning" OR DE "Workplace Learning" OR DE "Active Learning" OR DE "Adult Learning" OR DE "Associative Learning" OR DE "Paired Associate Learning" OR DE "Aural Learning" OR DE "Cooperative Learning" OR DE "Discovery Learning" OR DE "Discrimination Learning" OR DE "Electronic Learning" OR DE "Experiential Learning" OR DE "Field Experience Programs" OR DE "Internship Programs" OR DE "Job Shadowing" OR DE "Service Learning" OR DE "Incidental Learning" OR DE "Intentional Learning" OR DE "Interference (Learning)" OR DE "Lifelong Learning" OR DE "Mastery Learning" OR DE "Multisensory Learning" OR DE "Nonverbal Learning" OR DE "Perceptual Motor Learning" OR DE "Observational Learning" OR DE "Prior Learning" OR DE "Problem Based Learning" OR DE "Rote Learning" OR DE "Second Language Learning" OR DE "Sequential Learning" OR DE "Serial Learning" OR DE "Student Centered Learning" OR DE "Symbolic Learning" OR DE "Transfer of Training" OR DE "Transformative Learning" OR DE "Verbal Learning" OR DE "Visual Learning" OR DE "Workplace Learning" OR TI (learning*) OR AB (learning*)	381,995
S2	DE "Clinical Experience" OR TI (clinical* OR practice*) OR AB (clinical* OR practice*)	205,148

S1	DE "Nursing Students" OR TI ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*)) OR AB ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*))	2,294
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Ebsco/CINAHL (9 May 2018)

Search	Query	Items found
S11	S1 AND S10	3,209
S10	S5 OR S9	14,430
S9	S3 AND S8	12,924
S8	MH "Clinical Competence+" OR TI (clinical* OR practice*)	234,601
S7	S1 AND S6	5,669
S6	S4 OR S5	32,948
S5	MH "Learning Environment, Clinical" OR TI ("clinical learning*") OR AB ("clinical learning*")	2,388
S4	S2 AND S3	31,869
S3	MH "Learning+" OR MH "Conditioning (Psychology)+" OR MH "Memory+" OR MH "Reinforcement (Psychology)+" OR MH "Problem Solving+" OR TI (learning*) OR AB (learning*)	103,547
S2	MH "Clinical Competence+" OR TI (clinical* OR practice*) OR AB (clinical* OR practice*)	631,184
S1	MH "Students, Nursing+" OR MH "Students, Nursing, Baccalaureate+" OR MH "Students, Nursing, Graduate+" OR TI ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*)) OR AB ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*))	35,637

2. Search strategy and numbers of hits step 2

2.1 search strategy

(PubMed: (concept[tiab] OR (conceptpart1*[ti] AND conceptpart2*[ti]) OR (conceptpart1 [ot] AND conceptpart2*[ot])) If integral concept could not be found in the Index, this was composed with an AND relation.*

[Mesh] = Medical Subject Headings, keywords in PubMed

[tiab] = words in title or abstract

[ti] = words in title

[ot] = other terms, in particular author keywords

MH = mapped heading, keyword in CINAHL

DE = descriptor, keyword in ERIC

TI = words in title

AB = words in abstract

Search	PubMed	Ebsco/ERIC	Ebsco/CINAHL
#1	"Students, Nursing"[Mesh] OR "Internship, Nonmedical"[Mesh:noexp] OR ((nursing[tiab] OR nurse[tiab] OR nurses[tiab]) AND student*[tiab]) OR ((nursing[tiab] OR nurse[tiab] OR nurses[tiab]) AND internship*[tiab])	DE "Nursing Students" OR TI ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*)) OR AB ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*))	MH "Students, Nursing+" OR MH "Students, Nursing, Baccalaureate+" OR MH "Students, Nursing, Graduate+" OR TI ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*)) OR AB ((nursing N3 student*) OR ((nursing OR nurse OR nurses) N3 internship*))
#2	authentic learning*[tiab] OR (authentic*[ti] AND learning*[ti]) OR (authentic*[ot] AND learning*[ot])	TI (authentic* AND learning*) OR AB ("authentic learning*")	TI (authentic* AND learning*) OR AB ("authentic learning*")
#3	clinical learning*[tiab]	TI ("clinical learning*") OR AB ("clinical learning*")	TI (authentic* AND learning*) OR AB ("authentic learning*")
#4	clinical placement learning*[tiab] OR (clinical placement*[ti] AND learning*[ti]) OR (clinical placement*[ot] AND learning*[ot])	TI ("clinical placement"* AND learning*) OR AB ("clinical placement learning*")	TI ("clinical placement"* AND learning*) OR AB ("clinical placement learning*")
#5	(clinically based*[tiab] AND learning*[tiab])	TI ("clinically based" AND learning*) OR AB ("clinically based learning*")	TI ("clinically based" AND learning*) OR AB ("clinically based learning*")
#6	(experiential learning*[tiab] OR (experiential*[ti] AND learning*[ti]) OR (experiential*[ot] AND learning*[ot]))	DE "experiential learning" OR TI (experiential* AND learning*) OR AB ("experiential learning*")	MH "Experiential learning" OR TI (experiential* AND learning*) OR AB ("experiential learning*")
#7	experimental learning*[tiab] OR (experimental*[ti] AND learning*[ti]) OR (experimental*[ot] AND learning*[ot])	TI (experimental* AND learning*) OR AB ("experimental learning*")	TI (experimental* AND learning*) OR AB ("experimental learning*")
#8	hidden curriculum*[tiab] OR (hidden*[ti] AND curriculum*[ti]) OR (hidden*[ot] AND curriculum*[ot])	DE "hidden curriculum" OR TI (hidden* AND curriculum*) OR AB ("hidden curriculum*")	TI (hidden* AND curriculum*) OR AB ("hidden curriculum*")
#9	informal learning*[tiab] OR (informal*[ti] AND learning*[ti]) OR (informal*[ot] AND learning*[ot])	TI (informal* AND learning*) OR AB ("informal learning*")	TI (informal* AND learning*) OR AB ("informal learning*")
#10	learning by doing*[tiab] OR (learning*[ti] AND doing*[ti]) OR (learning*[ot] AND doing*[ot])	TI (learning* AND doing*) OR AB ("learning by doing*")	TI (learning* AND doing*) OR AB ("learning by doing*")

#11	"learning from experience*" [tiab]	TI "learning w1 experience*" OR AB "learning w1 experience"	TI "learning w1 experience*" OR AB "learning w1 experience"
#12	"learning through experience*" [tiab]	TI ("learning through experience*" OR AB ("learning through experience*"))	TI ("learning through experience*" OR AB ("learning through experience*"))
#13	(learning* [tiab] AND clinical placement experience* [tiab])	TI (learning* AND "clinical placement experience") OR AB ("learning from clinical placement experience*")	TI (learning* AND "clinical placement experience") OR AB ("learning from clinical placement experience*")
#14	practice based learning* [tiab] OR (practice based* [ti] AND learning* [ti]) OR (practice based* [ot] AND learning* [ot])	TI ("practice based*" AND learning*) OR AB ("practice based learning*")	TI ("practice based*" AND learning*) OR AB ("practice based learning*")
#15	practice learning* [tiab]	TI ("practice learning*" OR AB ("practice learning*"))	TI ("practice learning*" OR AB ("practice learning*"))
#16	learning from practice* [tiab]	TI (learning w1 practice*) OR AB (learning w1 practice*)	TI (learning w1 practice*) OR AB (learning w1 practice*)
#17	learning in practice* [tiab]	TI (learning w1 practice*) OR AB (learning w1 practice*)	TI (learning w1 practice*) OR AB (learning w1 practice*)
#18	(learning* [tiab] AND clinical practicum* [tiab])	TI (learning* AND "clinical practicum*") OR AB (learning w2 clinical practicum*)	TI (learning* AND "clinical practicum*") OR AB (learning w2 clinical practicum*)
#19	(learning* [tiab] AND clinical field* [tiab])	TI (learning* AND "clinical field*") OR AB (learning w2 clinical field*)	TI (learning* AND "clinical field*") OR AB (learning w2 clinical field*)
#20	(learning* [tiab] AND clinical context* [tiab])	TI (learning* AND "clinical context*") OR AB (learning w2 clinical context*)	TI (learning* AND "clinical context*") OR AB (learning w2 clinical context*)
#21	(learning* [tiab] AND clinical setting* [tiab])	TI (learning* AND "clinical setting*") OR AB (learning w2 clinical setting*)	TI (learning* AND "clinical setting*") OR AB (learning w2 clinical setting*)
#22	(learning* [tiab] AND clinical nursing environment* [tiab])	TI (learning* AND "clinical nursing environment*") OR AB (learning w2 clinical nursing environment*)	TI (learning* AND "clinical nursing environment*") OR AB (learning w2 clinical nursing environment*)
#23	(learning* [tiab] AND clinical environment* [tiab])	TI (learning* AND "clinical environment*") OR AB (learning w2 clinical environment*)	TI (learning* AND "clinical environment*") OR AB (learning w2 clinical environment*)
#24	learning on the job* [tiab] OR (learning* [ti] AND on the job* [ti]) OR (learning* [ot] AND on the job* [ot])	TI (learning* AND "on the job*") OR AB ("learning on the job*")	TI (learning* AND "on the job*") OR AB ("learning on the job*")
#25	workplace learning* [tiab] OR (workplace* [ti] AND learning* [ti]) OR (workplace* [ot] AND learning* [ot])	DE "workplace learning" OR TI (workplace* AND learning*) OR AB ("workplace learning*")	TI (workplace* AND learning*) OR AB ("workplace learning*")

#26	learning in the workplace*[tiab] OR (learning*[ti] AND workplace*[ti]) OR (learning*[ot] AND workplace*[ot])	TI (learning* AND "in the workplace*") OR AB ("learning in the workplace*")	TI (learning* AND "in the workplace*") OR AB ("learning in the workplace*")
#27	work based learning*[tiab] OR (work based*[ti] AND learning*[ti]) OR (work based*[ot] AND learning*[ot])	TI ("work based*" AND learning*) OR AB ("work based learning*")	TI ("work based*" AND learning*) OR AB ("work based learning*")
#28	work integrated learning*[tiab] OR (work integrated*[ti] AND learning*[ti]) OR (work integrated*[ot] AND learning*[ot])	TI ("work integrated*" AND learning*) OR AB ("work integrated learning*")	TI ("work integrated*" AND learning*) OR AB ("work integrated learning*")
#29	learning process*[tiab]	DE "Learning Processes" OR TI ("learning process*") OR AB ("learning process*")	TI ("learning process*") OR AB ("learning process*")
#30	"learning the practice of nursing"[tiab]	TI ("learning the practice of nursing*") OR AB ("learning the practice of nursing*")	TI ("learning the practice of nursing*") OR AB ("learning the practice of nursing*")
#31	(learning*[tiab] AND clinical nursing*[tiab])	TI (learning* AND "clinical nursing*") OR AB ("learning clinical nursing*")	TI (learning* AND "clinical nursing*") OR AB ("learning clinical nursing*")
#32	placement learning*[tiab] OR (placement*[ti] AND learning*[ti]) OR (placement*[ot] AND learning*[ot])	TI (placement* AND learning*) OR AB ("placement learning*")	TI (placement* AND learning*) OR AB ("placement learning*")
#33	"Self-Directed Learning as Topic"[Mesh] OR self directed learning*[tiab] OR (self directed[ti] AND learning*[ti]) OR (self directed[ot] AND learning*[ot])	TI ("self directed*" AND learning*) OR AB ("self directed learning*")	MH "Self directed learning" OR TI ("self directed*" AND learning*) OR AB ("self directed learning*")
#34	self regulated learning*[tiab] OR (self regulated [ti] AND learning*[ti]) OR (self regulated [ot] AND learning*[ot])	TI ("self regulated*" AND learning*) OR AB ("self regulated learning*")	TI ("self regulated*" AND learning*) OR AB ("self regulated learning*")
#35	situated learning*[tiab] OR (situated*[ti] AND learning*[ti]) OR (situated*[ot] AND learning*[ot])	TI (situated* AND learning*) OR AB ("situated learning*")	TI (situated* AND learning*) OR AB ("situated learning*")
#36	socialisation*[tiab]	TI (socialisation*) OR AB ("socialisation*")	TI (socialisation*) OR AB ("socialisation*")
#37	socialization*[tiab]	TI (socialization*) OR AB ("socialization*")	TI (socialization*) OR AB ("socialization*")
#38	student learning*[tiab]	TI ("student learning*") OR AB ("student learning*")	TI ("student learning*") OR AB ("student learning*")
#39	ward based learning*[tiab] OR (ward based*[ti] AND learning*[ti]) OR (ward based*[ot] AND learning*[ot])	TI ("ward based" AND learning*) OR AB ("ward based learning*")	TI ("ward based" AND learning*) OR AB ("ward based learning*")

	based*[ot] AND learning*[ot])		
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During the search and selection process, three concepts appeared in the literature that had been discarded before, but were added to the list of concepts to run the second search with after discussion in the research team. The total number of hits was calculated after this search.

Concept	PubMed	Ebsco/ERIC	Ebsco/CINAHL
#40	(peer learning*[tiab]) OR (peer*[ti] AND learning*[ti]) OR (peer*[ot] AND learning*[ot])	TI ("peer*" AND learning*) OR AB ("peer learning*")	TI ("peer*" AND learning*) OR AB ("peer learning*")
#41	Peer assisted*[tiab] OR (peer assisted*[ti] AND learning*[ti]) OR (peer assisted*[ot] AND learning*[ot])	TI ("peer assisted*" AND learning*) OR AB ("peer assisted based learning*")	TI ("peer assisted*" AND learning*) OR AB ("peer assisted based learning*")
#42	(transformative learning*[tiab] OR (transformative*[ti] AND learning*[ti]) OR (transformative*[ot] AND learning*[ot]))	TI (transformative* AND learning*) OR AB ("transformative learning*")	TI (transformative* AND learning*) OR AB ("transformative learning*")

2.2 Number of hits per concept

	Concepts	Combination of searches with # from queries in the above table	PubMed (23 May 2018)	Ebsco/-ERIC (23 May 2018)	Ebsco/-CINAHL (23 May 2018)
1.	Authentic learning	#1 AND #2	32	6	23
2.	Clinical learning/ clinically based learning/ clinical placement learning	#1 AND (#3 OR #4 OR 5)	631	16	544
3.	Experiential learning	#1 AND #6	294	84	571
4.	Experimental learning	#1 AND #7	31	2	26
5.	Hidden curriculum	#1 AND # 8	26	1	18
6.	Informal learning	#1 AND #9	11	7	7
7.	Learning by doing	#1 AND #10	12	3	14
8.	Learning clinical nursing/ learning the practice of nursing	#1 AND (#30 OR #31)	205	0	31
9.	Learning from/through experience/learning from clinical placement experience	#1 AND (#11 OR #12 OR 13)	48	7	4
10.	Learning in the clinical field/learning in the clinical context/ Learning in the clinical setting/Learning in the clinical nursing environment/learning in the clinical environment	#1 AND (#19 OR #20 OR #21 OR #22 OR #23)	785	16	240
11.	Learning on the job	#1 AND #24	0	2	2

12.	Learning process	#1 AND #29	463	40	474
13.	Learning in practice/learning from practice/ learning in practice environment/learning in practice setting/learning in a clinical practicum/practice learning/practice based learning	#1 AND (#14 OR #15 OR #16 OR #17 OR #18)	176	10	205
14.	Placement learning	#1 AND #32	102	4	64
15.	Practice based learning				
16.	Self directed learning	#1 AND #33	1210	20	297
17.	Self-regulated learning	#1 AND #34	27	2	32
18.	Situated learning	#1 AND #35	25	4	17
19.	Socialication/socialisation	#1 AND (#36 OR #37)	380	35	372
20.	Student learning	#1 AND #38	543	66	663
21.	Ward based learning	#1 AND #39	0	1	2
22.	Workplace learning/learning in the workplace/work based learning/work integrated learning	#1 AND (#25 OR #26 OR #27 OR #28)	92	5	67
23.	Peer learning*	#1 AND #40	106	4	31
24.	Peer assisted learning*	#1 AND #41	23	0	3
25.	Transformative learning*	#1 AND #42	60	17	19

* Search 23, 24 and 25 have been conducted on 16 september 2018.