

Key Considerations

The 'so what?' question – where's the gap?

Software (EPPI Reviewer, Rayyan, Leximancer,

AJET (HE, OA, word count restrictions)

London Review of Education (OA)

Scope of the project – keep it manageable.

• BJET (word count restrictions)

Computers & Education: AI

Computers & Education

CALL (Language)

Qualitative Evidence Synthesis and EPPI Reviewer



Introductory Workshop

University of Stavanger, 3rd November 2023

Dr Melissa Bond

VOSViewer)

> Where to publish?

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Resources (time and people)

NJSRE (OA)

ETRD

JECR

ILE (AI)

○ IJETHE (HE, OA)

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Image source: http://navigatingeffectivetreatments.org.au/exploring_systematic_reviews.html

Suggested resources

- Systematic Review in Educational Research by Zawacki-Richter et al. (2020), <u>https://link.springer.com/book/10.1007/978-3-658-27602-7</u>
- An Introduction to Systematic Reviews by Thomas et al. (2017), <u>https://us.sagepub.com/en-us/nam/an-introduction-to-systematic-reviews/book245742</u>
- Doing a Systematic Review: A student's guide by Cherry et al. (2023), https://uk.sagepub.com/en-gb/eur/node/1571341/



• Qualitative Evidence Synthesis: Where are we at? By Flemming & Noyes (2021), https://doi.org/10.1177/1609406921993276









Step 1 – Question and search string

- 1. Identify and clearly define the question/s your review will address, following the PICO(TS) framework as necessary for your topic.
 - e.g. What effects do <u>clicker-based technologies</u> have on <u>cognitive and non-cognitive learning outcomes</u> in <u>classrooms</u> compared to <u>conventional lecture</u> <u>classes</u> where they are not used?
 - P = students in classrooms
 - I = clicker-based technologies
 - C = conventional lecture classes
 - > O = cognitive and non-cognitive learning outcomes
 - > How does the flipped learning approach affect student engagement in K-12?
 - P = K-12 students
 - I = flipped learning approach
 - O = student engagement

Ask yourself	Your review focus
Population – who?	
Intervention – what?	
Comparator/s – compared to?	
Outcomes – expected result	
Time – when?	
Setting – where?	

Your review question:

- 2. Refine your search strategy.
 - > Use the template on Page 3 to brainstorm terms.
 - > Consider truncations and settings of specific databases.
 - > Write your search string on Page 4.







Develop table for key concepts in research question (e.g. according to PICOTS model) and find search terms for each concept – identify free text terms and author keywords/subject terms to create your searches; join all terms within each concept with **OR**.

	Concept 1	Concept 2	Concept 3	Concept 4
Key concepts				
Free text terms				
(synonyms, UK/US terminology, acronyms/abbreviations, more narrow search terms)				
Author keywords / Subject terms				
(e.g. Keywords within Web of Science)				

Once you have found all relevant information for each concept in your topic, join them together using **AND** and write your search string on the next page.







Step 2 – Search strategy

1. Decide what types of studies and data will answer your question.

- Empirical research only?
- ➢ Grey literature?
- Both quantitative and qualitative data?
- 2. Decide on your inclusion/exclusion criteria.

INCLUSION	EXCLUSION

3. Decide on which database/s you are going to search in:

Web of Science	Scopus	ERIC ProQuest
EBSCO Host	PsycINFO	Teacher Reference Center
Science Direct	Wiley	Cochrane Library
PubMed		







Step 3 - Protocol

Begin writing your protocol.

1.	Background
	 Gives context and provides a summary of PICO(TS).
2.	Summary of existing literature
	 Overview of literature that is important to the review question.
	 End with a rationale why the question is important.
3.	Research question and aims
4.	Methods
	 Search strategy, screening & selecting, quality assessment, data extraction, data analysis.
5.	Time frame

Step 4 – Scoping search

- 1. Conduct a search for literature using the databases you have decided on.
 - > Be systematic and methodical.
 - > Document all search results using Record Keeping Log (see below).
- 2. Export your results into a .ris or .txt file.

Record Keeping Log example

Database searched	
Date of search	
Person searching	
Database settings	
No. of records obtained	
Search string	







Hands-on task

You can find instructions on how to set up your own review in EPPI Reviewer in our <u>shared</u> <u>GoogleDrive folder</u>.

Today, you're going to be working on a systematic review I've already set up on the experiences of mothers undertaking doctoral education (PhD or EdD).

Step 1 – Log into EPPI Reviewer

Go to <u>https://eppi.ioe.ac.uk/EPPIReviewer-Web</u> and login to the 'Doctoral education and motherhood – QES practice' review.

			PPI Welcome to EPPI
EPPI	EPPI Centre Evidence for		EPPI Reviewer 6 supports all modern browsers and o
	Policy & Practice	Startin Review functio other, l	g with version 6.15, EPPI Reviewer 6 (formerly known as "Web") is wer 4, meaning that it is not <i>necessary</i> to use version 4 in order to or nalities not available in version 4. However, both versions operate o based on their personal preference.
Password:		We en	courage all users to provide feedback and suggestions via the "Fee
Login Forgot Password?	Create Account	ID	Review Name
Visit the EPPI-Reviewer Gatewa for Account and Review Management, Documentation, Supp	y Follow Us on Twitter	43900	Doctoral education and motherhood - QES Practice
For Cochrane/Campbell Authors: click HERE to login	with your Cochrane account. More info	38649	Review of reviews: programming

Step 2 – Find your coding allocation

Click on the Collaborate tab and click on the number of items in the Remaining column next to your name.

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eview hor	me References Reports Sea	arch & Cla	ssify Collaborate						
Distribute	Work Create reference groups	Create n	new code	coding assignment Creat	e comparison Auto Co	mparison(s)			
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D	Name	ld ↓	Name	Study Group	Codes to apply	Allocated	Started	Remaining	
3451	Melissa Bond	135640	Wenche Olivia Sigurdsen	Group 4 screening T&A	Screening on Title & Abstract	16	0	16	Delete
19219	Astrid Guldbrandsen	135639	Merete Haugstad	Group 3 screening T&A	Screening on Title & Abstract	16	0	16	Delete
24900	Camilla Hagevold	135638	Maximiliaan Thiissen	Group 3 screening T&A	Screening on Title & Abstract	16	0	16	Delete
24929	Ellinor Waaland	135637	Ellinor Waaland	Group 2 screening T&A	Screening on Title & Abstract	16	0	16	Delete
24906	Maximiliaan Thijssen	135636	Elin Nordbø	Group 2 screening T&A	Screening on Title & Abstract	16	0	16	Delete
24930 24941	Merete Haugstad Wenche Olivia Sigurdsen	135635	Camilla Hagevold	Group 1 screening T&A	Screening on Title & Abstract	16	0	16	Delete
		135634	Astrid Guldbrandsen	Group 1 screening T&A	Screening on Title & Abstract	16	0	16	Delete
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Step 3 – Screen your coding allocation

Click on GO on the first item, read the title and abstract and see if you can find a reason from the list to exclude the item. If you can't, you must include it at this stage. Screen all 16 items.

© EPPI	Reviewer	Item Details		
Reviewer	+ 1 • • • 12	First Previous Next Last Item 1 of 16		
Review home References Reports Search & Classify Collaborate	🔻 🏦 🖨 📈 Screening on Title & Abstract	Item Details Links Arms Timepoints PDF Coding Record		
	EXCLUDE duplicate Info	Ref. Type. Book, Chapter		
	EXCLUDE not solely mothers into	Add relevant term Add irrelevant term Remove term Show/Hide Terms Add relevant term		
Import Items	 EXCLUDE not solely on doctoral education Info 	Leadership found		
First Provinue Page: 1 of 1 Next Last Showing 16 items of 1	 EXCLUDE not focused on the experience info 	 Abstract: Carolyn Kenny is an Indigenous scholar with Choctaw and Ukrainian ancestry and adopted into th 		
Flist Flevious Fage. I OIT Next Last chowing to items of t	EXCLUDE not empirical Info	working in Canada and the United States and has presented her work internationally in two areas-In Human Development and Indigenous Studies with a PhD from Antioch University in Leadership and		
Showing work allocation remaining: Group 4 screening T&A	EXCLUDE not primary research info	chapters, and articles on these topics. She is the mother of Josh Kenny and Shannon Lee Kenny an Madison. © 2015 Taylor & Francis.		
Showing work allocation remaining. Croup 4 screening Tax	EXCLUDE out of review scope Info	Author(s) Kenny Haida ; C ;		
D Short titlet Title	EXCLUDE not in English Info	Book Title Indigenous Leadership in Higher Education		
	 EXCLUDE book review, editorial, abstract, brief communication, obituary, news article 	Item is Included ID 91988350		
GO I 91988350 Kenny (2014) Leadership found	Info	Editors		
	INCLUDE on title & abstract info	Year 2014 ISBN 97		





QES Workshop





Step 4 – Reconcile your screening decisions with your partner

In the Collaborate tab, one person should click on 'Create Comparison'. Select the names of the reviewers involved, leave the code set as 'Screening on Title & Abstract', and click on 'Create Comparison'.

Review home References Reports Search & Classify Collaborate	
Distribute Work Create reference groups Create new code Create coding assignment Create comparison Auto Cr	omparison(s
Reviewer 1	
· · ·	
Reviewer 2	
· • •	
Reviewer 3 (optional)	
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Code set	
Screening on Title & Abstract	
Selected Filter:	
Set Filter Clear Filter	
Create Comparison Cancel	

Scroll down to the bottom and (under Comparisons) click on 'View' on the report you just created. Then, click on 'Include/Exclude only'. Under disagreements, click on 'Reconcile'. You should <u>always</u> reconcile your disagreements first!

Comparisons								Collaps
Codes applied from this set	Reviewer 1	Reviewer 2	(Reviewer 3)	(Only with this code)	Date	Quick Rep.	Details	Delete
Screen on T&A	Melissa Bond	Shannon Mason			11 Nov 2021	Run	View	Delete
The statistics are based on the status Full Include/Exclude Only	of the database a	it the time the comparison	was created.					_
Agreements Disagreements								
Melissa Bond Vs. Shannon Mason Complete & L					C / 100 (list) Beconsile			ancilo
		947100 (list) Complete		Complete	07100 (list)		Reconcile	

Read the titles and abstracts together and make a mutual decision on whether to include or exclude the items by clicking on the 'Complete & Lock' button in that person's column. Do this for until all items have been reconciled and appear in green.

	PPI eviewer	Reconciliation	Feedback Help Support Melissa Bond Logo		
Item	IS List Show Detailed Tree-View		Close/ba		
	Item	Melissa Bond	Shannon Mason		
	65602788 Ahluwalia-Cameron (2021)	Un-Complete INCLUDE on title & abstract	EXCLUDE not empirical		
	64411597 Behboodi (2017)	Complete Complete & Lock EXCLUDE not solely on doctoral education	Complete Complete And Lock		
	65604250 Bober (2017)	Complete & Lock EXCLUDE not solely on doctoral education	Complete Complete And Lock INCLUDE on title & abstract		
W	65603075	Un-Complete	EXCLUDE not solely on doctoral education		
First	Previous Page: 1 of 1 Next Last	Showing 6 items of 6			
Title	Singled Out for Success: A Narrative Inquiry of Sing College	Ile Mothers in the Community Abstract: The purpose of this qualitat community college student	ive study was to explore and understand single-mother s' perceptions of their ability to succeed. The theoretical		

Then, click close/back and click on 'Complete & Lock' in the Agreements column.

Full Include/Exclude Only					
	Agree	ments	Disagreements		
Melissa Bond Vs. Shannon Mason	04 / 400 /8=4)	Complete & Lock	C / 100 (lint)	Reconcile	
	94 / 100 (list)	Complete	67100 (list)	Reconcile	
		Complete			







Step 5 – Record your frequencies and officially exclude items given an exclude code

In the Reports tab, click on the 'Screening on Title & Abstract' coding tool, click 'Set', click on your group's allocation code and click 'Set'. Then, click on 'Get Frequencies'.

Reviewer	[Feedback][Help][Support]
Review home References Reports Search & Classify Collaborate	Edit Tools With this Code 🔻
	Screening on Title & Abstract
Frequencies and crosstabs Configurable reports	Screening on Full text
Rows: Screening on Title & Abstract Set Get Frequencies	 A Data extraction
Columns: Not set (only used for Crosstabs) Set	 Coding allocations
Filter: Not set (actional)	 Screening on T&A allocations
	Group 1 screening T&A
Get Frequencies Get CrossTab Included Excluded Both Current code: Screening on Title & Abstract	Group 2 screening T&A
No data to show.	Group 3 screening T&A
	Group 4 screening T&A
	 Screening on full text allocations
	 Data extraction allocations

Click on the blue number of items next to an exclusion code, select all of the items by clicking in the checkbox at the top of the column. Click on the 'In/Exclude' button, choose 'Selected documents', change the toggle to 'Excluded' and click 'Assign'. Repeat for all items given an exclude code.

Review home References Reports Search & Classify Collaborate									
Assign documents as Included or Excluded									
	Assign thes	se items:	Selected documents ~						
	Assign as:		Included Excluded						
		Assign	Cancel						
First Previous Page: 1 of 1 Next Last Showing 64 items of 64 View Options									
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ID Short t	itle↑	Title							
GO I 91988307 Abbase	oglu (2018)	Birth and employr incompatibility	ment transitions of women in Turkey: The	eme					
GO 🗹 I 91988308 Abdolh	osseini (2017)	Effects of Pomegr Pregnancy: A Ran	ranate and Spearmint Syrup on Nausea a ndomized Controlled Clinical Trial	nd V					

Repeat steps 3, 4 and 5 for items that you have included on Title & Abstract. Mel will set up the allocations for you but you may need to locate the PDFs for this. Go straight to the method section to see if the item is relevant.







Step 6 – Data extraction

Work your way through the data extraction coding tool and try to assign text directly from the PDF to the codes as much as possible. For example, highlight the research questions or aims/objectives, click on the 'Yes (specify)' code and click the 'A' button. You always need to have text from the item to back up your coding decision.

EPPI Reviewer					em De	[Feedback][Help][Suppor			
+	First	Pre	vious	Next	Last	Item 1 of	2		Auto Advance D Show
🕨 🏖 🖨 🗾 Screening on Title & Abstract	Item De	etails	Links	Arms Tin	nepoints	PDF	Coding Record		
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 Publication type 		.1	\cup	0					
 Publication language Author details Study Context Description of study sample Study design 				w	ork doct emain un	oral educ: known. T	ation; the experiences his study will explore	of pregnan the followi	and parenting social work doctoral students ing research questions, focused on social work
				de	octoral ee	lucation:	, ,		
					(1) Wh	at resour	es and supports were	available to	women while pregnant or parenting?
					(2) Ho frie	w did wo	men experience the cl	imate of the	eir doctoral program in terms of being family-
					me				
Theoretical Framework									A
 Research Questions/Aims/Objectives 								-	
Yes (specify) Info			-					High	light (H)
□ No Info				20					

Where we are using **inductive coding**, that is we are generating new codes based on evidence that appears in the data, click on the parent code (e.g., Theoretical Framework) and click on the + icon. Choose 'Selectable (show checkbox), type in a code name (e.g., Theory of Transformation) and click 'Create'.

Reviewer	+
+	Add child to: Theoretical Framework
Add child code ng on Title & Abstract	Code Type*
Screening on Full text	Selectable (show checkbox)
🔻 🦓 🖨 📝 Data extraction	Code Name*
 Publication type 	
 Publication language 	
 Author details 	Description (optional)
 Study Context 	
 Description of study sample 	
▼ Study design	Create Cancel
Theoretical Framework	

Step 7 – Quality assessment

This can be done either before or after data extraction, depending on how many items you have in your review and whether you are going to exclude any that receive a low quality rating. We're not going to focus on this today, but I can highly recommend the tools that I have already mentioned, including:

- CASP tools <u>https://casp-uk.net/casp-tools-checklists/</u>
- Mixed Methods Appraisal Tool - http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/146002140/MMAT_201 scitetai.com/w/file/fetch/146002140/MMAT_201 scitetai.com/w/file/fetch/146002140/MMAT_201







Step 8 – Synthesis

Now that we have coded our eight studies, we can start synthesising the results. To begin with, I always start with looking at the frequency reports of all the codes and subcodes. You can do this by running a frequency report in the Reports tab (like in Step 5) of the individual codes, but don't forget to select 'Included' before clicking 'Get Frequencies.'

Review home References Reports Search & Classify Collaborate	Edit Tools With this Code 🔻 🖺 🖒 🖨
Frequencies and crosstabs Configurable reports	code: Theoretical framework
Code	Count Study design
No clear framework	21 Scope of study Data collection
Bourdieu - family capital/ sociological thought	2 Theoretical framework
transnationalism, space and place	1 Factors affecting mothers in doctoral educat

Export the results to an Excel file, which will enable you to order them in descending order. You can then provide the frequencies in a table, as well as report on them narratively. To do this, create a <u>configurable report</u> in EPPI Reviewer and open it in Excel.

	A	В	A	М
1	Code	Count	Short Title	Positive self-perceptions & self-efficacy quotes
2	Positive self-perceptions & self-efficacy	30	Abdelrahman (2017)	[Abdelrahman et al - Flipped Learning for ESL Writing in a Sudanese School.pdf] Page 6: Before my experience with the
3	Self-regulation	25		module, I paid little attention to writing in English. I only focus on completing the number of words required to finish a writing
4	Understanding	24		assignment [Abdelrahman et al - Flipped Learning for ESL Writing in a Sudanese School.pdf] Page 7: Before using the module. English
5	Learning from peers	23		was the most difficult subject in school. I donÂ't write because I am weak in English. Now, I am completely changed. I am n
6	Focus/concentrate	20		confident in using and writing English, even outside school" "subject in school. I don't write because I am weak in English.
7	Critical thinking	18		Now, I am completely changed. I am more
8	Teaching self & peers	17		[Avery 2018.pdf] Page 10: \hat{A}'' It helped me to become more responsive during class time. $\hat{A}'''' " \hat{A}''$ I am better at working with
9	Deep learning	16	Avery (2018)	others.Â″
10	Reflection	8		[Bergstresser.pdf] Page 72: Overall, students in the flipped classroom scored higher numbers on the survey in both science and
11	Setting learning goals	5	Bergstresser, (2018)	history classes in self-belief (mean flipped= 5.73, mean traditional= 5.5)

Read through all of the evidence you've gathered across each study under that code and see if there are any commonalities or differences. Summarise the studies and include one or two examples.

4.4.3. Cognitive engagement and flipped learning

Found slightly less in the studies in this review, cognitive engagement was coded through 12 different indicators (see Table 4 for the top five), with the flipped learning approach enhancing *positive self-perceptions & self-efficacy* in more than a quarter of studies, and found in 50% of studies using Google Classroom (see Table 8). Research reported enhanced student subject self-efficacy (Abdelrahman et al., 2017, pp. 60–70; Chaipidech & Srisawasdi, 2016) and technology self-efficacy (Chang & Hwang, 2018; Huang & Hong, 2016), with Hwang and Lai (2017) finding that a flipped learning approach using an interactive eBook was more effective for students with lower self-efficacy. Again, whilst some students did not obtain higher results in exams using the flipped approach, they were "not disappointed" because they "became more confident" and "more comfortable to pose questions to the teachers and friends" (Middle school student, Lee, 2018, p. 850). There was, however, still quite a number of studies that reported increased content *understanding* (e. g., Kong, 2015), even if only in one aspect or topic of instruction more than others (e.g., Kirvan, Rakes, & Zamora, 2015).

