

Guide for SEED Method Step 6: Literature, refining the research questions and completing *Question Refinement Template* (Review of the literature)

OVERVIEW: During this step the research team will review related academic literature in order to uncover gaps in knowledge and finalize the list of research questions. The time needed for this method will depend on the number of questions being reviewed, the size and experience of the review team, and the time allotted for this task by individual reviewers.

I. Guidelines for completing literature review

The need to complete a thorough literature review will largely depend on the goals of the project. We recommend this type of review be completed if the aim is to publish the research agenda in the scientific literature or disseminate it to professional audiences. For goals such as prioritizing funding decisions or identifying research topics for internal use, a less intensive level of review may be needed.

Recommendations:

1. **Limit the number of final research questions** each Topic group prioritizes! This will in turn expedite the literature review process.
2. **Create a literature review team** of no less than three people. Each question can take up to 40 hours to thoroughly research depending on the experience and expertise of team members conducting the review. Make sure your team is large enough to adequately handle the number of questions that are being refined and researched.
3. Make sure literature review **team members have appropriate experience and skill set**. It is recommended that people helping with the literature review are well versed in interpreting academic literature, literature reviews, and how to search large academic databases. Expertise in the content of the questions is helpful.
4. **Meet regularly** as a large team throughout the literature review phase in order to discuss search strategies, talk through refinement process of each question, and troubleshoot issues as they arise.

II. Literature Review Training – Q/A

What is a literature review?

A literature review asks: **What do we know - or not know - about this particular issue/ topic/ subject?** How well you answer this question depends upon:

1. The effectiveness of your search for information
2. The quality & reliability of the sources you choose
3. Your ability to synthesize the sources you select

(from <http://guides.library.vcu.edu/lit-review>)

What is the purpose of the literature review in the SEED Method?

The SEED Method uses a review of the literature to investigate which aspects of each question have been answered by prior studies in order to make recommendations targeting research gaps. The literature review also helps utilize appropriate wording in revising each question. The research questions generated by the Topic groups that represent gaps in current knowledge and are relevant to patient centered outcomes research will be incorporated into a *Research Agenda*.

How do I start?

The first step to beginning the literature review is to understand the question that is being posed! Please see Section III A2 below for additional details regarding review of the Topic group audio and transcripts to better understand how the question originated, the context and meaning behind the question, and the direction of the question being asked. The context of the discussion may be very helpful if the question itself was not precisely worded.

A second important step is to review the recommended process and materials, such as the *Refinement Template*.

How do I search for articles?

We recommend using a search engine such as PubMed, Web of Science, or an academic library system in order to search for academic articles. If you are unfamiliar with searching these databases we recommend meeting with a librarian before beginning.

How do I organize my search?

There are several ways to organize your search, however we recommend using a citations manager such as Refworks or another system that suits your team's needs. Citations can be saved under sub-folders linking them to each research question, and can be easily uploaded through search engines such as PubMed.

How do I know I'm on track?

We found that group meetings to review work in progress are a great way to stay on track.

How do I know if and when I've thoroughly researched a question enough?

It is helpful to keep in mind that your goal is to re-word the question posed by the stakeholders instead of changing direction. If the question is out-of-step with the current research, then completing the 'Summary of the Literature' table (Part III) in the *Question Refinement Template* is a good guide.

I've done the literature review, now what? How do I use this to refine the research questions and inform the gaps in knowledge?

Use Part III (Summary of the Literature) and Part IV (Research Gaps) tables in the *Question Refinement Template* to synthesize what was learned from the literature and revise the final questions based on the findings.

III. Completing *Question Refinement Template*

A. Reviewing the prioritized research questions:

1. Review Topic Group notes and audio recordings to make sure questions reflect the groups' discussions and revisions. This includes:
 - Question wording
 - Population, outcomes, and special concerns
 - Rationale for the question
 - Context of the question
2. Understand the direction of the relationship specified in each question (What impacts what? What is the predictor variable? What is the outcome of interest?).
 - ***Tip: Only review studies that focus on correct direction of relationship! That is, make sure the articles you use in your literature review are getting at the outcomes of interest in each research question!***
3. Check-in with the Lit. Review team to develop keywords together and discuss your search strategy and direction you're heading in.
4. Narrow down population or outcomes (if necessary) to get to the "right" question.

B. Reviewing the scientific literature:

1. Review the professional literature on the topic – use PubMed or other databases.
 - a. Start by searching "keywords" that were developed.
 - Review articles that seem the most relevant to finding out whether the question has been answered as posed.
 - **Systematic reviews are a great resource!**
 - b. As you review the most relevant articles pay attention to the citation trail. This helps to focus your search in the right direction.
 - In recent articles that have cited your article of interest, go through their reference list and look for other relevant citations.
 - In older articles, look 'forward' to papers that have cited this article and look for other relevant citations.
 - c. Only summarize and document the relevant articles in the *Question Refinement Template* (see next section below).

Tip: When reviewing articles, start with the abstract and conclusion sections to see if the article is relevant and adds anything to your search! Also make sure that it is trying to answer the research question you're investigating! If so, pull out the important points.

2. How to move from "reviewing the literature" to "uncovering the knowledge gaps":
 - a. Ask yourself:
 - Did the studies answer the main question being asked?
 - Did the studies answer the question for the special populations, outcomes, and specific concerns?
 - What are the research gaps identified in those articles?

- Look for author comments about where evidence is lacking, as well as specific recommendations for future research.

C. Filling out the Question Refinement Template:

1. Begin filling out the *Question Refinement Template* with the most relevant, “on-point” articles.
 - **Tip: Save time by cutting and pasting key points from the article!**
 - **Tip: Start with basic literature and systematic reviews. After that, you can look for articles about special populations, innovative interventions, and dissemination and implementation.**
 - **Tip: Assess the strength of the evidence. This will provide a framework for recommending further research on the topic (if evidence is preliminary) or moving on to more targeted issues.**
 - **Tip: Focus attention on the limitations as well as the recommendations for further research in each article.**
 - Periodically check-in with your Lit. Review team.
2. Check-in with team after filling in five articles to make sure your search is going in the right direction.
3. Fill in the rest of the template and do another check-in around 10-12 articles. Bring suggestions for the final re-worded questions.
4. The Lit. Review team provides feedback and works together to come up with the final, refined research questions.

Tip: Continuously fill out Lit Review Tracking document to update question status!

D. Identifying and reaching out to content experts

1. Use the *Question Summary Template* to create a summary for each research question.
2. Reach out to content experts and send the completed *Question Summary* for the question of interest to them to review. Be clear that you are looking for feedback on the question itself and that you are not looking for them to provide answers to the question. The request should be for a small amount of their time via a short interview (15 minutes).
3. Speak with a topic/content expert on each research question to:
 - Ensure that topic was fully explored and that the review captures the relevant scientific literature.
 - Discuss their feedback and thoughts on the final research question(s), including question wording, or suggestions for different directions.
4. Incorporate experts’ suggestions into final research questions (as you and your team see fit).
5. Final research questions should be asking questions that get at the gaps in the scientific knowledge base, while reflecting as closely as possible the questions suggested by Topic groups!

E. Documenting final, refined research questions

1. Once a question is finalized, transfer the final, refined research question to *Final Refined Research Questions Template*.

Necessary documents – see templates

- *Question Refinement Template* (one per research question)
- *Question Summary Template* (one per research question)
- *Final Refined Research Questions Template* – this becomes the Research Agenda (not attached – please see example documents)
- *Lit Review Tracking document*