Writing a Great Literature Review

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Introduction

As a continuous improvement leader in your school or district, you are going to be faced with challenges that you never foresaw. One day, you will be sitting at your desk, looking at data that is telling you all kinds of scary things about your situation. Overwhelmed, you frantically begin Google for solutions; only to find lists of expensive products and consultants that don't really address your specific situation. What is a leader to do!?!

I have great news for you! It is unlikely that you are the first leader to face this particular challenge. When confronted with an important decision, education leaders should turn to the research literature to gain their footing and consider the possible impacts of their decisions.

As a decision-maker, your thinking must be rooted in a sound theoretical model that is easily communicated to your constituents. In this eBook, I will teach you a simple, six-step process for completing a thorough and comprehensive literature review and transforming it into a theoretical

Step One: Search for Literature

It may seem obvious, but the first step to conducting a great literature review is to find peer-reviewed research articles that are relevant to your problem. In education, there are many places to look for such articles, but I always encourage folks to start with the [Education Resource Information Center](#) (ERIC) database. The ERIC database is a free database managed by the Institute of Education Sciences (IES) at the U.S. Department of Education. This database archives hundreds of education journals from round the world and is widely considered to be the most comprehensive database available to educators.

The basic search engine for the ERIC database is on its homepage. Simply type in an appropriate key word or phrase and click "Search". It is recommended that you also select the "Peer reviewed only" and "Full text available on ERIC" filters. These filters will ensure that you get immediate access to the highest quality peer reviewed articles available in ERIC.

Before we discuss at some of the features of the ERIC database, lets pause for a quick discussion about keywords. A keyword is a word or phrase used to search for articles. While the search engines deployed by academic databases are getting better, they are not as sophisticated as more common search engines like Google or Bing. You will likely need to try several words or phrases to get the information that you want to know. For example, if you are looking for information on English learners, you may need to use all of the following keywords to get the information you need: "English learner", "ELL", "English language learner", "English as a second language", "Bilingual students", "English acquisition", etc. It is recommended that you keep a list of keywords and the date at which you last searched for that keyword. Figure one provides a model for how I like to track my article search terms.

A search in ERIC will return a list of results. At the time of this writing, if you search the term "English Learner" ERIC returns nearly 5,500 results. That is probably more articles than you need (or want) to read. Adding additional filters can quickly narrow down the number of results in your field. It is generally considered best practice to focus your results on research conducted within the last ten years, so I always recommend adding time frame filters next. If you filter the results for "English Learner" down to the last

five years, you get roughly 2,700 articles. That's still way too many articles for any one person to reasonable review – but ERIC has ten different filtering options that will allow you to continue to narrow your search results down to a reasonable number.

Date of Search	Search Term	Database	Number of Results	Number of Articles Saved
3/15/21	English Learners	ERIC	63	15
3/16/21	English Language Learner	ERIC	63	11
3/17/21	English as a Second Language	ERIC	240	75

Figure One: Model Keyword Log

Step Two: Read Abstracts and Download Articles

Having narrowed down the number of articles retrieved in your search; it is time to select the articles you actually want to read. Rather than reading all of the articles in full, you should start by reviewing the article abstracts. Abstracts are condensed summaries of a research article that help you understand the underlying research question, a little background about the work, how the authors conducted their study, what they found, and why it matters. The are normally less than 250 words, so you can scan them very quickly and determine if an article is really relevant to the problem you are trying to solve.

ERIC makes this easy by providing detailed abstracts right in the search results. Simply start at the top and work your way through the abstracts. You should be able to tell within the first few sentences if an article is going to meet your needs. If you need more information, you can read the full article abstract by clicking the name of the article.

Once you have found an article that you want to read, download it and save it to your desktop. Don't spend time reading the articles yet. That will slow you down and cause you to circle back over your results multiple times. Focus on building your own library of articles relevant to your topic. ERIC articles are downloadable as a PDF file. When you download them, they will come with a generic coded name that ERIC uses for sourcing. You will want to re-name each article and save it in a unique folder on your hard drive. A good way to do this is to create a master folder for your project followed by a folder with the date of your search. Give your file a recognizable name, such as the authors last name and the year it was published. This will make it easier to find files later. Keep going with this step until you have a good-sized library, twenty articles or so, that focus on your specific topic.

If you plan on doing a lot of literature searches, you may benefit from investing in one of the many citation management tools available on the market.

Six Citation Management Tools to Make Your Life Easier!

Mendeley	Zotero	EndNote
Papers	Ref Works	Paperpile

Step Three: Read Abstracts and Take Notes

Once you have collected and archived your articles, it is time to read them and take notes. It is vitally important that you read all of the articles you selected in order to develop a deep understanding of the current thinking on your topic. During this process, you will want to take detailed notes in an efficient way.

There are a few good ways to take notes while you read. Many citation management tools include features that allow you to take notes right into the article file. This makes it easy to export and review notes later and also helps you keep your place while you are working. These tools are useful if you plan to do a lot of intensive literature reviewing; however, some of the note taking and exporting features can have a steep learning curve. I do not recommend them if you are doing only the occasional project.

If you have saved your articles as PDF files, you can use the comment feature in your PDF reader to make comments about the article along the way. While this is efficient, it can be cumbersome because you must go back and click and open each comment to remember what you said.

The method I generally teach to research new-comers is to simply take notes in a word processing document. To make this method efficient, start by writing out a full citation of the article you are reviewing. This will save you time later when it is time to build your references list. Next, type your notes under the citation with bullets. I suggest keeping the notes for all your articles in the same document. You will see why when we talk about coding your notes later. I have included a mockup of this process in Figure 2 on the next page.

Here's another tip: do not copy and paste language from the article into your notes. Always paraphrase important information into your notes. This step helps to prevent accidental acts of plagiarism later as you will eventually paraphrase the language a second time when you work it into its final form.

As you read, make note of any important articles cited by other authors. It is likely that past authors will have cited foundational articles on your topic or seminal pieces of research that you need to familiarize yourself with. You should also scan the references list of each article for article titles that sound meaningful or relevant to your paper. You will want to find those and review them later. I always copy the citations into my notes and highlight them in a bold color so that I can easily find them.

Complete this step for each of the articles you discovered during Step Two.

Courtney, M.B. (2020). The Education Agency as Research Intermediary. *Journal of Educational Issues, 6*(1). doi: 10.5296/jei.v6i1.16174

- This paper is about how state education agencies can support schools and districts in implemented ESSA's evidence-based practice provisions.
- NCLB included a directive to use "scientifically based research" and ESSA expanded that to formalize the definition.
- There are four evidence levels under the ESSA.
- A research intermediary is an agency that helps to provide access and interpretation to research.
- SEAs can become research intermediaries by modeling research use in their own decision making.
- SEAs can support research use by developing training protocols that build knowledge and capacity.
- SEAs can support research use by supporting action research in schools and districts.
- Papers to find:
  - Biesta, G., (2007). Why "What Works" Won't Work: Evidence-based practice and the democratic deficit in educational research. *Educational Theory, 57*(1). https://doi.org/10.1111/j.1741-5446.2006.00241.x
  - Coldwell, M., Greany, T., Higgins, S., Brown, C., Maxwell, B., Stiell, B., ... Burns, H. (2017). *Evidence-informed teaching: an evaluation of progress in England*. Research Report; Project Report. London, UK, Department for Education.
  - Cooper, A., & Shewchuk, S. (2015). Knowledge brokers in education: How intermediary organizations are bridging the gap between research, policy and practice internationally. *Education Policy Analysis Archives, 23*(118). https://doi.org/10.14507/epaa.v23.2355

Figure Two: Sample Note Taking Procedure

Step Four: Find New Articles and Repeat

It is unlikely that your initial library of twenty articles has provided enough information for you to fully develop a theoretical foundation for your decision making. You will need to repeat the search process multiple times, at least three, to develop a thorough review. You should repeat these steps by finding the articles you identified in Step Three and testing out new keywords in Step One. There is no steadfast rule as to when you have enough information. A good rule of thumb is that you have enough information when you run out of questions or when a scan of multiple reference lists turns up no new articles of interest.

How many articles do I need?

You should repeat Steps One through Three until you have sufficiently answered your own questions on the topic and a quick scan of the references lists of other papers reveals no new articles of interest.

Step Five: Code Your Notes

Now that you have read your articles and taken notes about their content, it is time to code your notes into themes. As you read, you have undoubtedly noted themes or trends that run across multiple articles. The idea here is to sort your notes out by theme so that you can start to see the connections and patterns that form the foundation of your problem.

If you used the note-taking method I described in this eBook, the coding process can be done quickly using color coding. Simply start at the top of your note pages, identify the theme of your first bullet point, and give it a color. As you go through your document, highlight anything else that is of the same theme the same color. You may need to take multiple passes through your document to make sure that you have coded all of your ideas. In qualitative research, this method of coding is called *inductive coding.*

For example, if I were to code the note snippet on page 4, I would likely group bullet two and three together (as they are both related to the historical development of a policy) and bullets four through seven together (as they all relate to the specific details of research intermediaries).

Step Six: Communicate Your New Understanding

Congratulations! You have made it to the end of your literature review process. By now, you have a long list of articles that you have carefully studied and an idea of the key themes that are driving the problem you are trying to solve in your school. Hopefully, you also have a better idea of what you will to do try to solve that problem. The final step is to decide how you will communicate these results to your stakeholders

The traditional way to communicate your new thinking is by authoring a formal literature review. This could come in the form of a formal research paper, a whitepaper, or a policy brief. If you have clearly and accurately coded your notes in step five, then you should be able to pull your thoughts together pretty easily by creating a subheading for each coded category in your working draft and then turning your notes into more thoughtful narratives. This is a good option if you are planning on sharing your work with your colleagues, presenting on your solution at a conference, or promoting your solution beyond the four walls of your schoolhouse.

Another good option for education leaders is to create a visual representation of your newly created logic model. This visual representation should succinctly capture each of your coded categories with a few bullets showing the finer points of the category. This is a good option if you will primarily be sharing the fruits of your labor with students, parents, or the broader community.

Regardless of which method you choose, you should also include an alphabetized references list. This will help your audience dig deeper on their own and gain a better understanding of the work that you did.

Now – go forth and do good work friend! Allow the research literature to empower and embolden you as you work to solve persistent problems in your school or district. Your innovative solutions will be strengthened by the time you spent with the literature and your newly created support documents will help you to communicate about your decisions efficiently and consistently.

Dos and Don'ts for Communicating your Work

DO use headings to group the literature by themes. Headings make it easy for the reader to quickly navigate your paper. It also makes the information easier to digest by breaking it down into topical snippets that can be stand alone.

DON'T use a heading if you don't need one. If you find that a section of your paper only includes one or two sources, it probably isn't a robust enough to warrant a stand-alone section. Do some more digging for other literature or allow this section to be absorbed by another theme.

DO consider the flow of the paper. You should work to make connections between themes and help the reader see how everything fits together into a big picture. Your theory model should tell a story.

DON'T be afraid to vary slightly from established academic norms. While there are time tested formulas for presenting research papers, the best researchers know when to follow the rules and when to adjust them appropriately to make a point.

DO weave multiple pieces of literature together to make your point. Think of it like baking a cake. Your literature is the cake itself – its super important and must be put together just right in order to work, but the decoration is where you get to add a little splash of personality. Is it a wedding cake or a birthday cake? You tell me!

DON'T simply state what the prior research has said. If the reader wants to know what another researcher says about a topic, they can read the original paper.

DO provide an appropriate citation every time. It is likely that you will cite a paper multiple times in your discussion of the theory – especially if it represents a new change in thinking. Your paper must be cited every time you use it.

DON'T cite studies that you didn't use. It is likely that you spent time reading papers that never actually make it into your theory model. That is okay. Don't add a study simply because you spent time on it.

DO make sure to make your point. Each section of your theory should make a connection back to the purpose of your study and reiterate why your research is important. After reading each section, as yourself, "So what?".

DON'T give away the results of your study too soon. Your theory model is where you set up the study and help identify the glaring hole in the theory you are trying to fill. You can discuss your study later.

DO allow this section to challenge the thinking of others and yourself. Your goal is to expose gaps and restructure current thinking to create space for new ideas – YOUR new ideas! You cannot do that without challenges old ways of thinking.

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data and research to drive continuous improvement
in your school or district, please visit:

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