INTRODUCTION TO ERIC DIRECT

WHAT IS ERIC DIRECT?

The ERIC database is the world's largest index to journal articles and documents in education, but it is not exhaustive.

- **Topic coverage**. It covers topics the US Department of Education cares about: pre-K through post doc education. It is weak in Christian school and church education. Supplement with Atla and WorldCat for religion.

- **Genre/format coverage**. ERIC cites scholarly journal articles and unpublished practitioner reports (article length "ERIC documents"). It cites very few books. Supplement with WorldCat for books. It provides full-text links to many items, but it does not link to journals we own.

ACCESSING ERIC

To use the ERIC database, go to https://library.dts.edu/ and choose ERIC from the drop-down list (Figure 1).

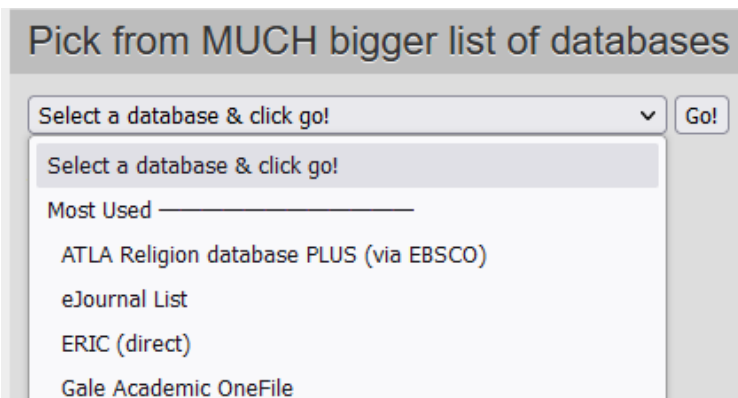

Figure 1. Drop-down list of databases at the DTS library website.

TABS AND OPERATORS

Choose the Collection tab and enter search terms to search the ERIC database and bring up records of resources for your topic. Choose the Thesaurus tab to find descriptors (subject headings) useful for your search.

ERIC uses quotation marks, parentheses, AND, and OR as most other databases do. AND and OR must be in all caps. To omit a word, use a hyphen (-). (An asterisk (*) is not a wildcard and has no effect on a search.) The default operator is AND. Use a field name followed by a colon and a search term to restrict a term to a specific field. E.g., author:davis would bring up records with an author named Davis. The field name followed by a colon only affects the word, phrase in

quotation marks, or words in parentheses following it. E.g., a search for << title:blue states >>, brings up records with "blue" in the title and "states" anywhere in the record. To search for the phrase "blue states" in the title, use << title:"blue states" >>. To find "blue" and "states" in the title but not necessarily as a phrase, search for << title:(blue states) >>.

For more information on searching, click the Advanced Search Tips link to the right of the Search button (Figure 2).

Figure 2. ERIC search screen.

IDENTIFYING USEFUL SEARCH TERMS

The key to successful searching is picking good search terms. ERIC uses standardized terminology for concepts,[1] so you need to discover what standardized terms ERIC uses for the topic you want. Below we illustrate two ways to identify useful search terms in ERIC: trial and error searching, and the thesaurus. The trial and error method consists of doing an initial search, examining records, then executing subsequent searches based on what you learned. The thesaurus method involves using a tool ERIC provides for you.

TRIAL AND ERROR

We begin with a question: why do so many students at the local high school flunk STEM courses? (We might also ask: Is it just a STEM problem, or are these students flunking non-STEM courses, too?) We need to discover what standardized terminology ERIC uses for the concept of flunking. Our initial exploratory search is for flunk.

Figure 3. Search for a term.

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[1] Standardization is meant to guarantee a name or concept is always expressed in a consistent way. Standardization reduces problems caused by variant spelling (e.g., Koran or Quran or Qur'an) and variant forms (e.g., J Smith vs John Smith) and synonyms (e.g., anger vs wrath). So controlled vocabulary supports consistency and cross references from non-standard terminology to standard terminology. The ERIC thesaurus provides such cross references.

This search retrieves 22 results (Figure 4). Some records are irrelevant because they use "flunking" in reference to school failure, not student failure. Notice that a few descriptors are listed under each record. Click the title to see more. Descriptors for all 22 records are tabulated on the left. Note some useful descriptors such as Grade Repetition and Academic Failure in the list. Clicking a descriptor in the list brings up the records with that descriptor from the 22 results.

Figure 4. Search results.

THESAURUS SEARCH

We wish to understand how promising descriptors are used in relation to other terms in the database, so we pick the Thesaurus tab, type in << academic failure >>, and search (Figure 5). This should lead us to other descriptors.

Figure 5. Thesaurus search.

The search brings up one result.

Figure 6. Thesaurus search result.

Click the link to find other potentially useful descriptors (Figure 7).

Broader Terms
Failure

Narrower Terms
Reading Failure

Use this term instead of
Scholastic Failure

Related Terms
Academic Achievement
Academic Probation
Achievement Gap
At Risk Students
Dropouts
Expulsion
Grade Repetition
Learning Disabilities
Learning Problems
Low Achievement
Social Promotion
Student Promotion
Suspension
Underachievement

Figure 7. Descriptors related to Academic Failure.

This surfaces additional promising terms. Click one to check for more terms. For example, Dropouts will lead to Dropout Prevention, Dropout Rates, etc. In this case, using Dropout should retrieve these related terms. Under Dropouts we also find Withdrawal (Education) and decide not to include it because the Scope Note says it is about much more than dropping out (Figure 8). Most terms lack a Scope Note, but they are useful when included.

Withdrawal (Education)

Scope Note: Termination of class, grade, or school due to transfer, completion of school work, dropping out, or death

Figure 8. Scope note.

PERFORMING A SEARCH

Once we find the search terms we want, we combine them using search operators.

After performing a search, you may further restrict results by making appropriate choices in the left-hand menu. For this example, we first try

 << "academic failure" OR underachievement OR "low achievement" OR "grade repetition" OR "academic probation" OR dropout OR expulsion OR suspension >>

We retrieve around 550,000 records! We need to refine the search. We omit terms in the initial search that were not about failing a grade per se, and we return to our original question about why so many students at the local high school flunk STEM courses. So we narrow the search by ANDing terms for high school and terms for STEM that we find in the Thesaurus or by trial and error.

("academic failure" OR "grade repetition" OR expulsion)
AND
('high school" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12")
AND
("stem education" OR "science education" OR "technology education" OR "engineering education" OR "mathematics education")

We still retrieve about 300,000 records. ERIC is huge! To the left of the search results are options to further limit results. Limiting by publication date, publication type, audience, and/or location might be particularly useful depending on what exactly we wanted to study. Are we interested in journal articles about STEM issues in Texas high schools within the last 20 years? Results are only a few clicks away. Any link you click on the left-hand side searches within the search you already performed. E.g., choosing Texas under Location reduced the results to slightly over 4000.

If we do not yet limit by location, type of publication, or any other options we can choose on the left-hand side, we must still reduce the results. Causation is our focus. A thesaurus search for <<causation>> brings up no results even when we check the box to include synonyms (Figure 9). A similar thesaurus search for <<cause>> brings up one irrelevant result, but a thesaurus search for <<causal>> retrieves helpful descriptors. From those we can find others as well.

Figure 9: Thesaurus search for causation.

So we add the following to the search we constructed before limiting to Texas.

AND ("causal models" OR etiology OR correlation OR "statistical analysis" OR "attribution theory" OR influences OR "statistical inference" OR predictor variables")

Results now number about 140,000, and we need to reduce them further. Restricting to full text and peer reviewed under the search box, brings up about 20,000 records. We may restrict to full text for short papers, but we will not want that limitation for a thesis. Clicking Texas under Location reduces results to about 400.