Welcome to the “Case of the Missing Single-Subject Study”, a workshop presentation for students in educational research courses.
What we’ll discuss today:

- Defining your information need
- Where to find peer-reviewed education articles
- How to find single subject research designs
- How to get library help

We will discover how to find peer-reviewed journal articles that use a single-subject methodology.
Before you start on your quest for single-subject studies, be sure you understand your assignment.

Are you looking for a methodology-based article to share in a discussion post, annotated bibliography, or literature review? Maybe, you are exploring single-subject methodology to design your own research.

Whatever the assignment or step in your research process, be sure to know the class expectations as set out in your course outline, grading rubrics, lectures, texts, and selected readings or other learning tools. Without this understanding, you may find yourself lost in dark alleys with unsavory characters that block your progress.
Through the Library, you have access to *SAGE Research Methods*, a database of books on the various methodologies used in research. These are an excellent way to clarify definitions and explore best practices.

The chapter on Quantitative Research Methodologies in *Designing and Conducting Research in Education* highlights some of the key features of a single-subject study:

Subjects are typically studied individually and there are very few participants.

The study compares different phases of treatment:
- Before treatment (baseline phase: A).
- With treatment (treatment phase: B).
- Changes in behavior (phase: C).

[There are multiple variations of how this methodology is implemented beyond the A & B phases. You may only need to focus on A & B.]
Peer Review: What Does It Mean?
https://nu.libguides.com/SPD695/peer-review

Key Points

- An article evaluation process conducted by a select panel of peers, experts in the same research area, who approve or reject the article for publication
- Academic term for quality control
- Most library databases provide a way to limit your search results to articles from peer-reviewed journals

The chapter on Peer Review in *Case Studies for Ethics in Academic Research in the Social Sciences* explains the peer review process and notes its value to scholarly publishing.

Tip: When you are searching in a library database, look for an option to limit your results to articles published in peer reviewed journals. This is an easy way to eliminate articles you don’t need from your search results.
Google and Smart Search are wonderful information-finding tools. However, the Library has more powerful tools for doing education research.
Use the Library’s Resource Guides created for your course or program to quickly find the databases recommended by your library liaison.
This is the homepage for your course guide. Use the tabs on the left side of the page to navigate through the guide.
A great place to begin a search for single subject research studies is with EBSCO’s Databases for Educators. You will find articles covering all levels of education and all educational specialties in this database group.
<table>
<thead>
<tr>
<th>Search Techniques: Focus on Key Concepts &amp; Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Divide your topic into concepts/segments/pieces</td>
</tr>
<tr>
<td>▪ Searching in full sentences is unnecessary</td>
</tr>
<tr>
<td>▪ 2-4 key concepts usually works best</td>
</tr>
<tr>
<td>▪ Brainstorm for synonyms and related terms</td>
</tr>
<tr>
<td>▪ There are lots of ways to say the same thing</td>
</tr>
<tr>
<td>▪ Expand / narrow results</td>
</tr>
<tr>
<td>▪ Combine key words using AND/OR</td>
</tr>
<tr>
<td>▪ Refine results using database limiters and facets</td>
</tr>
</tbody>
</table>

Think about your topic before you start searching. Identify the key concepts and ideas first, then think of other terms related to your topic. Use these in conjunction with database settings to create more precise searches.
Search Techniques: Putting Terms Together

- Connect ideas
  - special education AND assistive technology
- Connect synonyms
  - inclusion OR inclusive OR mainstreaming
- Phrase search
  - “every student succeeds act”
- Find alternate endings
  - learn* = learner, learners, learning
- Create search string
  - Your Topic AND “single subject”

Here are a few examples of how to put your terms together to improve your search effectiveness.
In the example shown, we are using selected EBSCO databases.

Use the advanced search box to organize your key points:
Population or group, for this search, come first
The type of methodology required comes next
Followed by the problem being researched
Lastly, strategies to be implemented to change behavior are listed. These may align with your research questions.

The second search box models search terms.

Note some of the search techniques used:
Synonyms are “OR-ed” together within a box
Quotation marks keep phrase concepts together
The asterisk at the end of a root term will search for alternate word endings
The drop down box of search field options lets you decide where you hope to find your term listed: SUBJECT field, ABSTRACT field, or in the article TITLE.
From the results list, look at a potential article and see what other subject terms might be listed.

In this example, “behavior” is in the TITLE and in the SUBJECT fields. “Single-subject” appears in the ABSTRACT as designated in our search, and “disabilities” appears in the SUBJECT field.

For additional synonyms look closely at the SUBJECT field to identify alternative search terms such as “mathematics” or “academic achievement.”
A single subject alternating treatment design across three student-teacher dyads was used to investigate the comparative impact on student academic engaged time of three opportunity-to-respond (OTR) strategies: guided notes, class-wide peer tutoring, and response cards. Participants were three high school students with disabilities with noted behavioral concerns and poor academic performance within mathematics general education courses. Results indicated all OTR interventions were effective in improving percentage of academic engaged time and reducing behavioral disruptions. Using visual analysis and an additional replication phase, response cards proved to the most efficacious in improving student outcomes. Implications for the existing knowledge base on the efficacy of OTR as well as future research within high school settings are discussed. [ABSTRACT FROM AUTHOR]

Reviewing the ABSTRACT gives you a quick view of the author’s purpose for the study and hopefully a hint of the methodology they implemented.
Try a Database Search: Critically Look at Methods

Method

Participants were selected from a public high school located in the Midwest. The targeted high school was selected from schools that were participating in a national randomized control trial examining the effectiveness of a range of interventions with secondary-aged students with significant behavioral challenges (see Kern et al., 2015).

Look within the article to read more about the authors methodology. This may run several pages. Charts and tables help you visualize the results of the study.
Try a Database Search: Focus on Research Questions

- Grade level
- Subject area
- Specific content or problem
- Specific strategy
- Research (use “study” or “method* as a search string)

To focus on your research questions, try a variety of searches with terms that reflect your interest. Add a search box or swap out terms in one of the boxes to see how your results change. Enjoy the systematic process of finding the best representative articles for your research.
We are here to help you with your research process. Please let us know if you have questions.