Graphic Organizers for Research Papers

A graphic organizer (also referred to as a research matrix) is a useful tool for compiling detailed notes during the research process. These types of note-taking systems can take a long time to assemble, so they're geared toward long-term papers, such as graduate research or capstone projects. That being said, they are well worth the effort as they save time and effort when navigating themes, content, and theories across articles. Furthermore, these organization systems make it easy to quickly compile a bibliography as all the information is stored in one place.

Why Graphic Organizers?

There are quite a few reasons to consider creating a graphic organizer for your research, each adaptable to your unique research needs. The wonderful thing about graphic organizers is that there are no rules—your organizational method and the content you choose to include are entirely up to you. Below is a list of benefits to consider.

Organize Articles Easily

A graphic organizer makes it easy to organize your articles and research content, whether by topic, year, subject, or method. Graphic organizers are also easy to navigate and add to as your research progresses. This feature is particularly important when working with multiple articles as it is easy to lose track of information over time.

Color-Code References

This benefit is similar to the one above, but a bit more specific. Color-coding, as a visual tool, can be very helpful in drawing connections and visualizing relationships between articles. The use of color in studying content and taking notes has long been documented as a memorization strategy, as well as a way to quickly scan for important content. You could use colors to indicate specific dates, methodologies, ethnicities, geographic locations, or theoretical developments.

Create Specific Columns

By organizing your research in the form of a table, it is possible to create columns representing patterns, relationships, and themes that are important to your research. The use of columns can improve the overall clarity and structure of your research articles by honing in on specific information, saving time by eliminating the need to sift through pages of notes. Finally, organizing information into columns makes it easier to focus on specific aspects of your research at any one time.

Access References and Citations Instantly

This benefit cannot be understated; the importance of accessing reference citations quickly saves time, ensures accuracy, and makes it easy to track source information. By seeing your articles all

in one place, you can visualize the quality and breadth of your sources by tracking the credibility of the authors and information sources. You can also track dates to ensure that your articles are relevant and up-to-date on your chosen topic.

Refer Back Later

Aside from saving hours of additional work, the ability to refer back to old research allows you to build on your previous knowledge, evaluate your progress over time, avoid repetition, and ensure that your content remains relevant. The work we put into researching a topic is important and should never be forgotten. By organizing your research in a compact table, you can develop more impactful research and knowledge in your field while tracing your growth as a scholar.

Are Graphic Organizers a Good Fit for My Research?

While graphic organizers can be an incredibly useful and valuable tool, they do have a few drawbacks and limitations that must be considered. As mentioned above, graphic organizers take time to assemble and are not always the best choice for all forms of research. Below are a few limitations to consider.

Can be Time Consuming

Research in and of itself is a rigorous and time-consuming process. Pair that with the time it takes to build a graphic organizer, and it is clear that the process requires a significant time investment, further slowing down the research process. Creating a graphic organizer requires a degree of focus and effort, making it a heavily involved process that may not work well for shorter research papers. It is important to consider whether you are ready to commit to this type of intensive note-taking.

May Not Align with How Everyone Processes Information

Graphic organizers are visual, which may not be the best fit for individuals who learn better in other ways. Columns of thought may not suit the way everyone processes information. While graphic organizers are meant to simplify complex information, it may overcomplicate information for some people, making it feel overwhelming. It is important to remember that graphic organizers should be adapted to the needs and preferences of the researcher.

What Does a Graphic Organizer Look Like?

Graphic organizers will vary depending on your style, research, and needs. They are a tool for you, as a researcher, to organize your thoughts, observations, and insights as you reflect on complex information and apply your critical thinking skills. Below is a real example from a Writing Center staff member, Amy Russo. While the sample text may be too small to read, it demonstrates how a graphic organizer might *look* with multiple columns and references.

How Should I Structure a Graphic Organizer?

Graphic organizers can be structured in a few ways, but we will focus on two orientations: vertical and horizontal. Below are examples of both options.

Horizontal Layout

Reference	Theoretical Framework	Research Question/ Hypotheses	Methodology	Conclusions
Maisto, S. A., Pollock, N. K., Lynch, K. G., Martin, C. S., & Ammerman, R. (2001). Course of functioning in adolescents 1 year after alcohol and other drug treatment. *Psychology of Addictive Behaviors*, *15*(1), 68.	Coping factors in relationship to decreasing substance abuse with adolescents one year post drug treatment	What factors contribute to the variability in adolescent functioning regarding substance abuse one-year post treatment?	Quasi-experimental design involving 166 subjects in Pittsburgh adolescent research center. Initial baseline assessment and 1 year later.	All clinical groups demonstrated improvement at one year.
de Anda, D., Bradley, M., Collada, C., Dunn, L., Kubota, J., Hollister, V., … & Wadsworth, T. (1997). A study of stress, stressors, and	Stress, stressors, and coping strategies among middle school adolescents	Adolescents' perceptions of their stress use of coping strategies and the adolescents' evaluation of	54 middle school students 12-14 years old completed ASCM and STAI.	School related stressors rated highest thus schools are a good place for intervention/prevention. Gender

		degree of success regarding		differences need to be considered.
coping strategies among middle school adolescents. *Children & Schools*, *19*(2), 87-98.				
Longabaugh, R., & Morgenstern, J. (1999). Cognitive-behavioral coping-skills therapy for alcohol dependence: Current status and future directions. *Alcohol Research & Health*, *23*(2), 78.	Examined current status of cognitive behavioral coping skills treatment in relation to alcohol treatment.	Does CBST differ in effectiveness for different kinds of patients during different treatment phases or potential relapse situations? Are certain CBST approaches superior to others?	Reviewed 9 well controlled studies where patients voluntarily entered treatment. Examined studies that attempted to identify the variables responsible for CBST effectiveness.	CBST is more effective than other approaches only when used as an adjunct to treatment, not on its own. Underlying mechanisms still unknown for CBST.
Myers, M. G., & Brown, S. A. (1996). The Adolescent Relapse Coping Questionnaire: psychometric validation. *Journal of Studies on Alcohol*, *57*(1), 40-46.	Psychometric validation of the Adolescent Relapse Coping Questionnaire (ARCQ)	-What is the evidence to support psychometric validity of the ARCQ?	Prospective longitudinal study using 136 substance abusing adolescents.	Analysis provides support for psychometric validity of ARCQ; validate use of temptation coping construct and differences between adults and teens.

Adapted from (Burkholder, 2010).

Vertical Layout

Reference	Cornelsen, K. (2005). Women Airforce Service Pilots of World War II: Exploring military aviation, encountering discrimination, and exchanging traditional roles in service to America. *Journal of Women's History*, *17*(4), 111-119.	Stewart, A. J. (1994). The women's movement and women's lives: Linking individual development and social events.	Bruley, S. (2003). A new perspective on women workers in the Second World War: the industrial diary of Kathleen Church-Bliss and Elsie Whiteman. *Labour History Review*.	Scott, C. (2007). Written in red, white, and blue: A comparison of comic book propaganda from World War II and September 11. *The Journal of Popular Culture*, *40*(2), 325-343.
Alteration of Women's Roles Because of WWII	- Women accredited the WASP program for opening new doors, challenging stereotypes, and proving that women were as capable as men (p. 113) - Women could compete with men as equals in the sky because of their exemplary performance (p. 116) - WASP created	- WAAC (Women's Army Auxiliary Corp) was 1st chance for women to serve in army, given full army status in 1943 as WAC (p. 28) - Needs of the war were so great that women's traditional social roles were ignored (p. 30) - Military women paid well for the time period and given benefits if they became	-Women given equal opportunities (p. 223) - Women joined workforce as a break from the ordinary to help the war (p. 220) - Unconscious decision to cross into male-dominated roles (p. 221) - Seized these new opportunities to bring about change (p. 230)	- Women born in the 1920's found new doors open to them where they once would have encountered brick walls (p. 526) -Even women not directly involved in the war were changing mentally by being challenged to expand their horizons because of the changing world around them (p. 562) - War also brought

	opportunities for women that had never previously existed (p. 112) - Women's success at flying aircrafts "marked a pivotal step towards breaking the existing gender barrier" (p. 112)	pregnant (p. 32) - The 1940's brought more opportunities to women than ever before (p. 26)		intellectual expansion to many people (p. 557)
Hardships and Oppositions	- "From the outset male pilots resented women's presence in a traditionally male military setting" (p. 1113-4) - "The WASP were routinely assigned inferior planes that were later found to have been improperly maintained" (p. 114)	- Women in the military given extensive physical and mental tests, but still discriminated against, ridiculed, and considered inferior to men (p. 29)	- Women given unskilled labor positions by government because only seen as temporary workers, therefore no reason to train them (p. 221-2) - Women given less significant work and viewed as less intelligent and physically able (p. 224)	

Adapted from (Ingram et al., 2006).

What Categories Should I Include in the Graphic Organizer?

The categories you choose to include will be dependent on the information that is most important to your research topic and focus. For example, an anthropology student may want to create a category for where a research study took place or how many participants were involved. A medical researcher, on the other hand, may need to track the year a study took place or specific demographics of the sample population, including age, sex, and ethnicity. Below is a list of categories that you may want to consider adding to your graphic organizer.

- Abstract
- Analysis/Reflection
- Contributions to Knowledge/Field
- Data Points
- Definitions
- Discussion/Conclusion
- Ethical Considerations
- Future Research
- Gaps/Flaws/Limitations
- Geographic Location
- Implications/Recommendations

- Methods/Research Design
- Participant Demographics
- Practical Implications
- Reference Citation
- Research Question(s)
- Results/Findings
- Significance of Findings
- Topic Background
- Theoretical Framework
- Year of Study

How Do I Create a Graphic Organizer?

We recommend using Google Sheets as it is an excellent tool for collaboration with classmates, faculty, and advisors. Here's how to get started!

Step 1: Open Google Sheets

Create a new blank spreadsheet by clicking on the "+ New/Blank" button in the upper-left corner of the screen.

Step 2: Create Your Columns

Begin adding your categories to the first row or column. These categories will serve as the column headers for your graphic organizer.

Step 3: Adjust the Formatting

Use the formatting tools in Google Sheets to customize the appearance of your graphic organizer. You can change the font, font size, color, and background color of your text to make it more visually appealing. Play around with the format until you find a style that works for you.

Step 4: Continue Adding New Content

Enter your research notes under each category in the corresponding column. You can add text, numbers, and even images to your sheet. Continue to add notes as your research progresses, adding new categories or columns as needed.

Activity: Create a Basic Graphic Organizer

Select a recent research paper you wrote. Go to your reference list and open the articles you worked from. How many articles did you use?

Open Google Sheets (or your platform of choice) and create five basic columns: reference citation, abstract, key terms, methods, and results. Add your articles, filling out each column. You just created a graphic organizer!

References

Burkholder, G. (2010). *Table 1 review of literature*. Walden University Writing Center. https://academicguides.waldenu.edu/writingcenter/assignments/literaturereview/matrix.

Ingram, L., Hussey, J., Tigani, M., and Hemmelgarn, M. (2006). *Writing a literature review and using a synthesis matrix*. North Carolina State University Writing and Speaking Tutorial Service. https://case.fiu.edu/writingcenter/online-resources/_assets/synthesis-matrix-2.pdf.