

SYNTHESIS

What is synthesis?

At the very basic level, synthesis refers to combining multiple sources and ideas.

As a writer, you will use information from several sources to create new ideas based on your analysis of what you have read.

What strategies can I use to synthesize my information?

- The key to a good synthesis is to be organized as you're researching and reading sources on your topic.
- One way to organize your research is to use a **synthesis matrix**. Using this, you can record your sources and main ideas on the topic. It will provide a visual representation of your research and help you to see how sources are connected.
- In addition to a matrix, as you critically read your sources, take note of the following:
 - Do any authors disagree with another author?
 - Does one author extend the research of another author?
 - Are the authors all in agreement?
 - Does any author raise new questions or ideas about the topic?

Example of Synthesis

The literature on the imposter phenomenon (IP) is limited regarding graduate students, and no known studies have compared online graduate students to traditional graduate students. Previous studies on graduate students have indicated that online students experience lower levels of anxiety (DeVaney, 2010). Researchers have theorized that the loss of social cues and pressures in electronic communications may reduce anxiety associated with asking for help (Kitsantas & Chow, 2007) and may create a more comfortable, open environment where all members are equal (Sullivan, 2002). Many cues about the context of an interaction are not present in electronic communication, such as body language, nonverbal cues, physical appearance, and emotional reactions (Parks & Floyd, 1996). Without this information, communication online should result in less social influence and conformity in comparison to face-to-face communications (Parks & Floyd, 1996). Because face-to-face communications are absent, or limited, in online graduate programs, it is theorized that online graduate students will experience less anxiety and less intense IP, when compared to their traditional counterparts.

The writer has included multiple resources in the paragraph

This writer has also included an analysis of the topic and added something new to the scholarly conversation.

Entering to the scholarly conversation

- When writing for academic purposes, you are contributing toward a larger conversation taking place among scholars.
- Therefore, you need to place your thoughts and input within that larger conversation.
- What do others have to say about this topic and how does your contribution relate to, and extend this larger conversation?

Ways to include your academic voice to the Research

- In academic writing, it is important to do research and include information from outside sources. However, you need to do more than just present the words and ideas of others. You need to add your own ideas, analysis, and interpretations.
- This is important because if you only include information from outside sources, it is no longer your paper; it is just a summary of what others have stated. Remember that it is important to use research to **support** your ideas, not **replace** them.

This is an example of “cut & paste” or “mash-up” writing.



37% of animals used for science suffer moderate to severe stress and discomfort or severe pain (National Statistics, 2014). “The American Veterinary Association defines animal pain as an unpleasant sensory and emotional experience perceived as arising from a specific region of the body and associated with actual or potential tissue damage” (Dunnuck, n.d., para. 6). Some of the animals used in biomedical research are not given any pain relief and are subjected to painful conditions and physical procedures that leave them in intense cold or heat, or have limbs crushed and spinal cords damaged (Callanan, 2009). Psychological distress, fear, and sadness have been demonstrated amongst a wide variety of species (Ferdowisiann & Beck, 2011). “They’re very similar to us in terms of their emotional lives and their intellectual and physical and social experiences, and using them in painful, invasive ways is to harm them; they don’t consent to it” (Lee, 2015, p. 3).

The student has only included information from multiple sources, without including any of their own ideas, interpretations, or analysis.

The best practices to help you incorporate your own thoughts and ideas into your writing:

1. Begin with a topic sentence that indicates the main point of the paragraph.

To help you write a strong topic sentence, try answering these questions:

- What is this paragraph about?
- What claim is being made in this paragraph?
- What will this paragraph prove or discuss?

2. The best practices to help you incorporate your own thoughts and ideas into your writing:

2. Support your topic sentence by adding relevant evidence (statistics, expert opinion, research studies, or facts).

To help you support your claims and argument, try answering questions like these:

- What research has been done?
- What have experts in the field stated?
- What statistics are available?
- Is the information from the source strong and relevant evidence?
- **Remember:** All information from outside sources must be cited (in-text and in your references list).

3. The best practices to help you incorporate your own thoughts and ideas into your writing:

3. Explain and elaborate by adding your own analysis, conclusions, or ideas.

To do this, ask yourself:

- Why is this information important, significant, or meaningful?
- How does this evidence relate to your thesis?
- What conclusions have you reached by doing the research you've included here?
- What is your interpretation of the research? How do you understand it?

An example where the student has integrated research and added his own academic voice



Animal testing comes with a high cost. It comes with the cost of animals being subjected to tests that put them through distress and can harm or kill them. Research shows that 37% of animals used for science suffer moderate to severe stress and discomfort or severe pain (National Statistics, 2014). This pain is defined by the American Veterinary Association “as an unpleasant sensory and emotional experience perceived as arising from a specific region of the body and associated with actual or potential tissue damage” (Dunnuck, n.d., para. 6). Some of the animals used in biomedical research are not given any pain relief and are subjected to painful conditions and physical procedures that leave them in intense cold or heat, or have limbs crushed and spinal cords damaged (Callanan, 2009). Psychological distress, fear, and sadness have been demonstrated amongst a wide variety of species (Ferdowisiann & Beck, 2011). In these ways, Lee (2015) notes, “They’re very similar to us in terms of their emotional lives and their intellectual and physical and social experiences, and using them in painful, invasive ways is to harm them; they don’t consent to it” (p. 3). When it comes to using animals for science and experimentation, people tend to focus on the fact that non-human animals are inferior to humans. Regardless of this is true it does not take away from the fact that animals experience pain and seek pleasure. Pain and suffering are unique to every individual, and pain thresholds differ for every person and animal. However, evidence clearly shows the pain that is experienced by these animals is experienced the same way that it is in humans. Considering the horrific psychological and physical pain that animals often endure in testing for biomedical research, alternative testing methods are in order.

Topic sentences indicating the main point of the paragraph.

Evidence from sources that explains and supports the topic sentence. Quoted and paraphrased information is properly cited.

Student’s own analysis, conclusions, or ideas about the evidence as it relates to the topic.