**IzTech Academic Writing Center**

**Writing Resources**

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**The Writing Process**

**Planning Your Writing**

**Narrowing your Topic and Developing your Thesis**

Your research and your advisor can help you narrow down your topic and main thesis or questions. You should get a feel for what topics are currently of interest in your field and what research questions have not yet been answered. Your topic should be narrow and specific and yet broad enough that you can tackle it in an article or dissertation.

**Creating an outline/structure**

Academic writing requires a clean, organized, well-structured outline. You must create a “scaffolding” that’s attractive, inviting, and easy to navigate, without any unnecessary or confusing bits hanging out. A clear structure is not only more inviting, but also easier to navigate for your reader. An outline will also help you decide which information you really need from your sources, and where to place them in your paper. Before you even finish your research, you should take the time to create a detailed outline.

**Conduct further research and experiments**

Now that you have a narrower topic, a thesis or main idea, and a solid outline, conduct further research and experiments. Insert your notes beneath the appropriate section in your outline.

**Integrating and Documenting Sources**

Academic journals usually employ one documentation method consistently, using a set of established standards for citing and referencing sources. Academic journals in similar disciplines may not always use the same method. You should check the documentation method used by your intended journal before you write or send your article.

**Integrating Sources**

You typically integrate, or synthesize, your sources as part of the composing process. When you **summarize** a source or sources, you extract ideas that are directly relevant to your writing, expressing them in your own words. What distinguishes a summary from a **paraphrase** is that summaries are selective: they focus on main ideas. When you paraphrase, you include *all of the original, putting it in your own words.* Paraphrasing is reserved for very important detailed information. Whereas a summary condenses and is thus an efficient method for synthesizing material, a paraphrased passage is not usually shorter than the original – in fact, it may be longer. Paraphrase is used sparingly in scientific writing. Direct quotation, where you use exactly the same words as the original within quotation marks, is employed even more rarely in scientific writing (Henderson, 2012).

**Documenting Sources**

Documenting sources in a **list of references** is often the last stage of writing your paper, although you should keep track of your sources throughout the research process. Documenting sources serves several practical purposes: it enables a reader to distinguish between your ideas and someone else’s, and it makes it possible for any reader to access the source itself to ensure its accuracy or focus on its content.

**Plagiarism**

Plagiarism is an extremely serious academic offence. You plagiarize if you use any material that is not your own – whether you quote directly, summarize, paraphrase, or refer to it in passing – without acknowledging it. You plagiarize if you use the exact words of the source and do not put them in quotation marks and if you follow the structure of the original too closely.

**What kind of information must be cited?**

You do not need to cite anything that falls under the category of *general knowledge.* If a typical reader is likely to know something, a citation may be unnecessary. If a fact or idea is *easily obtainable*, a citation may also be unnecessary. This will depend on the expertise level of your audience.

**Voice and Style in Academic Writing**

According to Henderson, academic prose is “**customized for an audience familiar with a given discipline’s conventions and modes of discourse, its central ideas and its ways or presenting and analyzing them**” (2015). It is important to **have your intended audience in mind** when you are writing your dissertation or academic article. Not all readers will be specialists in your field. The readers of Academic journals vary from very knowledgeable readers to those with general knowledge. Biologists tend to read the journal *Cell*, while physicists are the main audience of *Communications in Mathematical Physics*. However, academicians from many fields subscribe to scientific journals like *Nature* or *Science.* Becoming familiar with the conventions of the type of journal in which you wish to publish can help you target your prose toward your audience **so that they can understand your research.**

Some people think of academic writing as dense, abstract writing so highly specialized that non-specialists cannot understand it. However, successful academic writing **should not confuse the reader**. Academic writers may use specialized diction or jargon. However, academic writing includes less ornamentation than literary writing. It is marked by **direct, straightforward prose with few modifiers** (adjectives and adverbs).

The voice in academic essays is generally **objective and analytical**, avoiding the expression of personal views. They use voice in specific ways to **assume distance from the study and avoid bias**. For example, writers may use passive constructions, in which the subject of the sentence is acted upon, rather than acting itself.

**Passive vs. active voice**: Student writers are often told to avoid the passive voice in their writing, because it often results in a weaker sentence. For example, instead of saying “The metal beams were corroded by saltwater” (passive), students may be encouraged to write “Saltwater corroded the metal beams” (active). The passive voice can be used to de-emphasize the subject (such as the researcher) or stress the object (such as that which is being studied). For instance, instead of writing “We studied the correlation between red meat consumption and cancer,” scholars may prefer to say “The correlation between red meat consumption and cancer was studied.”

However, it is becoming more common in science writing to employ the **active voice**, for the sake of simplicity. Sometimes it is much easier to understand a sentence written in the active voice. For example, some articles will use sentences similar to the following: “We then injected smyd5-MO into embryos and examined gross morphological phenotypes.”

So, **how can you know whether to prefer active or passive voice in specific situations**? The best way is to read numerous articles in the top journals of your field to get a feel for academic language used in your research area.

**Exercise 5:** Below is an abstract from the journal *Child Development*. Abstracts precede many journal articles to give a brief summary of the article. **Underline the use of passive voice**, and **put a star next to the use of active voice.**

Using a genetic design of 234 six-year-old twins, this study examined (a) the contribution of genes and environment to social versus physical aggression, and (b) whether the correlation between social and physical aggression can be explained by similar genetic or environmental factors or by a directional link between the phenotypes. For social aggression, substantial (shared and unique) environmental effects but only weak genetic effects were found, for physical aggression, significant effects of genes and unique environment were found…

-M, Brendgen, G. Dionn e, A, Girard, M. Boivin, F Vitaro, & D. Perusse (2005), "Examining genetic and environmental effects on social aggression: a study of 6-yearold twins." Child Development, 76: 930-46

**Follow-up Question:** Does the abstract employ mostly active or passive voice? What is the effect or purpose of the voice used? Do you think abstracts usually employ active or passive voice? Why?

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**References**

Henderson, Eric. (2007). The Active Reader: Strategies for Academic Reading and Writing. Toronto: Oxford University Press.