



Using sources appropriately is often a difficult task. Writers have to negotiate A) Different Ways of Using Sources and B) The Dangers of Plagiarism.

A. Different Ways of Using Sources: You can work citations into your writing in three ways: **1) General References, 2) Paraphrase, 3) Direct Quotation**

1. General References: refer to the entirety to a study or set of studies rather than a specific page or concept. For example:

A variety of high-speed ciné film and short-duration single-shot photographic techniques have been used to this end (Worthington 1908; Savic & Boulton 1955; Watchers & Westerling 1966; Toda 1974; Akao *et al.* 1980; Inada *et al.* 1983).

2. Paraphrase: typically involves the summary of a single part of another author's work.

Single-shot flash photography yields better results than fast-motion movies (Chandra and Avedisian 1991:15).

Note that the writer has included the page number here because the information comes from a specific point in the original work. Chandra and Avedisian's original looked like this:

A variety of high-speed ciné film and short-duration single-shot photographic techniques have been used to this end (Worthington 1908; Savic & Boulton 1955; Watchers & Westerling 1966; Toda 1974; Akao *et al.* 1980; Inada *et al.* 1983). The method which has yielded the greatest clarity is single-shot flash photography.

The writer has determined that only the comparison between movies and stillflash pictures is important enough to repeat, and rephrased to

emphasize that comparison. Even though the writer does not use the exact words, the paraphrased detail still comes from Chandra and Avedisian, who listed six different sources to defend their point. **An author who uses Chandra and Avedisian's statement is ethically obligated to give them credit.** Without proper documentation, the statement would at best function as mere opinion, and would be of little or no professional value; at worst, it would be plagiarism. (*See below on Plagiarism versus Paraphrase*)

3. Direct quotation is not used much in technical writing. Why? Unlike in other fields, such as the study of literature, the exact wording in technical writing is not as significant as the ideas that are being communicated. However, occasionally, you might encounter something written so well, you just have to quote it. Here is a sample below:

Previous studies did not address this issue, however, because "they neglected any effects of liquid surface tension and viscosity, so that their results are applicable only to the initial stages of droplet impact, when these forces are negligible compared to their inertial effects [at the time of impact]" (Pasandideh-Fard *et al.* 1996:650).

The writer took a piece of information directly from page 650, reproduced it word-for-word, and gave appropriate credit to the original authors.

Issues with Direct Quotation: There are a number of issues to consider when using direct quotation:

- 1. Avoid "Dropped Quotes":** Dropped quotes occur when the writer just "drops" a sentence from a source in the middle of his/her own writing. For example,

Accessible work areas are key to making the lab accessible to disabled users. "Work areas shall be

designed and constructed so that individuals with disabilities can approach, enter, and exit the areas. These guidelines do not require that any areas used only as work areas be constructed to permit maneuvering within the work area or be constructed or equipped (i.e., with racks or shelves) to be accessible” [1].

This sentence does not connect well with the first sentence. The quote gives instructions for developing accessible areas, and then refers to guidelines not actually mentioned in the writer’s text. A more effective use of the source might have looked like this:

Accessible work areas are key to make the lab accessible to disabled users. Lab work areas that are “designed and constructed so that individuals with disabilities can approach, enter, and exit the areas” [1] easily need to be part of any accessible design.

2. **Use Square Brackets:** to signify addition of clarification of material to the quoted passage, or places where you’ve had to adjust the tense or mode of verbs and the number (singular versus plural) of nouns in order to make it fit into your own writing. In the above example from Pasandideh-Fard *et al.*, “[at the time of impact]” is added to the direct quote to specify when.

Original Source:	Integrated Quote:
No alteration shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a building or facility below the requirements for new construction at the time of alteration without approval from the board.	Where “alteration[s] are] undertaken which decreas[e] or ha[ve] the effect of decreasing accessibility or usability of a building or facility below the requirements for new construction at the time of alteration,” designers must receive approval from the board [1].

The above example uses direct quotation, but needs to change the singular “alteration” to plural, and the verb forms to agree with that change.

A Word of Warning: Where you place the citation can have significant impact on meaning. These two examples mean different things, even though the words are the same:

Example 1

...some photographs (Akao *et al.* 1980) are not easily reproduced.

Example 2

Some photographs are not easily reproduced (Akao *et al.* 1980).

The left-hand sentence means Akao *et al.*’s photographs are hard to reproduce, whereas the sentence on the right means that Akao *et al.* claimed that some other (unspecified) photos are hard to reproduce. In the first instance, the reader will assume you tried to reproduce Akao *et al.*’s photos, and in the second, the reader will assume that Akao *et al.* tried to reproduce photos. So in positioning the citation, make sure it indicates what you intend.

B. The Dangers of Plagiarism: The word “plagiarism” comes from a Latin word meaning “kidnapper,” because a plagiarist is one who makes off with another person’s ideas. Whether intentional or unintentional, it is a breach of professional or academic trust, in which a person takes credit for someone else’s work.

Knowing how to plagiarize is an invaluable skill because it can:

1. Speed up your writing
2. Eliminate your grammar worries
3. Get you kicked out of some of the nicest schools in the country.

Seriously, though, if you know how to do it, you know how to avoid it. And you want to avoid it. The University of Toronto’s position on plagiarism is clear. The Code of Behavior on Academic Matters (University of Toronto Governing Council Secretariat, 1991) reads:

It shall be an offence for a student knowingly:

- To represent as one’s own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic

work, i.e. to commit plagiarism;

- To submit, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or program of study in the University or elsewhere;
- To submit any academic work containing a purported statement of fact or reference to a source which has been concocted; (B.1.d-f)

That word “knowingly” doesn't get you out of trouble because the university understands that as including “should have known.” And any student who gets as far as university, *should know*. And yes, students do lose their degrees over plagiarism charges.

So how exactly do you do it? There are three main ways to commit an academic offence when using sources.

1. Incomplete or Inaccurate Bibliography:

Failing to identify the appropriate sources is an academic offence. You must list all of the sources that you have used in your list of references, and provide accurate bibliographic information.

Yes, professors and TAs do check sources, especially when they suspect plagiarism. Falsifying sources is not the same as plagiarism, but is still a serious academic offence. Avoid the temptation to do either by keeping a careful record of sources (what and where) used throughout your writing process. You don't want to be looking up bibliographic information on the morning of the day that the paper is due.

2. Failure to Cite: If you are like most students, it's what a priest might call a “sin of omission” – that is, you do it by leaving something out, rather than by intentionally doing something. Most often, the problem occurs when you do not include the citation in the text of your paper. Identifying the source in the bibliography is not sufficient: that tells the reader that you've used the source, but not where you've used it. (*See Introduction to Documenting Sources*) Citation comprises half of how you document your source. It is the half that

is most troubling for students because it raises questions:

- What do I have to cite?
- When do I quote?
- How can I impress the TA or Prof. with my ideas if I have to keep telling where I got them?

This last question lies at the heart of plagiarism. None of us wants to look stupid. The definition of plagiarism in the U of T code suggests how plagiarism makes us look stupid:

- Plagiarism is at once a perversion of originality and a denial of the interdependence and mutuality which are at the heart of scholarship itself, and hence of the academic experience. (Appendix A, 2.p)

Using sources adds value. It gives ideas authority; it provides evidence. One of the major problems we see in engineering papers is a failure to give evidence. Sources provide evidence. Part of how we look smart is by using sources correctly. We need to be able to decide which authors to use, how to work them into our writing, and when we absolutely have to quote. Also, and more importantly, your prof or TA will be more impressed by your work if you can **synthesize several sources**; that means, you draw conclusions and construct your own idea by putting the source together in a new or interesting way.

3. Unattributed Direct Quotation and

“Plagiaphrase”: The easiest cases of plagiarism to prosecute are those of unattributed direct quotation. If you fail to put quotation marks around passages that you've taken from a source, you've committed plagiarism. If your whole report is direct quotation, even if you've quoted appropriately, you've done no work (except for copy and pasting). These are fairly straightforward offences.

The most difficult aspect of using sources is drawing the line between plagiarism and paraphrase. Paraphrase involves putting the thoughts of the

source in your own words. However, students often have difficulty transforming the phrasing sufficiently. For example,

Published Source:	Student Sample:
It's called the Sensopad™, and it relies on the positional sensing of inductive elements or "pucks." These inexpensive, little pucks can be embedded within target objects such as dials or switch bodies, allowing position or speed to be sensed very accurately using simple circuitry.	Sensopads are <i>cheap, little puck</i> shaped devices which <i>can be embedded within target objects such as dials or switch bodies.</i> Sensopads <i>rely on the positional sensing of inductive elements</i> to sense position [2].

The italicized and bold areas from the student sample are taken directly or almost directly from the source, and represents inappropriate use of sources (strings of 12 and 8 words).

In order to avoid "plagiaphrasing" – paraphrase that is tantamount to plagiarism – focus on:

- Identifying the purpose of using the source, and then,
- Adjusting the material to fit into that purpose and the context of your own report
- Acknowledging the source somehow in the sentence
- Watching for long strings of words which remain the same from the source, and changing or putting quotation marks around those sections

Appropriate Use: Sensopads use simple circuitry that depends on inductive elements to sense the position or speed of some target object. According to their manufacturer, they can be cheaply embedded in whatever objects are being monitored, such as dials or switches, and will produce accurate measurements [2]

Notice that the reference becomes explicit – the manufacturer – so that the bias of the original also

gets clarified rather than just being quietly imposed.

Plagiarism Test: Below is a paragraph from a published source on the left, and a piece of student writing on the right. Has this student documented appropriately? What do you think?

Published Source:	Student Sample:
Anyone who is skilled at making pancakes. . . . will have the griddle very hot so that the batter solidifies quickly after being poured. Not having a thermostat on the griddle, one tests the griddle's temperature by sprinkling water on it. If the griddle is hot but not hot enough, the water drops spread out, wet the surface and evaporate within about two seconds. If the griddle is ready for the batter, the sprinkled drops dance, vibrate and skim over the surface for from 30 to 100 seconds. How can drops last longer on a hotter griddle?	If you have ever made pancakes, you might have noticed that if the griddle is hot but not quite ready for the batter, a drop of water sprinkled on the griddle will thin out and disappear in about two seconds. When the surface becomes hot enough, however, the droplets will bounce, wriggle and skip above the griddle for anywhere from half a minute to over a minute and a half. How can this be? Bibliography Walker, Jearl. 1977. Drops of water dance.... <i>The American Scientist</i> . 237: 126-131.

Is this student writing sample acceptable?

1. Yes! The writer of the passage has not used any of the original author's exact words
2. Yes! The writer of the passage has credited the original source in the bibliography
3. No! The writer of the passage has not documented the source properly!

If your response was:

#1. You're wrong. The author of the sample passage has replaced individual words (such as "dance, vibrate and skim") with different words

(such as "bounce, wiggle and skip"), but simple word substitution does not permit a writer to steal another person's ideas. Many of the statements in the student writing sample come directly from the original source. The author of the sample has not added any original interpretation or analysis.

#2. You're wrong. The author of the sample passage has indeed included a bibliography with all the necessary information. However, proper documentation consists of two parts: a **bibliography** (at the end of the document) and a **citation** (whenever and wherever you use part of somebody else's work in your writing).

#3. You're right. **The writer has not documented this source properly.**

- The writer of the student writing sample has changed the words, but is still using all of the original author's ideas.
- The writer has provided a bibliography, but is missing a citation.

How can we fix it?

Walker introduces the following example to explain the behavior of water drops on hot surfaces. If you have ever made pancakes, you might have noticed that if the griddle is hot but not quite ready for the batter, a drop of water sprinkled on the griddle will thin out and disappear in about two seconds. When the surface becomes hot enough, however, the droplets will bounce, wriggle and skip above the griddle for anywhere from half a minute to over a minute and a half. How can this be? (Walker 1977:126)

The italicized additions to the student writing sample show how the writer could have avoided plagiarism. The modified sample identifies the start of the entire passage that came from Walker, and ends the passage by giving the citation (with the page where the information was found in the original source). Note, however, that the sample follows the original source so closely that direct quotation would have been much easier for the writer.

Alternatively, if we can make use of the authority of the author (Walker is a well-known author of

Mechanical Engineering texts) and even use Walker's means to simplify the explanation, but then link it (at both ends) into a more interesting discussion of the phenomenon at work:

To explain the idea of thin film boiling, Walker uses a pancake griddle. He notes that on a hot griddle, a water droplet will "spread out, wet the surface and evaporate within about two seconds." However, if the griddle is hotter still, the droplet "dances" or bounces over the surface, taking much longer to evaporate. This change occurs because a thin film of steam forms beneath the droplet insulating it from making direct contact with the surface, thus making the droplet last much longer (Walker, 1977). The threshold where the droplet no longer makes direct contact with the surface is known as the Leidenfrost temperature. For water, that temperature is above 200°C.

Note in this instance, "Leidenfrost" and "200°C" do not require reference because these are standard facts from any textbook on the topic. Thus, the reference to Walker gets placed at the end of the reference-worthy information.

If you're still looking for more on plagiarism, check out the University of Toronto Advice on Writing site, where you can find the useful document on [How Not to Plagiarize](http://www.utoronto.ca/writing/plagsep.html). (<http://www.utoronto.ca/writing/plagsep.html>)

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