

Students submitting a Work Report 100 are expected to produce a technical document referred to as a **technical brief** (or technical note). A technical brief is a short technical essay intended to communicate information to other professionals. In difference to a full work report, the technical brief is much shorter, is not formatted in the same way, and is not required to contain any analysis or arrive at any conclusions.

The requirements of the technical brief are as follows:

- The report must follow departmental guidelines on technical writing (<https://uwaterloo.ca/mechanical-mechatronics-engineering/current-undergraduate-students/work-reports>). In short, the writing style should contain A) no 1st, 2nd, or 3rd person, B) no contractions, and C) no conversational language. Writing should be factual and to the point.
- Work Report 100 formatting guidelines are different from those posted for later reports. The technical brief should:
 - o Be approximately 2000 to 3000 words total (all parts), or about 5 pages in length.
 - o Contain at least 3 technical references (Wikipedia can be used, but you must find others).
 - o Contain an abstract or executive summary that is no longer than 250 word in length.
 - o Contain at least one figure or table. If you did not create these, you must reference the source.
 - o The brief will contain a Title, Author, Abstract, and Introduction. Sections that follow the introduction will depend on the report topic. The report should end with Conclusions or Summary, and Reference sections. A technical brief template is included below. You may create variations of this template to better suit the topic of your report.
- The report topic does not need to be related to your coop employment. In fact, if the work you did this past term is ideal subject matter for a traditional coop report, it is recommended that you save it and submit it in a later term as Work Report 200 or 300.
- Don't overthink the topic. Find something technical that interests you, research it, and write about it. Example topics include:
 - o The Robertson Screwdriver: History and Impact
 - o The History of Transistors
 - o A How-To Guide on Vacuum Forming
 - o Types of Welds and When to use them
 - o Wearable Sensors: Emerging Technologies
- Because of the subject matter, no confidential submissions will be accepted.

Note: When writing a technical brief, it's easy to find material to plagiarize. To be clear, taking an existing report and replacing every 3rd or 4th word is still plagiarism. So is assembling paragraphs from a variety of sources. Resist the urge to do this. It defeats the purpose of the work report, will result in an automatic fail, and likely incur Policy 71 proceedings.

The intent of this exercise is to develop your technical writing skills. Find several sources and put the material in your own words. We will critique your writing style and offer feedback.

The Robertson Screwdriver: History and Impact

By: Phillip Slots¹ (STU#12345678)

Executive Summary

The square-head screwdriver, also known as the Robertson screwdriver, was invented by P.L. Robertson in 1908. While difficult to manufacture, the Robertson screw solved many issues inherent in the easily manufactured slot-head screwdriver. Most importantly, it was far more suitable to automated manufacturing processes. In the report that follows, the steps used by P.L. Robertson to manufacture his screw and screwdriver will be reviewed, as will the history of its use in Canada and the United States. Finally, the impact that the screwdriver has had on manufacturing will be discussed.

Introduction

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Figure 1: The Robertson Screwdriver and Screw [1]

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History of Development

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¹ This report was written entirely by me, and has not received any previous academic credit at this or any other institution.

Use Outside of Canada

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Summary

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References

[1] sockagphoto/Shutterstock.com, last accessed October 8, 2020

[2] <https://www.thomasnet.com/articles/hardware/robertson-screwdriver-history>, , last accessed October 8, 2020

[3] https://en.wikipedia.org/wiki/P._L._Robertson, last accessed October 12, 2020