

Resource – <i>Paper-Writing-Template(PWT)</i>	Version 1.0, Dec 2013
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Paper Writing Template

Paper Writing Template (PWT) is the fourth of four templates. *What you have done so far are:*

- In the IPT, you:
 - Stated the teaching-learning problem you wish to solve.
 - Proposed your solution idea to address the above problem.
 - Surveyed literature and analyzed the gap in related work.
- In the SPT, you:
 - Detailed your solution idea.
 - Described the research method you would follow in your study.
 - Decided sample, instruments, procedure and potential data analysis technique.
- You then executed your study, as per your SPT.
- In the PPT, you:
 - Analyzed your data to show evidence regarding your solution.
 - Made claims based on your findings.
 - Organized your paper into sections and sub-sections.

Goal of this template (PWT):

- Decide the detailed flow of your paper: paragraphs, and specific points within each paragraph.
- Ensure that there is a logical structure to your paper at the detailed level, *before you write the full paper draft*. You will do so by importing points from the previous templates.

The dependencies are as follows:

- Your IPT contents can be adapted to form the Motivation paragraph and Related Work section in PWT.
- Your SPT contents can be used to form the Implementation and Methodology sections in PWT.
- Your PPT contents can be used to i) form the Data Analysis and Results section and ii) to give headings to the various sections and subsections.

Before you start, you MUST take a look at all the questions and sections in the IPT, SPT and PPT. You will need the answers to those questions for creating meaningful sections/ paragraphs in this PWT. The questions from previous templates are not repeated in the PWT.

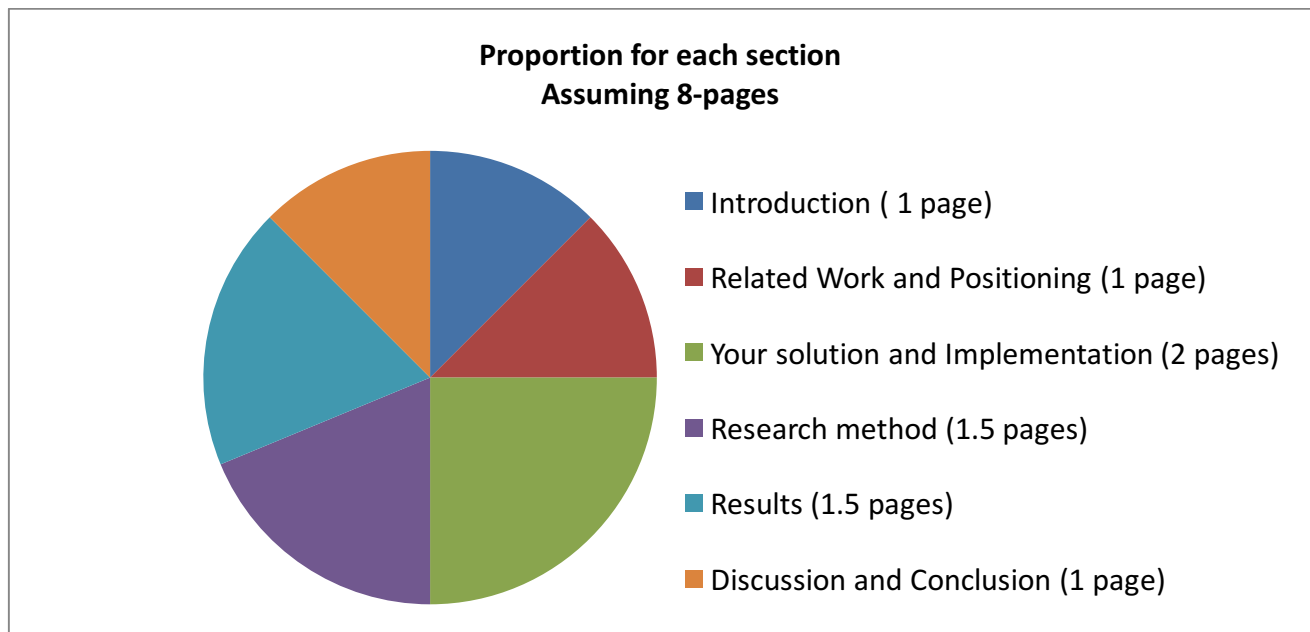
How to use this template (PWT):

1. This PWT is in the form of a table which you need to fill based on the instructions below.
2. The table has been organized according to typical sections expected in an ET research paper, for example: Introduction, Related Work, Implementation of solution, Research method, Results, Discussion, and Conclusion. Based on your responses to PPT, Step 13, you may include other sections.
3. Each row in the table represents a paragraph in your final paper. The template suggests how many paragraphs you should include in a given section or sub-section.

4. Each paragraph has a goal. Below each goal, state the points (in bulleted form) you will write in the final paper for that paragraph, to satisfy the goal.
5. For certain sections, such as Introduction, and Research Method, the break-up of the section into paragraphs is already provided in the table. The goal of each paragraph is mentioned. Write the points you will include from the IPT, SPT and PPT, in order to satisfy the given goal. Hints have been provided (in blue) as to which steps of the previous templates you should consider to write these points.
 - *Check if there is a logical flow in each section by just reading the bullet points you wrote.*
 - *If not, revise your bullet points so that the section has a logical flow.*
6. For certain sections, such as Implementation, you need to decide the goal of each paragraph. Use action verbs such as argue, describe, give example, and so on (see examples in the Introduction section). The template suggests how many paragraphs you should include in the section.
 - *Check if there is a logical flow to your paper by just reading the paragraph goals you wrote.*
 - *If not, revise your paragraph goals so that the paper has a logical flow.*
7. Write the points you will include in each paragraph in order to satisfy the goals you wrote (similar to Step 5 above). Use your responses to the IPT, SPT and PPT to write the points.
8. After you finish Steps 1-7, write first draft of your paper - with text, regular paragraphs, figures - based on the PWT outline that you just created.
9. Decide logistics of version control and proceed to further drafts and paper submission.

Number of pages and paragraphs:

The suggested number of pages or paragraphs in a section is given for an 8-page paper. If you have to write a shorter or longer paper, you can keep roughly the same proportion for each section as shown in Figure below.



Notation used in the PWT table is:

SECTION HEADINGS - BOLD, CAPS
Sub-section headings - bold, italic, smallcase
Goals of section, subsection or paragraph - italics

Create a detailed outline for your paper by filling each row in the table below:

Content	No. of paragraphs	Section
INTRODUCTION (~ 1 page)		1
<p><i>Goal of paragraph: Write an overview of the broad context of your problem.</i> IPT: Q1, Q5a,c; SPT: Steps 1-2.</p> <ul style="list-style-type: none"> • 	1	
<p><i>Goal of paragraph: Motivate the need for your work. Bring out the gap in the existing work. Show that the specific problem (for which you will later propose your solution) exists.</i> IPT: Q6; SPT: Step 3.</p> <ul style="list-style-type: none"> • 	1	
<p><i>Goal of paragraph: Briefly describe your solution approach (or treatment) for the problem in Paragraph 2: what the instructor did and what the students did, OR what the tool is supposed to do, what are its inputs and outputs.</i> IPT: Q2; SPT: Steps 4-7.</p> <ul style="list-style-type: none"> • 	1	
<p><i>Goal of paragraph: State your research questions and briefly describe the key points in the methodology of your study.</i> SPT: Steps 9-15.</p> <ul style="list-style-type: none"> • 	1	
<p><i>Goal of paragraph: Describe your results.</i> PPT: Steps 3-8.</p> <ul style="list-style-type: none"> • 	1	
<p><i>Goal of paragraph: State contributions of your work.</i> PPT: Step 10.</p> <ul style="list-style-type: none"> • 	1	
RELATED WORK (~ 1 page)		2
<p><i>Goal of paragraph: Describe the theoretical basis of your solution idea (such as learning theories).</i> IPT: Q5b.</p>	1	
<p><i>Goal of paragraph: Describe existing related work that:</i> a) address a problem similar to yours, and b) have a solution idea similar to yours. IPT: Q4b,Q5c.</p>	1-2 as needed	
<p><i>Goal of paragraph: Analyze the existing related work, and bring out the gaps.</i> IPT: Q6.</p>	1	
<p><i>Goal of paragraph: Explain the relation of your work to existing work.</i> SPT: Step 5.</p>	1	
IMPLEMENTATION (~ 2 pages)		3
<ul style="list-style-type: none"> • Split this section into subsections if needed, such as Intervention, Learning materials, Boundaries of solution and so on. • Make sure you write goals for every paragraph, and check that there is a flow to the section by just reading the goals. IPT: Q2, SPT: Steps 4, 6, 7, 8.		

	No. of paragraphs	Section
RESEARCH METHOD (1½ - 2 pages)		4
State research questions. SPT: Step 9.	1	
Sample Goal of subsection: Describe how sample was chosen and how sampling procedure was performed. SPT: Step 12.	~2	4.1
Procedure Goal of the subsection: Describe the procedure of your research study. SPT: Step 13.	2-4	4.2
Instruments Goal of subsection: Describe all features of the instruments used. For each instrument describe what is in it, why is it suitable, how instrument was created and validated. SPT: Steps 14-15.		4.3
Data Analysis Technique Goal of sub-section: Explain how data were analyzed, what statistical tests were used. SPT: Step 16; PPT: Steps 1-2.	1-2	4.4
RESULTS (1½ - 2 pages)		5
Goal of section: Analyze and report results. PPT Steps 3-8.	1 each	
DISCUSSION (1 page)		6
Goal of paragraphs: Write the answer to each RQ based on your results. PPT: Step 10.	1-2	
Goal of paragraph: Write how your findings connect to prior work. PPT: Step 11.	1	
Goal of paragraph: State your claims and justify each one. Argue generalizability of your findings. PPT: Step 12.	1	
Goal of paragraph: Write the limitations to your study, and the potential validity threats. SPT: Step 18; PPT: Step 9,13.	1	
CONCLUSION (Sometimes this section may be merged with the discussion itself.)		7
Goal of paragraphs: Describe what are the contributions of your work to the community in general. Show how can others use your work. State what research can you/others explore as a follow-up to your work. PPT: Step 14.	1-2	
REFERENCES		8