# Review of Literature

Most are aware that it is a process of gathering information from other sources and documenting it, but few have any idea of how to evaluate the information, or how to present it. A literature review can be a precursor in the introduction of a research paper, or it can be an entire paper in itself, often the first stage of large research projects, allowing the supervisor to ascertain that the student is on the correct path.

A literature review is a critical and in depth evaluation of previous research. It is a summary and synopsis of a particular area of research, allowing anybody reading the paper to establish why you are pursuing this particular research  program. A good literature review expands upon the reasons behind selecting a particular research question.

## What is a not Literature Review?

It is not a chronological catalogue of all of the sources, but an evaluation, integrating the previous research together, and also explaining how it integrates into the proposed research program. All sides of an argument must be clearly explained, to avoid bias, and areas of agreement and disagreement should be highlighted.

It is not a collection of quotes and paraphrasing from other sources. A good literature review should also have some evaluation of the quality and findings of the research. A good literature review  should  avoid the temptation of impressing  the importance of a particular research program. The fact that a researcher is undertaking the research program speaks for its importance, and an educated reader may well be insulted that they are not allowed to judge the importance for themselves. They want to be re-assured that it is a serious paper, not a pseudo-scientific sales advertisement. Whilst some literature reviews can be presented in a chronological

order, it is best avoided. For example, a review of Victorian Age Physics, could present J.J. Thomson‟s famous experiments in a chronological order. Otherwise, this is usually perceived as a little lazy, so it is better to organize the review around ideas and individual points. As a general rule, certainly for a longer review, each paragraph should address one point, and present and evaluate all of the evidence, from all of the differing points of view.

## Conducting a Literature Review

Evaluating the credibility of sources is one of the most difficult aspects, especially with the ease of finding information on the internet.  The only real way to evaluate is through experience, but there are a few tricks for evaluating information quickly, yet accurately. There is such a thing as „too much information,‟ and Google does not

distinguish or judge the quality of results, only how search engine friendly a paper is. This is why it is still good practice to begin research in an academic library. Any journals found there can be regarded as safe and credible.

The next stage is to use the internet, and this is where the difficulties start. It is very difficult to judge the credibility of an online paper. The main thing is to structure the internet research as if it were on paper. Bookmark papers, which   may   be relevant, in one folder and make another subfolder for a „shortlist."

The easiest way is to scan the work, using the [abstract](abstract) and [introduction](introduction) as guides. This helps to eliminate the non-relevant work and also some of the lower quality research. If it sets off alarm bells, there may be something wrong, and the paper is probably of a low quality. Be very careful not to fall into the trap of rejecting research just because it conflicts with your [hypothesis](hypothesis). Failure to do this will completely invalidate the literature review and potentially undermine the research project. Any research that may be relevant should be moved to the shortlist folder.

The next stage is to critically evaluate the paper and decide if the research is sufficient quality. Think about it this way: The temptation is to try to include as many sources as possible, because it is easy to fall into the trap of thinking that a long [bibliography](bibliography) equates to  a good  paper. A smaller number of quality sources is far preferable than a long list of irrelevance. Check into the credentials of any source upon which you rely heavily for the literature review. The reputation of the University or organization is a factor, as is the experience of the researcher. If their name keeps cropping up, and they have written many papers, the source is usually OK.   Look for agreements. Good research should have been replicated  by other independent researchers, with similar results, showing that the information is usually fairly safe to use.

If the process is proving to be difficult, and in some fields, like medicine and environmental research, there is a lot of [poor science](poor science), do not be afraid to ask a supervisor for a few tips. They should know some good and reputable sources to look at. It may be a little extra work for them, but there will be even more work if they have to tear apart a review because it is built upon shaky evidence.

Conducting a good literature review is a matter of experience, and even the best scientists have fallen into the trap of using poor evidence. This is not a problem, and is [part of the scientific](part of the scientific) [process](process); if a research program is well constructed, it will not affect the results.

## Systematic Reviews

Heavily used by the healthcare sector, systematic reviews are a powerful way of isolating and critically evaluating previous research. Modern medical research generates so much literature, and fills so many journals, that a traditional literature review could take months, and still be out of date by the time that the research is designed and performed. In addition, researchers are often guilty of selecting the

research best fitting their pre-conceived notions, a weakness of the traditional „narrative" literature review process. To help medical professionals, specialist compilers assess and condense the research, entering it into easily accessible research databases. They are an integral part of the research process, and every  student of medicine routinely receives a long and extensive training in the best methods for critically evaluating literature.

## Systematic Reviews - Addressing the Deficiencies in Narration

The problems with narrative literature came to light a couple of specialty  decades ago, when critics realized that reviewers looking at the same body of evidence often generated completely different findings. They drew conclusions based upon their specialty, rather than the compelling evidence contained within the body of research. It is unclear whether this was a case of conscious or subconscious manipulation (bias), but this particular finding was worrying, especially in a research area where life and death could be at stake. To address this issue, medical authorities developed a new protocol of systematic reviewing, based upon a structure as strict as the scientific method governing empirical research programs.

## The Protocols Underpinning Systematic Reviews

Define a research question, in a similar way to formulating a research question for a standard research  design  Locate and select relevant previous research studies, with no  attempt to evaluation at this stage. Ideally, research in languages other than English should be used, and the researcher should try to  find papers and reports unpublished in journals, such as conference speeches or company reports. Critically evaluate the studies. The reviewer should assess each study upon criteria based upon quality, strength of the findings and validity. For safety, this process should include at least two independent reviewers, although a greater number is advisable.

Combine the results. This is the process of combining all of the findings, sometimes qualitatively, but usually quantitatively, using meta-analysis. Publish the results. As with any research, the results have to  be written and published, usually  with  a system of independent review. Discussion of the conclusions, as with any research, allows the validity of the findings to be verified.

## The Reasoning behind Systematic Reviews

The principle behind the systematic reviews process is that the researcher critically evaluates previous studies, in a much more comprehensive and systematic way than a standard literature review. In many cases, statistical meta-analysis tools are used to give the review a quantitative foundation, allowing correlations to be documented

and <u>conclusions to be drawn.</u> Whilst the techniques are mainly used by medicine and psychology, there is a growing trend towards using <u>systematic reviews</u> in other disciplines. Many branches of science are becoming increasingly fragmented and anarchic, so this layer of analysis aggregates all of the disparate elements.

Systematic reviews, and   meta-analysis, are regarded as a cornerstone of healthcare research, essential where it is impractical or unethical to keep repeating old research. In addition to the potential risks of repeated   research upon   patients and volunteers, there are now laws in  many countries prohibiting  excessive research using  animals. Systematic reviews are a great way of reducing the amount of suffering caused by vivisection.

## Addressing the Disadvantages of Systematic Reviews

As with most systems, despite the protocols, systematic reviews do have some inherent weaknesses.  The main problem is the rapid advancement of medical research and technology, often meaning that many reviews are out of date before they are even published, forcing researchers to update their findings constantly. The development of specialist organizations for finding and evaluating data minimizes the effects of any subjective review there is the problem of selection bias, where contradictory research is jettisoned, although most medical researchers are adept at following the proper procedures.   Funding and research grants cause researchers to try to find results that suit their paymasters, a growing problem in many areas of science, not just medicine. The specialist reviewers sidestep this problem, to a certain extent, by producing independent research, uncorrupted by governmental or private healthcare funding, curbing  the worst excesses.

Often, a blind system is used, and reviewers are unaware of where the papers they re reviewing came from, or who they are written by. This lessens allegations of favoritism   and judging research by the reputation of the researcher rather than on merit. Ultimately, the onus is on the reader to draw their own assessments, using their own experience to judge the quality of the systematic review. Whilst not a perfect system, systematic reviews are far superior to the traditional narrative approach, which often allows a lot of good research to fall through the cracks.

## META ANALYSIS

Meta-analysis is a statistical technique developed by social scientists, which are very limited in the type of experiments they can perform. Social scientists have great difficulty in designing and implementing true experiments, so meta-analysis gives them a quantitative tool to analyze statistically data drawn from a number of studies, performed over a period of time. Medicine and psychology increasingly use this method, as a way of avoiding time-consuming and intricate studies, largely repeating the work of previous research.

## What Is Meta-Analysis?

Social studies often use very small sample sizes, so any statistics used generally give results containing large margins of error. This can be a major problem when interpreting and drawing conclusions, because it can mask any underlying trends or correlations. Such conclusions are only tenuous, at best, and leave the research open for criticism. Meta-analysis is the process of drawing from a larger body of research, and using powerful statistical analyzes on the conglomerated data. This gives a much larger sample population and is more likely to generate meaningful and usable data.

## The Advantages of Meta-Analysis

Meta-analysis is an excellent way of reducing the complexity and breadth of research, allowing funds to be diverted elsewhere. For rare medical conditions, it allows researchers to collect data from further afield than would be possible for one research group.  As the method becomes more common, database programs have made the process much easier, with professionals working in parallel able to enter their results and access the data. This allows constant quality assessments and also reducing the chances of unnecessary  repeat research, as papers can often take many months to be published, and the computer records ensure that any researcher is aware of the latest directions and results. The field of meta study is also a lot more rigorous than the traditional literature review, which often relies heavily upon the individual interpretation of the researcher. When used with the databases, a meta study allows a much wider net to be cast than by the traditional literature review, and is excellent for highlighting correlations and links between studies that may not be readily apparent as well as ensuring that the compiler does not subconsciously infer correlations that do not exist.

## The Disadvantages of Meta-Analysis

There are a number of disadvantages to meta-analysis, of which a researcher must be aware before relying upon the data and generated statistics.  The main problem is that there is the potential for publication bias and skewed data. Research generating results not refuting a hypothesis may tend to remain unpublished, or risks not being entered into the database. If the Meta study is restricted to the research with positive results, then the validity is compromised. The researcher compiling the data must make sure that all research is quantitative, rather than qualitative, and that the data is comparable across the various research programs, allowing a genuine statistical analysis. It is important to pre-select the studies, ensuring that all of the research used is of a sufficient quality to be used.

One erroneous or poorly conducted study can place the results of the entire meta-analysis at risk. On the other hand, setting almost unattainable criteria and  criteria

for inclusion can leave the Meta study with too small a sample size to be <u>statistically relevant</u>. Striking a balance can be a little tricky, but the whole field is in a state of constant development, incorporating protocols similar to the <u>scientific method</u> used for normal <u>quantitative research</u>. Finding the data is rapidly becoming the real key, with skilled meta analysts developing a skill-set of library based skills, finding information buried in government reports and conference data, developing the knack of assessing the quality of sources quickly and effectively.

## Conclusions and the Future

Meta-analysis is here to stay, as an invaluable tool for research, and is rapidly gaining momentum as a stand-alone discipline, with practitioners straddling the divide between statisticians and librarians. The conveniences, as long as the disadvantages are taken into account, are too apparent to ignore, and a meta study can reduce the need for long, expensive and potentially intrusive repeated research studies.

## How to Write a Research Paper

**Research paper question and the purpose of the paper**

One of the major parts of developing any research paper is defining the research paper question.

  ➢ For an experiment-based project, this question naturally leads onto a <u>hypothesis</u>.
  ➢ For a more <u>review</u>-based paper, such as an essay, it will lead to a <u>thesis statement</u>.

When trying to define the research paper purpose, you should brainstorm a few <u>ideas</u>, which will help you to develop a <u>research question</u> that is relevant, interesting and novel. Some ideas are:

  ➢ What are the most important research questions in my discipline, and are there any particular areas that are ripe for further exploration?

  ➢ Will my research lead to a greater understanding, and fill a gap in current knowledge?

  ➢ Has my <u>literature review</u> turned up a wealth of relevant information in this area?

  ➢ Am I <u>replicating</u> a previous study? If I am, in what ways am I improving and refining the research?

  ➢ Is this research at the cutting edge of science or is it in an area that is fading out of fashion?

➢ Is my research question going to have a meaningful impact upon the field?

Obviously, for a short-term research project, you do not have to answer yes to all of these questions or be as rigorous.

For a dissertation or thesis, these are just some of the questions, and for research scientists submitting a proposal, affirmative answers to these questions are the bare minimum for receiving a <u>research grant</u>.

## Narrowing Down the Research Paper Question

A general research question will usually be based around „why" or „how" a certain phenomenon is happening.

An example of a good general research statement could be:

### 'Why are the forest resources declining in the Amazon rainforest?'

This statement is based around a review of the literature, which shows that the Amazon rainforest coverage is declining rapidly. As a result, you can legitimately use that as a good starting point, a basic assumption upon which to build your research project. Whilst many researchers have postulated reasons for this, there is no clear consensus about what factor, or combination of factors, is contributing to the environmental and ecological damage. Now you need to narrow down the broad question, ideally moving towards a <u>hypothesis</u> or <u>thesis question</u>.

For example, looking at the above general question, you could arrive at:

➢ Is intensive agriculture the major cause of deforestation in the India?
➢ Is the logging industry the major cause of deforestation in the India?
➢ 'Is Global Warming the major cause of deforestation in the world?'

Once you have a good <u>research paper"s question</u>s, you can begin to generate a <u>testable</u> <u>hypothesis</u> or <u>research question</u>, and construct your paper around this. At the end of the research, you will be able to refer your <u>results</u> and <u>discussion</u> back to the research paper question, adding a little more information to the store of human knowledge.

## Research Paper Outline Examples

Once you"ve already decided what topic you will be writing about, the next thing you should pay attention to is the scope of your paper or what you will be including in your <u>discussion</u>.

The broader your topic is, the more difficult it is to discuss your topic in full details. This is why you should establish beforehand the scope and limitations of your paper and this will be the foundation of your research paper outline.

Basically, your [outline](#) will constitute three main parts namely the Introduction, the Body and the Conclusion. But to make sure your paper is complete, consult your instructor for specific parts he/she wants to be included in your [research paper](#). Sample outlines for research papers will be given later on. But first, let us discuss the main parts of your paper and what information each should cover.

## Introduction

The Introduction should contain your thesis statement or the topic of your research as well as the purpose of your study. You may include here the reason why you chose the particular topic or simply the significance of your research paper‟s topic. You may also state what type of approach it is that you‟ll be using in your paper for the entire discussion of your topic. Generally, your Introduction should state briefly all  the major points of your topic your readers will be reading about.

## Body

The body of your paper is where you will be presenting all your arguments to support your thesis statement. Please be reminded of the "Rule of 3" where you should find 3 supporting arguments for each position you take. Start with a strong argument, followed by a stronger one, and end with the strongest argument as your final point.

## Conclusion

Conclusion is where you   form a summary of all your arguments and state your final                                    stand.

Explain why you‟ve ended up with the said conclusion.

## Research Paper Outline Examples

As mentioned earlier, here are some sample outlines for research papers:

# Sample #1

**Thesis Topic: A Study on Factors Affecting the Infant Feeding Practices of Mothers in Las Pinas City**

I.      **Introduction**

A.  Statement of the Problem

B.  Definition of Terms

C.  Theoretical Framework

D.  Methodology

 1.  Type of Research

 2.  Respondents

 3.  Questionnaire

E.  Hypothesis

F.  Review of Related Literature

G.  Scope and Limitations

H.  Significance of the Study

II.      **Body**

Review of Literature

A. Background of the Study
1. Benefits of Breastfeeding
2. WHO Recommendations
3. The International Code of Marketing of Breast Milk Substitutes
4. The Baby-Friendly Hospital Initiative
5. The Innocent Declaration on the Protection, Promotion and Support of Breastfeeding
6. National Situationer
7. The Milk Code
8. BFHI in the Philippines
9. Milk Code Violations
10. Formula Feeding
11. Factors Influencing the Decision Regarding Infant Feeding Method
12. Area Situationer
B. Presentation and Analysis of Data
1. Socio-economic Demographic Profile of Mothers
2. Information Regarding Current (Youngest) Infant
3. Current Infant Feeding Practices of Mothers
   a. Exclusive Breastfeeding
   b. Mixed Feeding
   c. Formula Feeding
4. Previous Infant Feeding Practices
5. Maternal Knowledge
6. Correlation Tests
III. Conclusion
A. Concluding Statement
1. Analytical Summary
2. Thesis Reworded
B. Recommendations

## Sample #2

**Topic: Asbestos Poisoning**
I. Introduction
   A. Definition of Asbestos Poisoning
   B. Significance of the Study
   C. Definition of Terms
II. Body

    A. Symptoms of Asbestos Poisoning

    B. Effects of Asbestos Poisoning

    C. Treatments

III.   Conclusion

    A. Conclusion

    B. Recommendations

  1. How to Deal with Asbestos Hazards

## Sample #3

**Topic: Shakespeare**

I. Introduction

II. Body

  A. Early Life

   1. Family

    a. Father

    b. Mother

  2. Marriage

    a. Life of Anne Hathaway

    b. Reference in Shakespeare‟s Poems

 B. Works

 1. Plays

    a. Tragedies

     i. Hamlet

     ii. Romeo and Juliet

    b. Comedies

     i. The Tempest

     ii. Much Ado About Nothing

    c. Histories

     i. King John

     ii. Richard III

     iii. Henry VIII

2. Sonnets

3. Other Poems

C. His Later Years

1. Last Two Plays

2. Retired to Stratford
   a. Death
   b. Burial
III. Conclusion
A. Analytical Summary
B. Thesis Reworded
C. Concluding Statement

## How to Write an Introduction

The introduction starts with a broad basis and then narrows it down to your particular field of study, explaining the rationale behind each step.

Think of it as an inverted pyramid, where you start with a wide overview but move towards the thesis statement or hypothesis, which should be the final element of the introduction.   In the introduction, you are attempting to inform the reader about the rationale behind the work, justifying why your work is an essential component of research in the field. The introduction does not have a strict word limit, unlike the abstract, but it should be as concise as possible. It can be a tricky part of the paper to write, so many scientists and researchers prefer to write it last, ensuring that they miss no major points. For a longer research paper, where you use an outline, it can be useful to structure your introduction around the outline. Here are a few outline examples. The introduction gives an overall review of the paper, but does address a few slightly different issues from the abstract.

It works upon the principle of introducing   the topic of the paper and setting   it into a broad context, gradually narrowing down to a research problem, thesis and hypothesis. A    good introduction explains how you mean to solve the research problem, and creates „leads" to make the reader want to delve further into your work.

You should assume that your paper is aimed at someone with a good working knowledge of your particular field. For example, a paper about evolutionary adaptations need not go into too much detail about Darwin - it is fairly common knowledge. A    behavioral science paper only needs to    mention    Pavlov and Skinner in passing, as their theories are standard for any first year undergraduate.

## Background

Like in any good Hollywood movie, the first task of the introduction is to set the scene, giving your paper a context and seeing how it fits in with previous research in the field. Whilst not the only way, this section, comprising the first paragraphs of your introduction, can be based around a historical narrative, from the very first research in the field to the current day. In many fields, this could make up an entire essay in itself, so you have to stick to relevant information.

## Importance

This leads into the rationale behind the research, revealing whether it is building upon previous research, looking at something that everybody else has overlooked, or improving upon a previous research project that delivered unclear results. This section can then flow into how you are going to fill the gap, laying out your objectives and methodology. You are trying to predict what impact your research

will have if everything works as it should, and you ultimately reject the null hypothesis. **Limitations**

The introduction is the place to highlight any weaknesses in the experiment from the start.

For example, an ideal experiment should have perfectly randomized samples, but there are many good reasons why this is not always possible. As long as you warn the reader about this, so that they are aware of the shortcomings, then they can easily judge the validity of the research.

This is much better than making them wait until you point it out in the discussion.

## Assumptions

You should also point out any assumptions that you make about conditions during the research. You should set out your basic principles before embarking upon the experiment: any research will be built around some assumptions.

For example, if you were performing educational research, you may assume that all students at the same school are from a very similar socio-economic background, with randomization smoothing out any variables.

## Tips for How to Write an Introduction

There are a few   tips that can help you write a strong   introduction, arousing interest and encouraging the reader to read the rest of your work.

## Keep it Short

A long and rambling introduction will soon put people off and lose you marks. Stick closely to your outline for the paper, and structure your introduction in a similar way.

## Define the Problem

The entire introduction should logically end at the research question and thesis statement or hypothesis. The reader, by the end of the introduction, should know exactly what you are trying to achieve with the paper. In addition, your conclusion and discussion will refer back to the introduction, and this is easier if you have a clearly defined problem.

## Organization

As you write the paper, you may find that it goes in a slightly different direction than planned. In this case, go with the flow, but make sure that you adjust the introduction accordingly. Some people work entirely from an outline and then write the introduction as the last part of the process. This is fine if it works for you.

Once your introduction is complete, you can now think about attacking the rest of the paper.

## How to Write a Hypothesis

The entire experiment and research revolves around the research hypothesis (H1) and the null hypothesis (H0), so making a mistake here could ruin the whole design. Needless to say, it can all be a little intimidating, and many students find this to be the most difficult stage of the scientific method.

In fact, it is not as difficult as it looks, and if you have followed the steps of the scientific process and found an area of research and potential research problem, then you may already have a few ideas. It is just about making sure that you are asking the right questions and wording your hypothesis statements correctly.

## The Three-Step Process

Often, it is still quite difficult to isolate a testable hypothesis after all of the research and study. The best way is to adopt a three-step hypothesis; this will help you to narrow things down, and is the most foolproof guide to how to write a hypothesis.

Step one is to think of a general hypothesis, including everything that you have observed and reviewed during the information gathering stage of any research design. This stage is often called developing the research problem.

## An Example of How to Write a Hypothesis

A worker on a fish-farm notices that his trout seem to have more fish lice in the summer, when the water levels are low, and wants to find out why. His research leads him to believe that the amount of oxygen is the reason - fish that are oxygen stressed tend to be more susceptible to disease and parasites.

He proposes a general hypothesis.

"Water levels affect the amount of lice suffered by rainbow trout."

This is a good general hypothesis, but it gives no guide to how to design the research or experiment. The hypothesis must be refined to give a little direction.

"Rainbow trout suffer more lice when water levels are low."

Now there is some directionality, but the hypothesis is not really testable, so the final stage is to design an experiment around which research can be designed, a testable hypothesis.

"Rainbow trout suffer more lice in low water conditions because there is less oxygen in the water."

This is a testable hypothesis - he has established variables, and by measuring the amount of oxygen in the water, eliminating other controlled variables, such as temperature, he can see if there is a correlation against the number of lice on the fish.

This is an example of how a gradual focusing of research helps to define how to write a hypothesis.

The Next Stage - What to do with the Hypothesis

Once you have your <u>hypothesis</u>, the next stage is to <u>design the experiment</u>, allowing a statistical analysis of data, and allowing you to <u>test your hypothesis</u>.

The statistical analysis will allow you to reject either the null or the alternative hypothesis. If the alternative is rejected, then you need to go back and refine the initial hypothesis or design a completely new research program. This is part of the scientific process, striving for greater accuracy and developing ever more refined hypotheses.

## APA Writing Format

The American Psychological Association or APA Writing Format is one of the most widely used formats in writing academic papers, particularly in the field of science. The <u>APA writing style</u> has evolved through time and several changes have been adapted in response to the electronic information age. What follows are some useful pointers for those of you who"re tasked to write a paper using the APA format. In general, your paper should follow these formatting guidelines:

**Margin -** Although formerly, the required measurement for margins is 1 ½ inch, now, it is required that margins on all sides (top, bottom, left, right) should each just measure one (1) inch.

**Font Size and Type** - Font for text all throughout the paper should be 12-pt., Times New Roman.

**Spacing -** Double-space for the whole document, including <u>appendices</u>, <u>footnotes</u>, tables and <u>figures</u>. For spacing after punctuation, space once after commas, colons and semicolons within sentences and space twice after punctuation marks that end sentences.

**Text Alignment and Indentation -** Alignment should be flush left, or aligned to the left creating uneven right margin.

**Running Head and Short Title -** Running heads are short titles located at the top of each of the pages of your article. Short Titles on the other hand are two to three-word derivation of the title of your paper. Running heads should not be confused with Short Titles. Running heads are typed flush left at the top of all pages while Short Titles are typed flush right.

Running Heads are not necessary for high school and collegiate papers unless required by instructor. These are instead mostly required for documents that are being prepared for actual release or publication. Running Heads should not exceed 50 characters including punctuation and spacing.

**Active Voice -** Traditionally, the APA writing format requires writing in an impersonal form. That is, refraining from using pronouns such as „I" or „We" in your statements. Now, it has changed. Most disciplines require the active voice. An example of this would be, instead of writing "according to the study," it should be "according to our study." This way, papers are made to be as active as possible.

**Order of Pages and Pagination -** The order of pages should follow this format: Title Page > Abstract > Body > References > Appendices > Footnotes > Tables > Figures    The page number should appear one inch from the right corner of the paper on the first line of each page. The <u>title page</u> will serve as the Page 1 of your paper.

## Title Page

The <u>Title Page</u> should contain the title of your paper, your name as its author (including co-authors), your institutional affiliation/s and author note if applicable. In case there"s no institutional affiliation, just indicate your city and state or your city and country instead.

As mentioned earlier, your title page will serve as your Page 1. It should be typed centered on the page. If it requires more than one line, please be reminded to double-space between all lines. Your name appears double-spaced as well, below the paper title.

The author note is where information about the author"s departmental affiliation is stated, or <u>acknowledgements</u> of assistance or financial support are made, as well as the mailing address for future correspondence.

## Abstract

The <u>Abstract</u> of your paper contains a brief summary of the entirety of your research paper. It usually consists of just 150-250 words, typed in  block format. The Abstract begins on a new page, Page 2. All numbers in your Abstract should be typed as digits rather than words, except those that begin a sentence.

## Body

The body of your research paper begins on a new page, Page 3. The whole text should be typed flush-left with each paragraph"s first line indented 5-7 spaces from the left. Also, avoid hyphenating words at ends of line.

## Text Citation and References

<u>Text Citations</u> are important to avoid issues of <u>plagiarism</u>. When documenting source materials, the author/s and date/s of the sources should be cited within the

body of the paper. The main principle here is that, all ideas and words of others should be properly and formally acknowledged.

The [Reference Section](#) lists all the sources you"ve previously cited in the body of your                                                          research

paper. It states the author/s of the source, the material"s year of publication, the name or title of the source material, as well as its electronic retrieval information, if these were gathered from the Internet.

## Appendices

The [Appendix](#) is where unpublished tests or other descriptions of complex equipment or stimulus materials are presented.

## Footnotes

[Footnotes](#) are occasionally used to back up substantial information in your text. They can be found centered on the first line below the Running Head, numbered as they are identified in the text.

## Tables and Figures

What is the difference between Tables and Figures? Tables are used to present quantitative data or statistical results of analyses. Examples of quantitative data are Population, Age, Frequency, etc.

[Figures](#) on the other hand come in different forms. It could be with the use of graphs, images and other illustrations other than tables. Figures are commonly used to show a particular trend, or to compare results of experiments with respect to constant and changing [variables](#).

Above are guidelines you may find useful when writing a research paper in APA writing format. However, you should be reminded that it"s still best if you will consult your instructor every time to confirm his requirements. It will be handy to verify whether your instructor prefers the active voice or the passive voice, just to make sure you"re both on the same page.

## MLA Writing Format

This writing format provides guidelines to researchers and writers in formatting research papers and other reports, especially when referencing sources. Referencing and citing of sources is very important as this protects writers from allegations of [plagiarism](#). By properly referencing, you demonstrate accountability to your source materials.

When you are to [write a paper](#) with the use of the MLA format, here are general formatting guidelines that you should follow:

**Margin -** Margins should be set to one (1) inch on all sides (top, bottom, left and right).

**Font Size and Type -** Font for text all throughout the paper should be 12-pt. Make sure you use a legible font face, and refrain from using decorative fonts. It is recommended that for any font you choose to use, regular and italics type of this should differ enough to be recognized from one another.

**Spacing -** The entire paper should be double-spaced. This includes the title and the body of each paragraph. Avoid adding extra spaces between the heading and the title of your paper as well as between the title and body itself. For spacing after punctuation, observe one space after periods and other punctuation marks unless specified by your instructor.

**Text Indentation -** For the text body, indent the first line of each paragraph approximately half-inch from the left margin which also equates to 5-7 spaces. It is recommended that you make use of the Tab key for uniformity, rather than pressing the space bar 5-7 times.

**Order of Pages and Pagination -** Place a header that numbers all the pages of your paper in the upper right corner of each page, half inch from the top and right-flushed. However, this may vary upon the specifications preferred by your instructor. Sometimes headers are asked to be typed with your last name first, then the page number in Arabic numeral form. This is still in accordance to MLA writing format. It is advised that you first ask for your instructor's guidelines to make sure you're both in the right page.

**Endnotes** - Endnotes should be placed on a separate page preceding your Works Cited page. Place a "Notes" title for this section, centered on the page and must remain unformatted.

**Title Page**

When authoring papers in MLA writing format, be reminded that the Title Page is not necessary unless you were specifically instructed by the instructor to make one. In case you were instructed to do so, your Title Page will then serve as your Page 1. You are expected to list your name, your instructor's name, course and the date on the upper left corner of the page. Make sure you double-space after each line.

After the date, double-space once again then enter the Title of your paper, aligned at the center. Please refrain from formatting the Title further, such as underlining, italicizing, typing the Title in all capital letters or full capitalization, or placing your Title in quotation marks.

Quotation marks can however be used if you are at the same time referring to other works in your Title. If this is the case, here are some examples on their proper formatting:

Fearing and Loathing in Las Vegas as Morality Play

## Racism in "Crash"

Please be reminded that only the first page should include the whole heading and title. Here"s an example of a Title Page following the MLA writing format:

http://www.dianahacker.com/pdfs/Hacker-Daly-MLA-Title.pdf

## Section Headings

When writing a long research paper in MLA writing format, it is best to make use of Section

Headings as these would improve your paper"s readability. Section Headings could be individual chapters of a book or named parts of an essay.

There are two (2) types of headings you can make use of: the numbered headings and the formatted, unnumbered headings. Whichever it is you choose to make use of, make sure you employ this type of sectioning for the entire paper.

What follows are sample numbered headings that can be used as your reference when making headings for your own paper using the MLA writing format:

1. Soil Conservation

1.1 Erosion

1.2 Terracing

2. Energy Conservation

2.1 Traditional Sources of Energy

2.2 Alternative Sources of Energy

3. Water Conservation

For formatted and unnumbered headings, here are some examples:

Level 1 Heading: Bold, Flush Left

Level 2 Heading: Italicized, Flush Left

Level 3 Heading: Bold, Centered

Level 4 Heading: Italicized, Centered

Level 5 Heading: Underlined, Flush left

If you choose to use only one level of headings, this means all sections are parallel and distinct and does not include any sub-heading, it is advised that all these Section Headings resemble one another grammatically for the purpose of parallelism and uniformity. It is important that you remain consistent all throughout your paper. In the event you choose to employ multiple levels of headings, meaning some sections include subsections or sub-headings, providing a key of level headings you used and their corresponding formatting to your instructor or editor could be a good idea.

## Body

Now you"re done with your title page and section headings, let"s move on to the body of your research paper.

All general MLA writing format guidelines apply to the body of your research paper. Between paragraphs, refrain from adding extra spaces as this is only done when you"re expected to write in business format. Otherwise, be consistent and follow the general guidelines for the entirety of your paper.

## Text Citations

When writing research papers, it is crucial to properly document your sources with parenthetical references not only to prove your paper credible but also to avoid being accused of plagiarism. Being accused of plagiarism could cause you a lot of trouble and may even result to getting a failing grade.

Here are some guidelines in parenthetical referencing  for papers following the MLA writing format:

1. When referencing outside sources following the MLA writing format, include a page for
2. Works Cited to show readers where you found your data and information. This will also  allow  your  readers  to  easily  find  the  mentioned  source materials themselves.
3. Be reminded that the Works Cited page is not the same as Bibliography or a listing of all information you may have researched in the preparation and writing of your paper.
4. Format your Works Cited page by creating a header. The whole page should be double spaced just like the rest of the document, including citations.
5. List citation entries in alphabetical order by the authors" last names.