

Odiongan, Romblon *Tel. no. (042) 567-5588*



CE321 Civil Engineering Project 1

ENGR. REYNALDO P. RAMOS, PhD

MODULE FOUR: Review of Related Literature

BACKGROUND

This module covers the conduct of literature review, particularly on how to critique journal articles, the use of the American Psychological Association (APA) style of citation and referencing, including the elements of a research design and the forms and contents of an abstract. This module will be supplemented with additional handouts about plagiarism.

At the end of this module, it is expected that the student is able to:

- conduct, write and compile appropriate literature and studies relevant to their proposed research topic;
- > apply the proper way of citation and referencing using APA style;
- recognize the elements of a research design;
- identify the different types of variables; and
- avoid plagiarism during the research proposal writing and conduct of research.

1. Literature Review

A literature is an independent works or brief introduction to the reports of new primary data with different focuses, goals, perspectives, strategies, organization and audiences. It can also focus on research outcomes, research methods, theories and applications. It provides background to and context for the research and to establish a bridge between the research study and the existing body of knowledge on the research topic. It is a process in which the researcher "critically" reviews available literature directly or indirectly related to the conduct of the research. There are three main reasons why a literature is necessary: (a) determining what research has been done on the research topic, (b) determining what level of theory and knowledge development relevant to the research topic, (c) determining relevance of the current/existing knowledge in relation to research problem.

Major Steps to Literature Review

(a) Determine when to conduct a search, (b) Delimit what is searched, (c) Access database for books, journals, and documents, (d) Organize the information gathered, (e) Critically evaluate the literature, (f) Write the literature review



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Primary Techniques for Incorporating Source Material

Table below shows the three main techniques in the conduct of literature review.

Example: The example for each technique is based on the statement, "Skin cancer is generally divided into two main classes, nonmelanomas and melanomas, both types affecting different types of skin cells" (Joyce 2005, 143).

Technique	Description	Example
Quoting	Exact words used in the original are placed in quotation	"Skin cancer is generally divided into
	markers	two main classes."
Paraphrasing	Information from a source is restated in a that retains the	There are two primary types of skin
	essence of the original statement	cancer.
Summarizing	Key points from the source material are rewritten in a	The type of skin cell affected depends on
	more succinct, more focused way in the student's own	the type of skin cancer.
	words	

Example of Citation Styles

Table lists down the three most common citation used style guides/publication are the following: (a) American Psychological Association, (b) the University of Chicago Press, and the (c) Modern Language Association.

Citation Style	Journal	Book	Web Source
APA	Journal Article without Digital Object Identifier	Shotton, M.A. (1989).	PZ Myers. (2007, January 22). The
American	(DOI) Light, M.A., & Light, I.H. (2008). The	Computer addiction: A study	unfortunate prerequisites and
Psychologic al	geographic expansion of Mexican	of computer dependency. London, England: Taylor &	consequences of partitioning your mind [Web log post]. Retrieved
Association	immigration in the United States and its implications for local law enforcement, <i>Law Enforcement Executive Forum Journal</i> , 8(1), 73-82.	Francis	from http://scienceblogs.com/pharyngu la/2007/01/the- unfortunate_prerequisites.php
	Journal article with DOI Herbst-Damm, K.I., & Kulik, J.A. (2005). Volunteer support, marital status, and the survival times of terminally ill patients. Health Psychology, 24, 225-229, doi: 10.1037/0278-6133.24.2.225		
Chicago	Calabrese, E.J. and L.A. Baldwin, 1999. Reevaluation of the fundamental close- response relationship, <i>Bioscience</i> 49:725-32	Martin du Gard, Roger. Leiutenant-Colonel de Maumort. Translated by Luc Brebion an Timothy Crouse. New York: Alfred A Knopf, 2000.	Website, owner of site used for author Federation of American Scientists. Resolution comparison: Reading license plates and headlines. http://www.fas.org/irp/imint/reso lves.htm



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MLA	Web publication
(Modern	Eaves, Morris Robert Essick, and
Language	Joseph Viscomi, eds. The William
Association)	Blake Archive, Lib of Cong, 28
	Sept., 2007.
	http://www.blakearchive.org/bla
	ke/>

REMINDER: Download the handout material that is also available at Weebly website: http://www.brainitiativesph.com/uploads/7/7/6/4/77644974/sample_apa_guidelines_3.pdf

2. What is a Research Design?

Some definitions of research design are as follows:

- A technical document where the decisions to conduct a research project, including some exploratory work have been stated, justified, evaluated and completed
- An overall action plan or scheme which contains specific structure and strategy of investigation to obtain answers to identified research questions and to control variance.
- A process link research questions, empirical data, and research conclusions
- Considered as a working document derived from courses/modules taken in research methods/methodology, as well as an output from the discussions between the supervisor and a student
- It aims to provide framework for the collection, analysis and interpretation of data; and it specify or designate the logical manner by which the variable units are compared and analyzed

3. Basic Elements of a Research Design

The fundamental stages by which choices need to be made are as follows. (a) research topic/problem, (b) research questions and objectives, (c) research methods, techniques and strategies, (d) research concepts, hypotheses and models, (e) data sources, types of and forms, (f)selection from data sources, (g) data collection and timing, (h) data reduction and analysis. In general, a research design needs to answer basic questions: what will be studied? Why will it be studied, and how will it be studied? The selection or choice of a research design is the most important decision to make because this decision greatly influence s and have direct impacts in the prospective results of the study. Every type of research design setting has its own individual central characteristics and expected outcomes as illustrated in the table below.

Туре	Characteristics	Outcome
Sample survey	It deals with a fraction of o total population It employs a sampling method to provide a sample that represents the total population Test by potheses are also established.	Data analysis is based on a simple relationship between two variables It utilizes both qualitative and
Field Study	 Test hypotheses are also established It concern primarily with processes and patterns under investigation (community, group) It emphasizes on the social structure and social interactions 	quantitative analysis - The data gathered enable to test many hypotheses compare to the sample survey



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		- General control through focusing on
		subgroup of larger population
Case Study	- Intensive analysis of a single instance of a	 Concepts is discovered and tested
	phenomenon being investigated	- Cases are coded and statistically
	- It attempts to discover unique features and	tested
	common characteristics	
	- Cases is grouped by type to discover uniformities	
Combined	- Survey methodology is utilized to determine	Creation of two databanks,: case study
survey ad case	relationship in a correlational pattern, and then	analysis and statistical data
study	interpreted using case study to discover patterns	Relationships accompanied by process and
	and processes	pattern data
	- Cases selected from the results of the survey	
	analysis particularly with significant results	

4. Variables - It is defined as a quantity susceptible of fluctuation or change in value or magnitude under different conditions. Numerical values or categories represent these quantities.

Types of Variables:

- a. Independent variable the stimulus variable which is chosen by the researcher to determine its relationship to an observed phenomenon. This is the one being manipulated.
- b. Dependent variable this is the response variable which is observed and measured to determine the effect of the independent variable it changes when the independent variable varies.
- c. Moderate variable this is a secondary or special type of independent variable to determine if it changes or modifies the relationship between the independent and dependent variables.
- d. Control variable this is a variable that is controlled in which the effects can be neutralized by eliminating or removing the variable.
- e. Intervening variable this is a variable which interferes with the independent and dependent variables, either its strengthen or weaken these variables.

5. What is Abstract?

It is a brief and concise descriptive summary of statement of the problem, hypotheses, significance of the study, research design, determination of sample size, sampling design and technique, the research instrument and validation, data processing and method, statistical analysis, findings, conclusions and recommendations.

Forms of Abstract:

- a. Short Form it consists of 100-250 words and normally used for publication of research paper in a journal.
- b. Extended Form it consists of 500 900 and being used in research paper contest; and presentation of scientific papers during symposium, seminars and conference.
- c. Long Form it consists of 900-1000 words and being used in master's thesis and PhD dissertation



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MODULE ASSESSMENT

MODULE THREE ASSESSMENT TASK #4

- 1. Choose one (1) journal article relevant to your proposed research topics/titles that you submitted in Assignment #2.
- 2. Read carefully the journal article and part of critiquing, write the following basic information about the article using the APA style.
 - a. Name(s) of the author(s)
 - b. Title of article
 - c. Title of journal, volume number, date, month and page numbers
 - d. Statement of the problem or issue discussed
 - e. The author's purpose, approach or methods, hypothesis, and major conclusions (Please summarize)
- 3. Answer the following questions:
 - a. Is the title of the article appropriate and clear? If yes/no, explain why.
 - b. Is the abstract specific? Does it fit with the type of abstract for journal? If yes/no, why?
 - c. Is the purpose of the article made clear in the introduction? Explain why.
 - d. Should some sections of the manuscript be expanded, condensed or omitted?
 - e. Are the study design and methods appropriate for the purposes of the study? Explain why.
 - f. Have the procedures or methodology been presented in enough detail to enable a reader to duplicate them? Briefly discuss.
 - g. Scan and spot-check calculations. Are the statistical methods appropriate? Briefly discuss.
 - h. Do you find any content repeated or duplicated? (A common fault is repetition in the text of data in tables or figures. Suggest that tabular data be interpreted of summarized, nor merely repeated, in the text.) Cite any part of the article that has duplication.
 - i. What is the main significance of the article to your proposed topic or research area of interest?
- 4. Submit your answers thru Google Classroom on or before 23:59PM, Monday, 22 March 2021. Point deduction for late submission. You also submit the complete e-copy of the journal article.
- 5. Short bond paper, 1.5 spacing, 10-12 font size, either MSWord or PDF file. The file name should be: FIRSTNAMESURNAME_Assessment#4. Upload your submission to the link provided in Google Classroom and make sure that the file successfully uploaded

DEADLINE: 22 MARCH 2021, 23:59PM

"PLAGIARISM IS AN ACADEMIC OFFENSE, NOT TO BE TOLERATED"





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READING MATERIALS

- Dawson, C. (2009). Introduction to Research Methods, A Practical Guide for Anyone Undertaking a Research Project, 4th Edition, UK: How to Content. Retrieved from https://www.pdfdrive.com/introduction-to-researchmethods-a-practical-guide-for-anyone-undertaking-a-research-project-d157725135.html
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- 15 Sanchez, C. A. (1997). Methods Techniques of Research, 3rd Edition, Manila: Rex Book Store



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- 17 Trinidad, J.E (2018). *Researching, Philippine Realities: A Guide to Qualitative, Quantitative, and Humanities Research,* Quezon City: Ateneo De Manila University Press
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