

BACHELOR DEGREE PROJECT

CHAPTER 2 : LITERATURE REVIEW

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□ Literature Review

- What is literature review?
- Why the need for literature review?
- How to carry out a literature review?
- Selecting and Defining a Research Problem
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1. WHAT IS LITERATURE REVIEW



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LITERATURE REVIEW

I. What is Literature Review?

STUDY, STUDY and STUDY.....

- ❑ It is actually the reading of the works of others before commencing on our own research work (**Based on your Title and Scope**)
- ❑ Literature review can pave the way for better research/project development.
- ❑ It can help in identifying the relevance of the research/project.

LITERATURE REVIEW

Steps in reviewing the literature

- ❑ Define your idea in as general terms as possible by using general sources
- ❑ Search through different sources (General, secondary and primary)
- ❑ Organize your notes
- ❑ Write your proposal (**Chapters**)

LITERATURE REVIEW

Different types sources of literatures

□ General sources

- Examples are daily newspapers, news weeklies, popular periodicals and magazines, (e.g. IEEE Spectrum), etc.
- Provides an overview of a topic and leads to a pathway where more information can be found

LITERATURE REVIEW

Different types sources of literatures

- ❑ Secondary sources
 - Examples are books on specific subject and reviews of research
 - provides a level of information “once removed” from the original work

- ❑ Primary sources
 - Examples are journals, conferences, abstracts, scholarly books, etc.
 - Provides the original reports of the original work or experience

- ❑ Other Sources (To gain knowledge on the topic. Not recommended for citing)
 - ❑ Notes in the internet
 - ❑ Lecture Notes
 - ❑ You Tube
 - ❑ And etc.



2. WHY (THE PURPOSE OF) REVIEW LITERATURES?

LITERATURE REVIEW

What are the Purpose of Literature Review

- ❑ To limit the problem area
- ❑ To define the problem
- ❑ To avoid unnecessary repetition
- ❑ To search for new approaches
- ❑ To recommend suitable methods
- ❑ To sample current opinions

LITERATURE REVIEW

2. The Purpose of Literature Review

□ Limit The Problem Area

- The problem should be small enough and sufficiently specific for adequate treatment and competent analysis. Research articles often suggest recommendations for the course that further research should take

□ Define The Problem

- 'Definition' means that the researcher knows exactly what he is looking for, so that data when collected and analyzed actually relates back to the problem

LITERATURE REVIEW

2. The Purpose of Literature Review

❑ Avoid Unnecessary Repetition

- Do not assume that because most of the existing research adopts one method that it is the only method or the correct method available in the circumstances. Do not use the approach if you have reservations about its application to the problem

❑ Sample Current Opinions

- Newspapers, magazines and non-technical articles may contain unique ideas that have not yet been researched

LITERATURE REVIEW

2. The Purpose of Literature Review

□ Recommend Suitable Methods

- **Methodology** should be appropriate to the research problem. Compile a checklist in which your reference ideas on research design, instrumentation, sampling and data collecting and analysis from various studies

3. HOW TO CARRY OUT A LITERATURE REVIEW

LITERATURE REVIEW

3. How to Carry Out Effective Literature Review

I. Key Words

- Compile a list of key word and terms that relate specifically to the research problem
- Ensure that the list is exhaustive by checking terms in a dictionary
- Cross reference terms/ descriptors by using another dictionary/ encyclopedia (if possible)

- “Design and development of a **Chipless RFID** sensor-tag for Temperature and Pressure sensing”

LITERATURE REVIEW

3. How to Carry Out Effective Literature Review

2. Consultations

- Consult the librarian for information about the collection and cataloguing procedures
- Discuss the research problem with specialists (in your case your SV) and/ or colleagues (in your case your classmates) for help in understanding the topic and finding sources of literature

LITERATURE REVIEW

3. How to Carry Out Effective Literature Review

3. Preliminary Sources

- Using the key words check the preliminary sources for references
 - ❑ Catalogue
 - ❑ Indexes
 - ❑ Abstracts
 - ❑ Bibliographies
 - ❑ Annotated bibliographies

4. Secondary Sources

- Locate textbooks, articles and other secondary sources (also the internet)
- Check secondary sources for relevance and background information

LITERATURE REVIEW

3. How to Carry Out Effective Literature Review

5. Contacts

- Write to organizations and/ or institutions that may have an interest in the research problem and be able to supply information or additional contacts
- From the survey of primary sources, contact any person who may have conducted research in the area, if it is felt that this may be useful

LITERATURE REVIEW EXAMPLE (A BAD ONE)

This chapter includes two different section. One is the discussion on the communication technologies i.e. from 1G to 5G in details based on the (refer the table (frequency,)) includes the power receive and the other section describes the different spectrum surveys that has been done previously. Furthermore, this chapter will discuss about important of doing spectrum analysis and evaluate the power receive versus frequency.

World War II is started on 1 September 1939 and ended on 2 September 1945.

World War II have given a lot bad impact to the world however it also deliver new technology to the world such as radio phones was created for the military so that soldier communicate each other, after WWII, the United State of America USA won the war and become number one country in the world but loss in financially. To overcome the problem the leading country in the world make all the technology they invented for war to be commercially available so that they can overcome the financial losses., which this network is, was operated at 150MHz and the calls were manually switched. This technology can be was call as 0G technology. On 1 December 1979 in Tokyo, Japan 1G mobile network was introduce by Nippon Telephone and Telegraph Company (NTT). (*A brief history of 1G*)



LITERATURE REVIEW EXAMPLE (GOOD ONE)

According to (Wolfert *et al.*, 2017), smart farming concept consists of smart devices that are connected to the Internet are able to control a farm. With that, smart devices are devices that are built-in with sensors and intelligence to perform autonomous tasks. Besides, robots will be seen to take part in the control system and machines will be helping humans in planning and analysis. This will cause all operations to be automatic.

(Bauer and Aschenbruck, 2018) stated that the idea of precision agriculture came from the integration of digital novelties in the agricultural field. Lately, the Internet of Things (IoT) has widened its scope of precision agriculture by adding smart sensors and technologies that are already present in other industrial and home automation. This is considered as Smart Farming which includes data collecting, data processing, analysis and storage. Analytic results can be viewed through the IoT frame to assist farmers to take better actions. (Dagar, Som and Khatri, 2018) mentioned that smart farming enables the process of farming to be economical, less difficult, reduce the cost of labour, thus produce yields that are of good quality.

LITERATURE REVIEW EXAMPLE (GOOD ONE)

Nevertheless, study by Brosnan and Lee (1998) found the opposite to be true.

Although their study showed no gender difference in computer anxiety, in the United Kingdom sample, males reported more computer anxiety than the females in the Hong Kong sample. Fogarty (1996) found that even though there was no significant gender differences in role conflict and role ambiguity, males were found to significantly experience higher level of role overload compared to the females. These findings are supported by the findings of Nobile and McCormick (2007) and Ragu-Nathan *et al.* (2008) which showed that males significantly experienced higher level of stress than their females' counterpart.

On the other hand, Martocchio and O'Leary (1989) claimed that men and women did not experience stress differently, both psychological and physiological

SELECTING AND DEFINING A RESEARCH PROBLEM

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PROBLEM FORMULATION

Selecting a Problem

- The central element in any research is the problem
- One of the problem has been identified and adequately defined the systematic and scientific process of making observations and collecting data can be more easily carried out
- From an analysis of the data collected, some significant results would be expected in anticipation of finding a solution to the problem
- After all, how can you solve a problem if you don't know what the problem is?
- Not only does a problem have to be identified, but before the research can begin to take shape, the problem has to be analyzed and its exact dimensions specified
- This is not an easy task, especially for the inexperienced researcher

PROBLEM FORMULATION

Selecting a Problem

- The first question you ask is:

HOW DO YOU SELECT A PROBLEM

Can you think of a situation arising from your own personal experience that needs further investigation?

PROBLEM FORMULATION

- From Your Own Experience
 - ✓ Interaction with others
- Critical Study of the Literature

PROBLEM FORMULATION

Interaction with Others

- Conferences, meeting, workshops and in-serving courses are usually designed for specific purpose, but often, during the course of the discussions, references are made to broader issues
- As well, informal discussions with colleagues and other interested members of the public can lead the keen researcher to problem areas that could provide the basis for research
- By being always eager to learn more about the educational process, by adopting a critical outlook and by taking every opportunity to be part of a research environment, it is more likely that you will be able to select a problem for research

PROBLEM FORMULATION

Critical Study of the Literature

- In preparing for a non-empirical research, general reading in your subject area or in any related area knowledge gaps in the literature may be identified
- Perhaps conflicting points of view have been presented and there is a need for more information to be provided to support one or the other
- Maybe there are deficiencies in the explanations given, or some questions may be raised that need answering

WHAT WE EXPECT FROM YOU

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REMEMBER

Literature Review (C5, Weightage: 1.8)	
Relevant and complete investigation into existing systems/techniques/technology, and a comparison between them are provided.	5
Relevant and satisfactory investigation into existing systems/techniques/technology, and a comparison between them are provided	4
Relevant and fairly complete investigation into existing systems/techniques/technology without a comparison between them are provided.	3
Slightly relevant and poor investigation into existing systems/techniques/technology, without a comparison between them are provided.	2
Very poor investigation into existing systems/techniques/technology, without a comparison between them are provided.	1
No literature review is provided.	0

REMEMBER

The Necessary Elements for Chapter Literature Review
are.....

- Through investigation on the selected problem
- Explanation on the research gap based on literatures
- Relevant references (minimum 10-12 references or more, mostly from recent 5 years)
- Table of comparison (important to get full points but optional)

END OF THE SESSION