# RESEARCH MO, SAGOT KO

## The TESDA Research Manual

Philippines-Australia
Human Resources
Development Facility

Technical Education and
Skills Development Authority

# CONTENTS

# 1.0 Introduction

The general objective of this research manual is to provide a guideline for the study of the labor market. In the context of the goals and vision of the Technical Education and Skills Development Authority (TESDA), the core problem is the presence of structural unemployment. Hence, the manual aims to offer researchers in the TESDA a set of procedures that will allow them to collect and analyze data on this problem of structural unemployment.

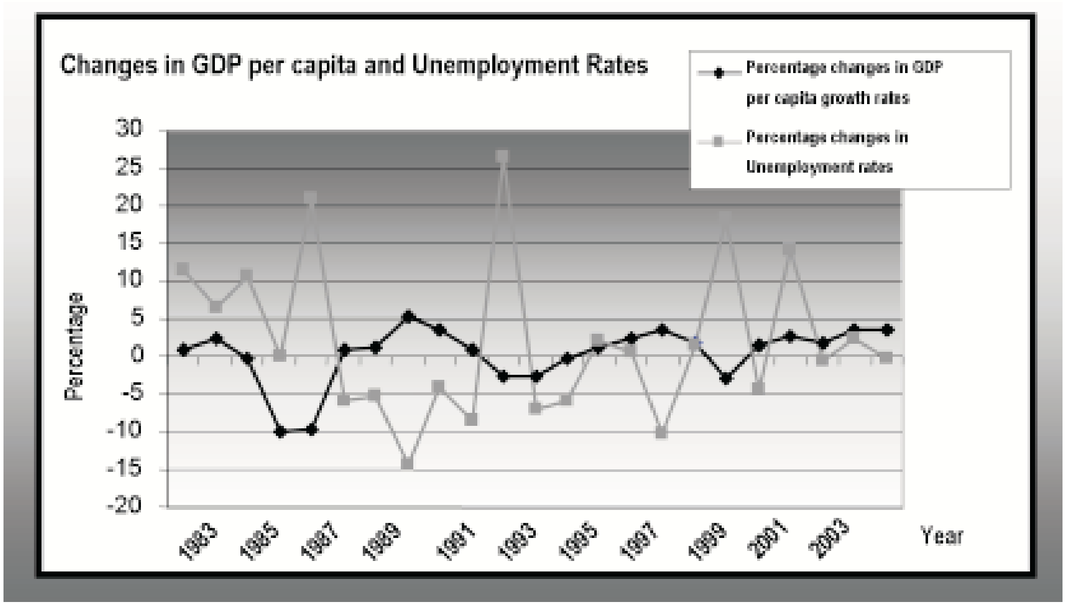
Conventional theory in labor economics distinguishes between structural, frictional, and cyclical unemployment. Structural unemployment is often viewed as a result of the institutional set up of the economy, including private and government organizations, types of market arrangements, educational and training systems, demography, laws and regulations. In the literature, the importance of these institutional features for structural unemployment is particularly tied to their implications for demand for and supply of labor, price and wage formation, and most importantly, the efficacy of search and matching processes in the labor market.

Frictional unemployment may be regarded as a subset of structural unemployment, mainly reflecting temporary unemployment spells as the result of job search and matching difficulties in connection with quits, new entries to the labor market, and job separation because of the employers' dissatisfaction with individual workers.

Cyclical unemployment differs from structural and frictional unemployment by basically being tied to short-term economic fluctuations. An empirical illustration of the importance of structural unemployment as compared to cyclical is that variations in actually measured unemployment rates have turned out to be much larger between cycles than within cycles, presumably reflecting differences in structural unemployment (Layard et al. 1991). It seems that this is clearly verified in the Philippines (see Figure 1), and that the structural unemployment movements are more significant than cyclical unemployment.

Successful social dialogue structures and processes have the potential to resolve important economic and social issues, encourage good governance, advance social and industrial peace and stability, and boost economic progress.

*- International Labor Organization*




Source of Basic Data: NSO Annual Statistics and LFS

While the issue of cyclical unemployment may be the main concern of NEDA and DOLE, the training and skills solutions to the problem of structural unemployment are obviously the mandate of TESDA. In 1994, R.A. 7796 created TESDA in order to promote Technical Vocational Education and Training. The main mandate then is to provide direction, policies, programs and standards towards quality, technical education and skills development. Furthermore, it attempts to develop systems, procedures and work methods to provide for a wide and complex array of qualifications, pathways, training, assessment, certification and accreditation systems within the breadth and scope of the TESDA mandate (TESDA HRD Plan). The goal then is to improve institutions of skills development and learning to produce a quality and employable workforce.

In fulfilling its function, research will be a vital component in the achievement of TESDA's goals and objectives. This research manual provides the principles of undertaking this research, along with examples to pursue this activity.

The manual will help the researcher into four main tasks:

- Frame the unemployment problem: Discusses a set of indicators of structural and other forms of unemployment in order to analyze it and to predict its occurrence. To help recognize and identify topics to study.

- Describe and execute procedures to collect information about the topic being studied. Involves identifying the:
  – Research participants involved in the problem
  – Strategies to collect data related to the topic
  –Activities describing the how, when, and from whom the data will be collected

- Analyze the collected data: Related to the nature of the topic and the data collected. Explains the differences in:
  –Quantitative vs. Qualitative research
  –Descriptive vs. Inferential statistics

- State the results or implications based on analysis of the data: To make sure conclusions should relate to the research findings.

## This manual can help researchers:

- Frame the unemployment problem
- Describe and execute procedures to collect information about the topic
- Analyze the collected data
- State the results or implications based on analysis of the data

**References:**

Layard R, Nickel S, Jackman R 1991 *Unemployment – Macroeconomic Performance and the Labor Market*. Oxford University Press, Oxford.

**Statement of the Problem**

- Background and Rationale of the Study
- Objectives of the Study
- Statement of the Hyoptheses
- Significance of the Study
- Scope and Limitation of the Study
- The Conceptual and Theoretical Framework
- Definition of Terms
- Review of Related Literature

# 2.0 Statement of the Research Problem

The objective of the Chapter 1 will describe how to identify and recognize the problem or issues as the subject of study. This includes the brief summary of the Background and Rationale of the Study, the General and Specific Objectives, the Statement of Hypotheses, the Significance of the Study and its Scope and Limitations. The Conceptual and theoretical Framework, the definition of terms and the review of related literature are also form part of this chapter.

## Background and Rationale of the Study

This part describes why the study had to be undertaken. This may be the cause or result of unexpected event or situation or of repeated occurrence of a certain problem/issues.

Example 1: ( Ref: Determinants of Assessment Rates in TVET in Region XI)

- The competency assessment and certification is a platform use to measure the level of competence and the recognition of knowledge and skills acquired by individual during the process of learning as well as on the quality of training delivery system by training providers.

- This is within the perspective that quality training provision results in higher level of certification rate.

- This study is conducted to analyze the factors affecting assessment and certification in view of raising the quality of training for employability.

## Objectives of the Study

This part draws up the very purpose of conducting the study as explained in the rationale. It draws from general objective to specific objectives.

Example 2a: (Ref: Determinants of Assessment Rates in TVET in Region XI)

**General objectives:**

- To determine various factors affecting the certification rates in TVET in Region XI
- To identify and recommend strategic measures and policy actions

**Specific objectives:**

To validate:

- that private TVET graduates perform better than TESDA Technology Institutes;
- that longer training period has greater chance in passing competency assessment;
- that graduates trained and assessed in Davao City has higher chance of passing competency assessment

Example 2b: (General Objectives, Research Paper in

- To determine the extent of absorption or employment rate of the graduates of the 100 hours finishing course for Call Center Agents (Cebu).

## Statement of Hypotheses

The statements of hypotheses are usually drawn up from the objectives. This is to test whether the statement is to accept or not to draw up conclusions.

Example 3:

- The graduates of private TVET Institutions perform better than TESDA Technology Institutes.
- The length of training has significant impact on certification rates.
- The location of the assessment center vis-à-vis TVET providers has significant effect on certification rates

## Significance of the Study

The significance of the study is a brief declaration that such study is very important and necessary.

Example 4:

- As a first study conducted in the Region, the results will be the basis to carry out further studies in the future along quality TVET provision, competency assessment and certification.(Davao Group)
- Result of assessment will serve as information for decision making. (Cebu Group)

## Scope and Limitation of the Study

The scope and limitations of the study describe the element and/or the coverage, e.g. Respondent, Location, Time, Qualification, etc.

Example 5:

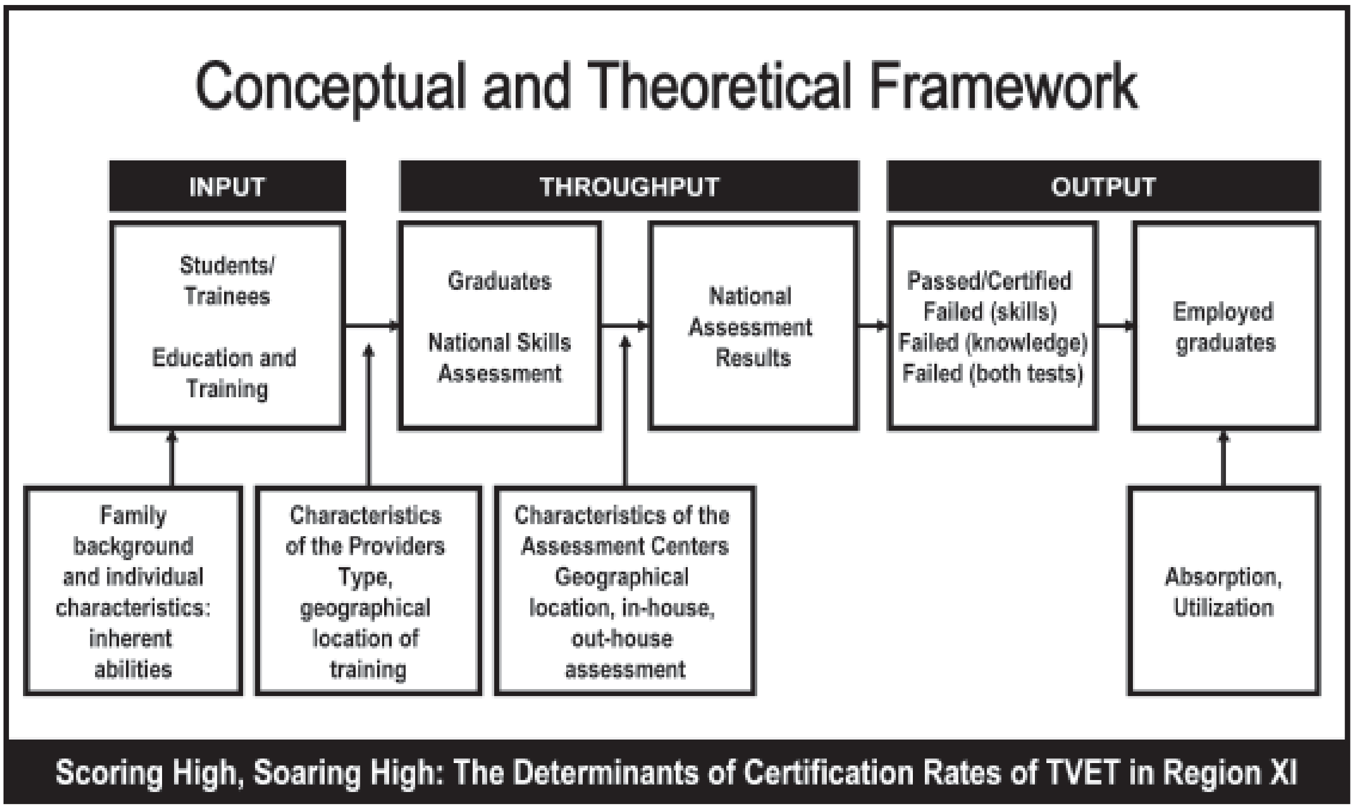
- This study covers graduates assessed in the following occupational qualifications from 2004-2006 in Region XI, namely: (Region XI study on CAC)
    - Automotive Mechanics (Light Duty)
    - Building Wiring Electrician
    - Data Encoder

- This study is limited to the 308 graduates of the 100-hour finishing course for call center from July 2001-February 2007 in Region VII. (Study on CCA of TESDA Region VII)

## The Conceptual and Theoretical Framework

This is the main part of the research which drew up the Input-Throughput-Output processes. It shows primarily the independent and dependent variables and its characteristics. It also shows the Empirical Strategy which briefly explains the desired results through mathematical formula. In addition, the definition of terms and the review of related literature are also form part of this chapter.

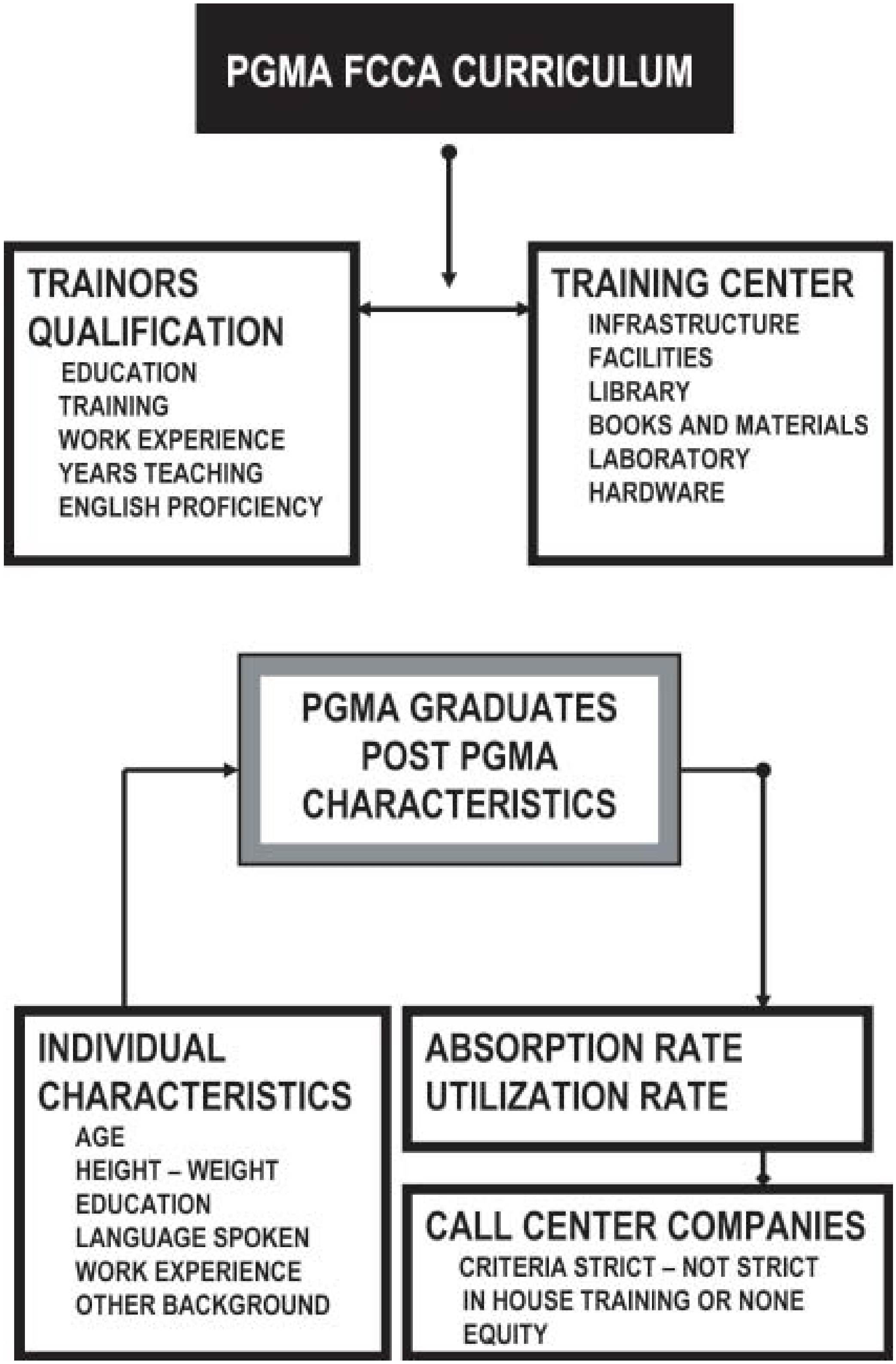
Example 6a: (Region XI Study)



Scoring High, Soaring High: The Determinants of Certification Rates of TVET in Region XI

$CR = f(HH, PROV, AC)$
$FKS = g(HH, PROV, AC)$
$CR = j(FKS, PROV, AC)$
$= j(g(HH,PROV,AC)PROV,AC)$
$= m(HH,PROV,AC)$
Hence, $CR = f(HH, PROV, AC)$

Example b: (Region VII Study on FCCA)



## Definition of Terms

This part defines the terms and abbreviations used in this study. This is to explain further the meaning of the terminologies and abbreviations specially those that are repeatedly used in this paper and to minimize number of pages.

Example 7a: (Davao)

**Competency –** involves possessing and applying knowledge, skills and attitudes to perform work activities to the standard expected in the workplace. (TESDA Policies & Guidelines)

**Competency Assessment -** is the process of collecting evidence and making judgments on whether competency has been achieved.

**Certification Rate –** is a percentage of passing the assessment over the total person assessed in a given period.

Example 7b: (Cebu)

**Call Centers –** refers to a centralize office used for the purpose of receiving and transmitting a large volume of request by telephone and operated by a company to respond to inquiries from customer and/or conduct telemarketing, debts collections and related businesses. (Wikipedia,

## Review of Related Literature

This part serves as references of the study and shows the name of the author, title of the paper and date of publication, among others.

Example 8: (Davao Group)

**“**The connection between assessment and performance is the most significant prompt for learning. Every act of assessment gives a message to student/graduate/worker about what they should be learning more and how they should go about it (UNESCO Studies in TVET, 1992)”.

Example 9: (Cebu Group)

“Industry estimates suggest that in the U.S. approximately 3% of the working adults work in call centers and that many call centers have less than 20 people handling calls, but there are also a very large multi-site centers with thousands of agents (An interview, Great Voice, 2007)

# 3.0 Data Gathering

This portion of the Research Manual describes and execute procedures to collect information about the topic being studied. Data gathering involves identifying the following:

A. Respondents
B. Strategies to collect data
C. Activities describing the how, when, and from whom the data will be collected

a. The following are the procedures to collect information about the respondents:

- Define variables. Identify required data sets. Table below is a suggested format to collect information about the respondents
- Get the population size
- Map out data sources for the variables
- Draw the samples following the defined method

| Research Topic | Objective | Data Set | Data Source | Data Collection Technique/ Instrument |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Strategies to collect data:

1. Primary Data Collection

- Survey questionnaire
  - face to face interview
  - phone interview
  - internet access
- Focus Group Discussion (FGD)
- Key Informant

2. Secondary Data Collection

- Retrieval of existing pre-processed information
  - creating master files
  - access data

c. Activities describing the how, when, and from whom the data will be gathered:

- Decide data gathering instruments to be used
- Construct the data gathering tool
  - questions should be in logical sequence, grouping/clusters
- Provide proper communication to authorities for the conduct of the study
- Allocate budget for incentives and benefits to researchers
- Orient researchers on data gathering procedures, incentives/benefits
- Pre-test data gathering tool
  - for survey 10% of the sample size, 5 or more (depends on the resources available)

Example:

N = sample size

n pre test = 10% of sample size

- for interviews using the landline telephones
- for interviews using the mobile phones
- for focus group discussions (FGDs) 4 to 5 groups

# 4. 0 Analyzing and Interpreting Data Collected

This chapter will guide the researchers on processing, analysis and interpretation of the data gathered. Specifically, this will provide the researchers the sequential steps in processing, analyzing and interpreting data. The following are the researchers' guide in analyzing and interpreting the data.

**Steps in data analysis:**

1 Data Coding
2 Data Encoding
3 Data Tabulation
4 Data Analysis and Interpretation

| Variable | Classification | Code |
|---|---|---|
| Gender | Male | 0 |
| | Female | 1 |

*example - data coding*

1) **Data Coding**

a. The researcher shall code the raw data appropriately and accordingly. Numeric code shall be used in coding for easy tabulation. The importance of coding is to track down sources of information, cluster, categorize and classify data.

2) **Data Encoding**

a. All data must be encoded electronically using spreadsheet.
b. Researcher shall review and evaluate the completeness, consistency, and correctness of data.
c. Create or come up with a summary sheet to generate all data sets.
(A summary sheet consists of all the variables ready for tabulation)
d. Proceed with the tabulation of data.

3) **Data Tabulation**

a. In tabulating data, the researcher shall sort, count, cluster, organize and classify statistical data in systematic order.
b. Arrange, desegregate and cluster data according to characteristics, types and other groups of data of significance.
c. Prepare necessary tables and matrices to be used in analyzing the data.
d. Number and label the tables accordingly.

4) **Data Analysis and Interpretation**

a. Experiment the different ways of presenting findings using tables, graphs, charts, histogram or other diagrams.

b. Decide on the appropriate statistical treatment to be used in data analysis. e.g. regression, etc.

c. Analyze the tabulated data to test the hypotheses and meet the objectives of the study using statistical tool.

d. Quantitative method will be used if the data sets are in numeric value.

e. If applicable, use qualitative analysis to support and supplement the quantitative data for the study to be concrete. Observations and responses through Focus Group Discussion (FGD), Process Observation (PO) and Key Informant (KI) shall be the bases to draw the qualitative analysis.

f. All related tables containing the data for each hypothesis are sequentially arranged, presented and discussed.

g. In presenting each table in the narrative text, the following procedures shall be followed:

1) Start with a brief introductory paragraph, giving the purpose of the data in the table
2) Analyze and interpret the findings
3) Write the findings

To ensure in depth analysis and objective interpretation, the following questions are asked:

1) What do the data or findings mean?
2) How significant are they in terms of the researchers own theory and that of cited sources?
3) Are there inconsistencies in the findings?
4) What are the circumstances that may have influenced the outcome of the study?
5) What are the implications of the findings to institutions and society in general?

# 5.0 Summary, Conclusions and Recommendations

This chapter is the last portion of all researches in TESDA. It aims to provide a clear instruction on how summary of findings, conclusions and recommendations are organized and drawn out.

This chapter has three parts, namely, Summary of Findings, Conclusions and Recommendations.

**In the summary of findings, briefly restate the:**

- problem of the study
- objectives
- hypotheses
- subjects of the study
- methodology in data gathering
- data analysis and interpretation
- instruments used in data gathering
- major findings of the study

## SUMMARY OF FINDINGS

This portion will briefly restate the problem of the study, the objectives, hypotheses, the subject/s of the study (respondents), methodology in data gathering, data analysis and interpretation, the instruments used in data gathering and the major findings of the study which are explicitly and specifically mentioned in the early chapters of the study.

The summary of findings is organized by topics in accordance to the problems of the study. The definite and explicit answer to each problem is given, whether the hypothesis is rejected or accepted.

For example. On the Survey of Graduates of the PGMA-TWSP 100 hour Finishing Course for Call Center Agents 2006-2007 in Region VII

Results of the analysis indicated these findings:

1. There is no apparent difference in the chances of employment in call center for one coming from private college graduate than another from State college or University.

2. The absorption rate is much higher for graduates of the finishing course with medical degrees.

## CONCLUSION

When drawing the concluding statements, the following shall be considered:

1. Each conclusion is brief and stated in a generalized statement that answers directly, in sequential order, each of the question or hypothesis that were formulated at the start of the study.

2. The conclusion should be derived from each of the significant finding of the study.

3. Figures, tables, percentages, or graphs which were already presented and extensively explained and presented in the previous chapters are no longer mentioned in the conclusion.

For example: The study indicates, that next the course itself, there are other factors contributing to the successful landing of call center jobs of the finishing course's graduates. The most important of these are the characteristics of specific attributes of the graduates themselves that are already given and can no longer be changed by the finishing course like gender, educational background and use of English at home.

## RECOMMENDATIONS

The purpose of providing recommendations is to discuss how the findings of the study could be the used to improve the present situation. When preparing the list of recommendations, the following essentials are to be observed.

1. The specific recommendations on the study are organized according to each of the problem or hypothesis' findings and conclusions

2. Each is stated in clear and concise terms

3. Each is relevant to the objective findings and conclusions

4. Recommendations should be practical and feasible.

5. The general recommendations are mentioned last. These include the following:

    a. Action/s of other parties which may improve the existing situation

    b. Further studies that may be conducted to enhance the original study or other related studies which interest other stakeholders.

**The purpose of providing recommendations is to discuss how the findings of the study could be the used to improve the present situation.**

For example: There should be a continuing study and monitoring of the performance of the graduates of the finishing course to further improve its curriculum on the effectiveness of the training centers involved in the program. For this purpose, there should be a study on the actual performance of the graduates in the call-centers where they work to include but not necessarily limited to their abandonment rate of calls, first call resolution, and average speed of answers, including their attrition rates, and compare it with the performance of those hired without the benefit of the finishing course.

**References:**

Developing and evaluating a Research Proposal, Master's Thesis and doctoral dissertation, Luz marries Sanches, Ed. D. 1986

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Philippines-Australia Human Resources Developmnt Facility (PAHRDF)

Technical Education and Skills Development Authority (TESDA)