

Certificate in Quantitative Research

Are you having challenges to plan for quantitative research?

Are you having difficulties in analysing data for a quantitative research?

Introduction

It always becomes a challenge for the graduate students to complete their PhD studies. Most researchers in the university are required to complete their proposal without proper guidance. The supervisors would advise them to read more journals and develop their proposals. In reality, the participants do not even know what to write and how to kick start the research proposal. This course enables students to develop their understanding of research methods, and confidence in designing a research project, choosing and executing appropriate methods, and assessing its intellectual/academic rigour.

Program Objectives

This program aims to

- understand the basis of scientific research
- construct a scientific research framework
- write the complete research proposal

Learning Outcomes

After completing this program, participants should be able to

- Understand the fundamental of scientific research methodology.
- Demonstrate this by seriously considering multiple viewpoints and perspectives in class discussions, in-class writing, group work, and the final paper.
- Complete research for graduate level

Who Should Attend?

Junior and senior academicians. Postgraduate students.

Methodology

Case studies, forum discussion, role-play, presentations, gamification

Program Outline

Time	Day One
9.00am– 10.30am	<p>Examine the Role and Importance of the Scientific Method</p> <p>In this module, participants would be exposed to the role of scientific research and the fundamental of scientific research. In addition, the participant would learn the flow of scientific research, especially on the principle of scientific inquiry. To appreciate the scientific method, a method of theory construction is exposed to the participants.</p> <p>Beginning the Research: Literature Review</p> <p>In this module, participants would be exposed to the purposes of a literature review. Sources of information and conducting a literature review, reading and note-taking strategies in the literature review. In addition, the participant will learn the reference management.</p>
10.30am-11.00am	<p>Break and Networking</p>
11.00am-1.00pm	<p>Essential Technique Towards Successful Literature Review</p> <p>In this module, participants will learn the right method to read a journal and secondary data. Then, the participant would learn the method how to structure a literature review before start writing literature reading. In this session, the participant would learn the technique of literature reporting, especially the in-text citations as the foundation of the literature review.</p>
1.00pm-2.00pm	<p>Lunch Break and Networking</p>
2.00pm-3.30pm	<p>Moving forwards from Your Reading: Introduction to the Study</p> <p>From a reading of journals and secondary documents, participants will be trained in identifying the background of the study, the problem statement, the needs of the study. From the needs of the study, general and specific objectives are developed. From the objectives, research questions are constructed to guide the study. The assumption of the study and contribution of the study.</p>
3.30pm-4.00pm	<p>Break and Networking</p>

4.00pm-5.00pm	<p>Converting Literature Reporting to Literature Review with a complete theoretical framework</p> <p>In this module, the participant would critically and systematically to review the academic work and build up the conceptual framework. From the conceptual framework, a theoretical framework is developed according to the objectives, research questions. Hypotheses are constructed based on the theoretical framework, objectives and research questions.</p>
Time	Day Two
9.00am– 10.30am	<p>Research Design and Sampling Design</p> <p>Participants would be exposed to various research design, both survey design and experimental design. From the research design, sampling size, sampling method and sampling procedure are exposed to the participants. Concept of validity and reliability are introduced in this session</p> <p>Foundation of measurement</p> <p>In order to evaluate the hypothesis, the nature of measurement needs to be understood. Level of measurement, evaluation of measurement scales, especially on reliability and validity are discussed.</p>
10.30am-11.00am	Break and Networking
11.00am-1.00pm	<p>Scaling and Instrument Design</p> <p>The questionnaire is developed to answer research questions. Various type of designing questionnaire will be discussed, such as question phrasing, response formats, frequently used scales techniques, instrument design is discussed.</p> <p>Data Collection</p> <p>Data collection techniques are discussed such as personal interviewing, focus group discussion, telephone interview, email interview, computerised aided interview, focus group and in-depth interview</p>
1.00pm-2.00pm	Lunch Break and Networking

2.00pm-3.30pm	<p>Descriptive Data Analysis</p> <p>Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Participants would learn how to key-in data to statistic package software (SPSS) and how to run data with SPSS.</p>
3.30pm-4.00pm	<p>Break and Networking</p>
4.00pm-5.00pm	<p>Inferential Data Analysis</p> <p>Techniques that allow us to study samples and then make generalisations about the population. Inferential statistics are a very crucial part of scientific research in that these techniques are used to test hypotheses. Participants would learn the method of how to run and analyse data analysis. These skills include One sample test of difference/One sample hypothesis test; Contingency Tables and Chi-Square Statistic; T-test or ANOVA; Pearson Correlation; Bi-variate Regression; Multi-variate Regression</p>