Research Methodology

Lecturers:

Dr. Eng. Herman Saputro, M.Pd., MT.

Cucuk Wawan Budiyanto, ST., Ph.D

Course Description:

This course will help the student to know how to select the appropriate methodology for use in a study to be performed, especially research in vocational education. The students will learn how to identify of the research problem, review of the literature, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solutions(s) towards the concerned problem or certain generalizations for some theoretical formulation. The final achievement students will learn to write a comprehensive research proposal.

Learning objectives:

1. Understand the concept at vocational research project –the research problem- and to discuss what a researchable problem is.
2. Perform literature reviews from the variety of source using print and online databases that pertain to the research objectives.

3. Understand the essential components of the research framework, relevant to the tackled research problem.
4. Compare and contrast quantitative and qualitative research paradigms, and explain the use of each.
5. Describe sampling methods, measurement scales and instruments, and appropriate uses of each.
6. Write a comprehensive research proposal.

Lecture	Theme	Content	Learning Method		Ref.
			On- Line	**Off Line**	
1	*A review of the Fundamentals research in vocational education*	1. Meaning of Research 2. Definitions of Research 3. Objectives of Research 4. Motivation in Research 5. General Characteristics of Research 6. Criteria of Good Research 7. Types of Research	Assesme On-Line	Cooperative Learning Think Pair Share	1&2
2	*Identification of a research problem*	1. Scientific Thinking 2. What is a Research Problem 3. Selecting the Problem 4. Sources of the Problem 5. Defining a Problem 6. Statement of a Problem 7. Delimiting a Problem 8. Evaluation of a Problem	On-Line Task	Expository , Discussion and Presentation	1&2

3	*The Review of Literature*	1. Meaning of Review of Literature 2. Need of Review of Literature 3. Objectives of Review of Literature 4. Sources of Literature 5. The Functions of Literature 6. How to Conduct the Review of Literature	On Line Articles / Journals Discussion	Expository , Discussion and Presentation	1&2
4	*The Research Hypotheses*	1. Meaning of Hypothesis 2. Definitions of Hypothesis 3. Nature of Hypothesis 4. Functions of Hypothesis 5. Importance of Hypothesis 6. Kinds of Hypothesis 7. Characteristics of a Good Hypothesis 8. Variables in a Hypothesis 9. Formulating a Hypothesis 10. Testing the Hypothesis	On Line Articles / Journals Discussion	Problem Based Learning	1&2
5	*The Research Approach*	1. The Philosophical Background 2. The Qualitative Approach 3. The Quantitative Approach 4. The Mixed-Methods Approach 5. Criteria for Selecting a Research Approach	On Line Articles / Journals Discussion	Expository , Discussion and Presentation	1&2

6&7	*Research Design in Quantitative Research*	1. Variables, 2. Conjecture, 3. Hypothesis, 4. Measurement, 5. Types of data and scales, 6. Sample, 7. Sampling techniques, 8. Probability, 9. Probability Distributions, 10. Hypothesis Testing, 11. Level of Significance and Confidence Interval, 12. t-test, 13. ANOVA, 14. Correlation, 15. Regression Analysis	On-Line Task	Cooperative Learning Think Pair Share Problem based Learning	1&2
8	*UTS*	1. Test 2. Proposal Project for *Quantitative Research*			
9/10/11	*Data Collection Methods*	1. Collection of Primary Data 2. Observation Method 3. Interview Method 4. Collection of Data through Questionnaires 5. Collection of Data through Schedules 6. Difference between Questionnaires and Schedules 7. Some Other Methods of Data Collection	Articles / journals Collection and Discussion	Expository , Discussion and Presentation	1&2

		8. Collection of Secondary Data 9. Selection of Appropriate Method for Data Collection 10. Case Study Method			
12/13	*Processing and Analysis of Data*	1. Processing Operations 2. Some Problems in Processing 3. Elements/Types of Analysis 4. Statistics in Research 5. Measures of Central Tendency 6. Measures of Dispersion 7. Measures of Asymmetry (Skewness) 8. Measures of Relationship 9. Simple Regression Analysis 10. Multiple Correlation and Regression 11. Partial Correlation 12. Association in Case of Attributes	On-Line Task	Problem Based Learning	1&2
14/15	*Interpretation and Report Writing*	1. Meaning of Interpretation 2. Why Interpretation? 3. Technique of Interpretation: 4. Precaution in Interpretation 5. Significance of Report Writing	On-Line Coaching	Cooperative Learning Think Pair Share Project Based Learning	1&2

		6. Different Steps in Writing Report 7. Layout of the Research Report 8. Types of Reports 9. Oral Presentation 10. Mechanics of Writing a Research Report 11. Precautions for Writing Research Reports			
16	*UAS*	TEST			

References

1. *Kothari, C. R. (2004). Research Methodology: Research and techniques, New Delhi: New Age International Publishers.*
2. *Wiersma, W. (1995). Research Methods in Education: An Introduction, Massachusetts: Allyn & Bacon, Incorporated*

Surakarta, 2 Februari 2020

Mengetahui,
Ketua Program Studi   **Dosen Pengampu**
S2 Pendidikan Guru Vokasi UNS

Dr. Suharno, S.T., M.T.
NIP. 19710603 200604 1 001

Dr. Eng. Herman Saputro, MT. M.Pd
NIP. 198208112006041001