

INTRODUCTION TO RESEARCH

Final Year Project

1st meeting Briefing

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RESEARCH STUDENTS AND TITLES

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Title: Static impact analysis to a badminton frame and design improvement

2. Nur Afiqah Binti Sami'in A17MJ0104

Title: Implementation of clean room principle and method into food industry.

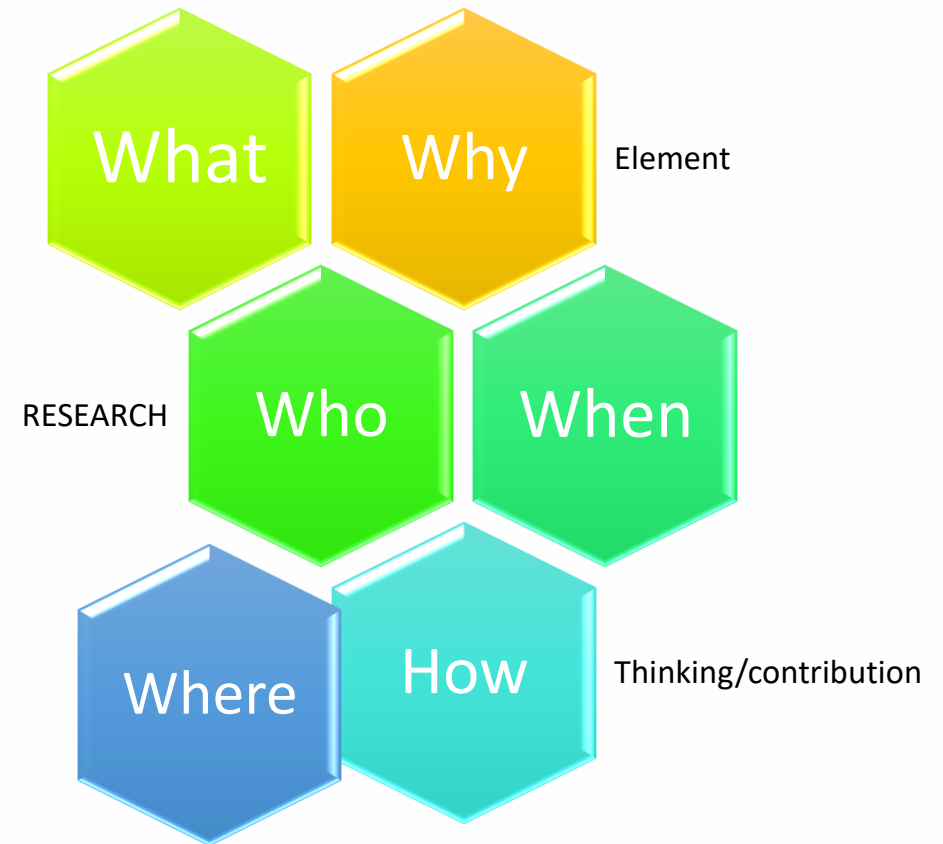
3. Muhammad Shafiq Bin Mohd Sa'at A17MJ3017

Title: design a vehicle control system of magneto rheological suspension

WHAT IS RESEARCH?

Research Methodology

1. Research is a logical and systematic search for new and useful information on a particular topic. The information might be collected from different sources like experience, human beings, books, journals, nature, etc.
2. A research can lead to new contributions to the existing knowledge. Only through research it is possible to make progress in a field.
3. Research is indeed civilization and determines the economic, social and political development of a nation.



Areas of conducting research

- Research is not confined to science and technology only.
- There are vast areas of research in other disciplines such as languages, literature, history and sociology.
- Whatever might be the subject, research has to be an active, diligent and systematic process of inquiry in order to discover, interpret or revise facts, events, behaviors and theories.
- Applying the outcome of research for the refinement of knowledge in other subjects, or in enhancing the quality of human life also becomes a kind of research and development

What are the Objectives of Research?

- ❖ To discover new facts
- ❖ to verify and test important facts
- ❖ To analyse an event or process or phenomenon
- ❖ to identify the cause and effect relationship
- ❖ to develop new scientific tools, concepts and theories
- ❖ to solve and understand scientific and nonscientific problems
- ❖ to find solutions to scientific, nonscientific and social problems
- ❖ to overcome or solve the problems occurring in our every day life

Is there any difference between research methods and research methodology?

RESEARCH METHOD

Research methods are the various procedures, schemes and algorithms used in research. All the methods used by a researcher during a research study are termed as research methods. They are essentially planned, scientific and value- neutral. They include theoretical procedures, experimental studies, numerical schemes, statistical approaches, etc. Research methods help us collect samples, data and find a solution to a problem.

Research methodology is a systematic way to solve a problem

It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to give the work plan of research

Research methodology is concerned with the explanation of the following:

- (1) Why is a particular research study undertaken?
- (2) How did one formulate a research problem?
- (3) What types of data were collected?
- (4) What particular method has been used?
- (5) Why was a particular technique of analysis of data used?

The study of research methods gives training to apply them to a problem.

The study of research methodology provides us the necessary training in choosing methods, materials, scientific tools and training in techniques relevant for the problem chosen

What makes people do research?

- (1) to get a research degree along with its benefits like better employment, promotion, increment in salary, etc.
- (2) to get a research degree and then to get a teaching position in a college or university or become a scientist in a research institution
- (3) to get a research position in countries like U.S.A., Canada, Germany, England, Japan, Australia, etc. and settle there
- (4) to solve the unsolved and challenging problems
- (5) to get joy of doing some creative work
- (6) to acquire respectability
- (7) to get recognition
- (8) curiosity to find out the unknown facts of an event
- (9) curiosity to find new things
- (10) to serve the society by solving problems



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