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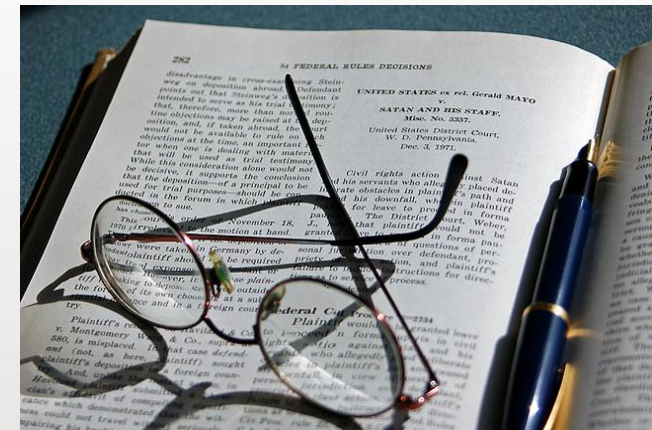
Identifying Research Problem & Formulation of Research Purpose, Question & Hypothesis

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Identifying Research Problem & Formulation of Research Purpose, Question & Hypothesis

At the end of this topic students will be able to:

- identify problems which are related to their fields of studies
- formulate suitable research purpose, question and hypothesis



What makes a good research topic?

- interesting
- researchable
- has theoretical or practical importance
- ethical
- manageable with your current skills, resources, and time available

Stating the Research Topic

- Quantitative research topics
- A topic statement describes the variables of interest, relations among those variables, and aspects of the sample.
For example :The topic to be investigated in this study is parents' beliefs about homework for primary grade children.

Stating the Research Topic

- Qualitative research topics are often stated in more general language at the outset of a study because the focus of the study will likely emerge after time in the field.

For example: This qualitative study explores the feelings of new teachers in large urban districts.

Placement of the Topic Statement

- Research statements are accompanied by background of the study and justification for the study (problem statement).
- The potential relevance of the topic should be stated. Thinking about significance of the topic often assist researchers in formulating hypotheses (quantitative) or research questions (qualitative)

Formulating & Stating Hypotheses

- A hypothesis is a prediction of the researchers' expected findings.
- Many studies contain more than one hypothesis.
- Researchers collect data to either support or not support a hypothesis.

Formulating & Stating Hypotheses

- Hypotheses in quantitative studies are formulated before conducting the study.
- All aspects of a quantitative study are affected by the hypotheses.
- Hypotheses are derived from theory or knowledge gained through literature review.

Types of Hypotheses

- Inductive Hypothesis: A generalization based upon observations (to form theory/model)
- e.g., A researcher observes that students are motivated by positive words; this observation becomes the basis for a hypothesis.

Types of Hypotheses

Deductive Hypothesis:

- Derived from theory and provides evidence that supports, expands, or even contradicts theory (to test theory/model)
- e.g., Based upon processing theories, a researcher forms the hypothesis that students will attend to moving objects in an educational computer game

Hypotheses Writing

- Null Hypothesis:

States that there is no significant relationship or difference among variables.

- e.g., There are no significant differences in spatial ability between male and female students.

Criteria of a good hypothesis

- clearly and concisely stated.
 - states the relation or difference among variables
 - defines variables in measurable terms.

Stating the Hypothesis

- Model for hypotheses:

P=The participants

X=The treatment, the causal or independent variable (IV)

Y=The study outcome, the effect or dependent variable (DV)

Example:

- Identify the P, X, & Y: The purpose of this study is to examine benefits in ninth grade students' achievement based upon attendance at a Saturday tutoring program.

P=Ninth grade students

X=Saturday program attendance or
nonattendance

Y=Achievement

Testing the Hypothesis

- The hypothesis is used to guide the research study.
- The researcher conducts the study and then analyzes the data to determine if the hypothesis is supported.
- Hypotheses are not proven—they are supported or not supported.
- Valuable contributions to the literature can still be made if a hypothesis is not supported.
- Hypothesis testing contributes by expanding, refining, and revising the literature base.

Formulating research questions

- Qualitative research does not use hypothesis
- The research is guided by research questions
- Research questions have to be clearly stated and cover the aspects that need to be studied

Example of qualitative research question

- How are the experiences of students who involve in the Service Learning program at Universiti Teknologi Malaysia?

References

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Thank you & Good Luck