

# The Importance of research understanding for Indonesian academics

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## **Abstrak**

*Penelitian adalah salah satu bagian dari Tridharma Perguruan Tinggi. Selain itu, pemerintah melalui Menteri Pendidikan dan Kebudayaan mengungkapkan bahwa salah satu tujuan pendidikan di Indonesia adalah kualitas Penelitian yang semakin hari semakin baik. Penelitian merupakan jantung sebuah Lembaga Pendidikan Tinggi, karena dengan penelitian dapat terungkap kebenaran-kebenaran dari suatu fenomena. Baik fenomena dibidang sosial maupun fenomena dibidang non-sosial.*

## **Pendahuluan**

The Minister of Education and Culture [1] revealed that one of his visions is to improve the quality of research and innovation. Therefore, revealing a research process is very important, especially in Indonesia, which is generally not familiar with things that intersect with research problems, especially students and lecturers who are really interested in research. For students, research is part of their course, namely their obligation to make a Final Project in the form of a thesis, thesis, or dissertation. As for Lecturers, research is part of the obligation, which in Indonesia is known as the Tri Dharma of Higher Education.

[2] a researcher One of the problems related to research faced by Indonesia is that the number of students and lecturers is not proportional to the number of publications produced. Until 2019, from 4,607 universities and 177,000 lecturers and researchers registered in the Science and Technology Index (Sinta), Indonesia only produced 34,007 journals indexed by Scopus.

"Currently, the number of researchers in Indonesia is increasing every year. However, more researchers are still needed. In addition, the Ministry of Finance (2019) states that the allocation of research funds is still below one percent of Indonesia's Gross Domestic Product (GDP)," he explained. In IPB University website.

This paper is a literature review on the research process and how to write a research proposal. Therefore, this paper is divided into two main parts, namely: (1) the research process, and (2) the importance of research. In part (1) the author explains some of the main things that a researcher needs to understand in conducting research, starting from understanding the theory or concept in the scientific field of the researcher, understanding data analysis techniques, and the ability to interpret the results of data processing. In part (2) the author puts forward

the condition of research in Indonesia, this section emphasizes several important things in conducting a research, for example the elements of a research proposal, background problems, literature review, measurement, data collection methods, analysis, logic research, and hypotheses.

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### ***The Importance of Research***

A country is in dire need of research, some developed countries show more research than underdeveloped countries or developing countries. In addition, the quality of research in developed countries is already very good compared to the quality of research in developing countries or underdeveloped countries.

The invention of the light bulb by Thomas Alpha Edison, the invention of the lightning rod by Benjamin Franklin, the invention and development of radio or television communication devices, and the discovery and development of atomic power or nuclear power by Albert Einstein in the United States provide evidence that the development of science will affect the development of civilized society. concerned. When the Chinese first invented gunpowder and paper, this country became the most advanced civilized country in the world. In the present century, the United States and other developed countries, such as Japan and Britain provide clear evidence that the civilizations of these countries are developing and progressing because of the research carried out by many of their citizens. These discoveries, of course, did not happen by chance, but through a process known as research activity.

### ***Research Process***

[3] reveals the stages of deductive research as shown in Figure 1. Figure 1 shows several steps of the research process. The research process begins with an interest, idea, or theory. The second stage is conceptualization, the next stage is the selection of research methods, operationalization stage, population determination and sampling, observation, data processing, analysis, and application. The first stage is the stage of generating ideas, interests, or theories. The letters in the top boxes indicate the concept or variable to be studied, the arrows indicate the relationship between these variables, for example: what causes consumers (X) to buy a product (Y).

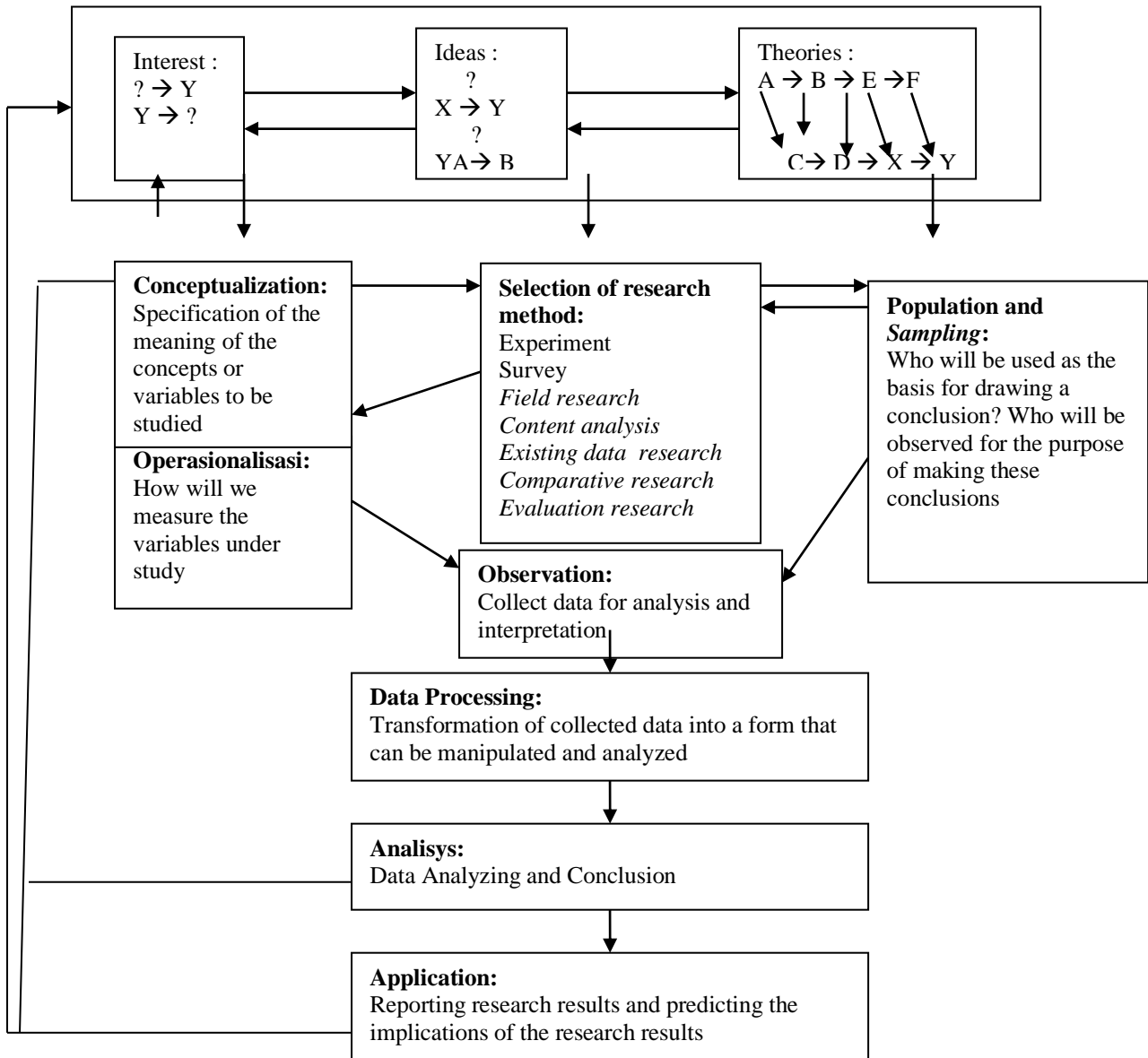


Figure.1. Research Process

The second alternative, the initial research starts from a specific idea regarding the relationship between one variable and another (a question mark indicates a relationship that is still in the form of conjecture), for example: in my opinion, an attractive advertisement will generate purchase intention. The third alternative, understanding various theories and connecting one theory to another so that a problem is formed, for example: a stimulus in an advertisement can cause stimulus discrimination or stimulus generalizations, these conditions will have a relationship with a me too marketing strategy or repositioning.

Based on these three things, the research objectives can be in the form of exploring an interest, testing a specific idea, or validating a complex theory. In addition, these three things can arise if the researcher correctly understands the field of study to be studied, for example understanding various theories and other supporting literature. For example, researchers who want to examine the effect of advertising on these strategies need to read the literature or ask experts in their fields to understand the relationship between these variables.

The second stage of the research process is conceptualization. The conceptualization stage is the stage of specifying all the concepts that are planned to be researched. For example: looking for the meaning of advertising and purchase intentions broadly, so that it can be measured easily. The third stage of the research process is selecting the research method. Several research methods that can be used to prove the hypothesis formed from the literature review are experimental, survey, field research, and content analysis.

The fourth stage of the research process is the operationalization of variables. Operationalization of variables is the stage when researchers describe the concepts to be studied into constructs that are easy to measure (see Zulganef, 2004). Operationalization of variables is the transfer of theoretical hypotheses into an empirical sentence or statement. Empirical here means that it can be measured easily.

The fifth stage of the research process is the determination of the population and the sampling method. The population is a group (generally people) that will be the basis for drawing conclusions from the results of the study. Researchers generally cannot examine all members of the population, therefore researchers will take samples that can represent the population.

The sixth stage of the research process is observation. Observation is defined as collecting empirical data. The data collection can be done by means of a questionnaire sent by post, through a team of research assistants, or by telephone.

The seventh stage of the research process is data processing. The data processing stage is to transform the data into other forms that are easy to analyze. In survey research, the raw data generated from observations are generally in the form of a questionnaire with checked boxes, written answers that must be classified (coding) and transferred to a computer.

The eighth stage of the research process is analysis. The analysis stage is the stage of interpreting the collected data in order to draw conclusions based on the ideas, interests, or theories that underlie the research. The eighth stage of the research process is the application stage. The last step of the researcher is to communicate the results of his research, so that it can be assessed or reviewed by other researchers, or used by parties with an interest in the research. Communication of research results is generally through a research report that contains the background of the research, how the researcher conducted the research, and the findings obtained by the researcher.

The research process proposed by [4] above is not much different from the stages of research proposed by [5] revealed that the research process consisted of understanding the theory, understanding the setting and proposition, and understanding the testable hypothesis. Swan and Martin (1994) further reveal that conducting research requires expertise in integrating the fields of philosophy of science, application of research methods, and understanding the core of the problem (substantive topic).

Philosophy of science is needed to understand that theories, research topics, measurements, and research methods are inseparable parts of an overall research process. The application of the application of research methods is needed to bridge the proof of the hypothesis by empirical conditions. Meanwhile, an understanding of the core problem is needed to interpret the results of the evidence based on the application of research methods [4].

[4] named the stages of the research process they put forward as a theory-setting-testable model. Because the model of the stages of the research process is related to the relationship between the concept (theory) and the setting of theory testing.

### ***Reconstruction of Logic and Logic in Practice***

Social researchers study and express a research based on one of two commonly known logics, namely: reconstructed logic and logic-in-practice. Quantitative researchers generally use logical reconstructions, while qualitative researchers generally use logic in practice [6]

Logical reconstruction means that the logic of how to conduct research is highly organized and stated repeatedly in an ideal, formal, and systematic form. For example, the rules for conducting simple random sampling are very strict and strict through certain steps (procedures) (eg there must be a sampling frame) [7].

Logic in practice is the logic of how research is actually carried out. This logic is relatively uncluttered with more ambiguity, and deals with very specific cases and is oriented towards practical completion of tasks. The logic of research in practice is based on judgments or norms agreed upon by the researchers themselves.

### ***Hypothesis Formulation***

[8] expresses the notion of a hypothesis as a statement of the relationship (conjunctural statement) between two or more variables. The hypothesis is always in the form of a declarative statement, and relates in general and specifically between variables. [9] reveals five criteria for causal hypotheses, namely:

- (1) has at least two variables,
- (2) the hypothesis expresses a causal relationship or cause-effect relationship between variables,
- (3) the hypothesis can be expressed as a prediction or an expected outcome in the future, for example the hypothesis: that attending religious activities reduces the likelihood of divorce, can be expressed as a prediction: couples who frequently attend religious activities have a lower divorce rate compared to couples who rarely attend religious activities
- (4) hypotheses are logically related to research questions and theories, because researchers test hypotheses to find empirical evidence that supports a theory
- (5) the hypothesis is falsifiable, that is, it has the possibility to be tested through empirical evidence and shows whether it is true or false. This means that the hypothesis can be tested empirically.

### ***Conclusion***

This paper aims to present the research process and the preparation of research proposals. The literature review that the author presents in sections II and III shows some important things in the research process and prepares a research proposal. Some of the important things the authors put forward below.

First, research in Indonesia is still far from what was expected, especially in terms of quantity and quality. Whereas Higher Education in Indonesia recognizes a work ethic for lecturers called the Tri Dharma of Higher Education. Which means that lecturers have three main activities/tasks, namely teaching, research and community service.

Second, the research process deductively starts from ideas, interests, or theories that exist in certain fields of science. Then followed by steps of conceptualization, selection of research methods, operationalization, population determination and sampling, observation, data processing, analysis, and application.

Third, the research process requires expertise in integrating the philosophy of science, the application of research methods, and an understanding of the core of the problem. These three fields can assist researchers in carrying out the stages of the first conclusion research above

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