

CHAPTER 1

EDUCATIONAL RESEARCH

Definition of Research

Research is "a systematic approach to searching for answers to questions" (Hatch & Lazaraton, 1991, p. 9). It is a "disciplined process of investigating and seeking facts which will lead one to discover the truth about something" (Markman & Waddell, 1965, p. vi). Therefore, *a thesis cannot be a statement reflecting one's opinion and prejudices*. Neither does research mean merely to give a string of quotations from scholars. In other words, research does not mean to derive the consequences of facts and provide evidence to defend one's opinion or hypotheses, which are expressed as one's thesis. Thus, the discovered facts need to refer to works of other people who happen to share one's opinion, and one has to explain how these facts are discovered. The opinion is presented subjectively, but the facts to support the points on which one wishes to focus need to be presented objectively to persuade the reader of the validity of the hypotheses formulated in the thesis. In order to arrive at a sound and valid result, one has to learn how to seek necessary information from different sources, analyze the facts obtained, and arrive at a conclusion after a reliable evaluation is made.

Reasons for Research

At universities, a thesis or a dissertation is normally a requirement for a higher degree. The common term found in these different requirements is "research." There are three stages of research in the educational process (Almack, 1930, p. 1). The first stage is the attainment of knowledge. In this stage, students' attention is drawn to the ways of acquiring and assimilating knowledge. The first stage culminates with the Bachelor of Arts (BA) degree. In the second stage, students acquire the techniques of testing the validity of the obtained knowledge. In the third stage, students spend time discovering facts through research. During this process, they learn to make generalizations from collected facts and formulate the whole process. When the results are written out in a formal way, the outcome is called a "dissertation." Once this is achieved, they earn the degree of doctorate and become specialists in their fields. Therefore, in order to be a specialist, a person needs to go through this process to be able to make discoveries about the unknown in a particular field and search for a valid solution or a result based on objective evaluations.

The terms "thesis" and "dissertation" are sometimes confused. In fact, they differ from each other in purpose and scope. As Albaugh (1951, p. 6) puts it, a master's thesis is completed in one or two academic years, and it is the first official

academic essay in individual research. It is in a way an exercise to lead the student into a scholarly life. It is designed to certify the students' individual ability in carrying out research. A doctoral dissertation, on the other hand, takes several years to complete. It is intended for an individual to demonstrate "fitness" in joining the community of scholars. In other words, with a thesis, one starts the apprenticeship in the area; with a dissertation, one ends his apprenticeship in the field and becomes a specialist. A dissertation, being the last stage of exercise in research, is the scholarly piece of work, which signifies the person's capability in conducting research completely independent of others and producing and interpreting results from the gathered data by using scientific methods of evaluation.

Advantages of Research

Hubbell (1962) cites the values that may be gained by acquiring the methods of research in the following manner:

Almost all vocations employ some sort of research, for skill in which knowledge of the basic method is prerequisite. Agriculture, journalism, salesmanship, insurance, even housekeeping, bookkeeping, golf, and constructing bridges may involve research.

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Most important of all, the success of research in these fields only demonstrates the real validity of the method. For many purposes, it is the best way to study, the best way to think. It is, in other words, highly educational. (p. vi)

Attributes of a Researcher

Although it is difficult to define a stereotype researcher, certain common qualities can be attributed to that person. As Avery (1978) points out, "successful researchers are usually imaginative, observant, and self-disciplined individuals. These persons also have intellectual ability, objectivity, an inquiring mind (curiosity), and a desire for additional knowledge (motivation)" (p. 4). Researchers are also good readers. They always spare time for themselves to follow the recent trends in their field via the articles that appear in recently published books and journals. By reading, researchers not only accumulate knowledge but also gain efficiency in expressing their ideas in the written form.

Good researchers respect the ideas of other scholars and do not make harsh attacks, nor do they attempt detecting errors in a bad tone. In contrary, in spite of their great knowledge, they are always modest. Albaugh (1957) brings the issue of courtesy as an attribute of a researcher:

The genuine scholar does not say, "Now I shall enlighten you." He says in effect, "Come, let us reason together." Modesty of tone does not require the writer to minimize the importance of his conclusion, but it does require him to let the thesis speak for itself. (p. 11)

Good researchers need to be very good at logical reasoning. In other words, they should be intellectually honest and should have access to logical reasoning. Their generalizations should be based on concrete facts. Albaugh (1957, p. 13) emphasizes the importance of logic and critical thinking and suggests that every graduate student should be exposed to the basic principles of logic.

Reasons for Failure in Completing Research

Students may fail to complete their research due to financial, physical or social reasons, such as family problems. However, there are other reasons as cited by Madsen (1983, p. 18) that affect students' performance:

Impatience: Students may find other responsibilities more pressing and may not be able to resist these pressures. A relatively better job opportunity, boredom, lack of motivation, obligation of repeating the experiment over and over again may cause the students to stop conducting the research. If they could resist all the temptations and be more patient and tolerant regarding the incoming problems, they would arrive at the desired destination.

Great enthusiasm but not on focus: Sometimes students get very enthusiastic about the research they are doing; they get side-tracked and start looking for very minor details and even irrelevant points, leaving out the main point of the subject. For instance, a female student of Madsen's (1983) working on Erasmus gets so enthusiastic about the subject that she diverts herself from the original topic and starts looking for the art, religion, and politics of the Renaissance. In this instance, the student's enthusiasm has acted against her, leaving her unable to select a proper thesis statement related to her dissertation topic. For this reason, she has not been able to finish the work in the desired period of time.

Perfectionism: Some students are so perfectionist that they are never satisfied with the work they have done. They try to look more into the problem trying to find more citations. They are not often pleased with the results they get from the experiments, and, for that reason, they conduct the experiments all over again. In such extreme cases, the research never gets finished. Meantime, either they cannot meet the deadline, or they lose their interest in the research and give up the whole project.

Casualty: Contrary to perfectionism, there are some casual people who have difficulty finishing the work because they get satisfied with the first draft of their work and their work never gets accepted by the examining committee.

Lack of synthesis or analysis: Some students think that what they need to do is to take notes out of different sources they consulted and simply put all these notes together without going into the process of synthesis. A thesis or a dissertation, however, is a piece of formal work, which needs to be prepared according to the universally set-out standards. Students consider dissertations as part of the requirement. For most people, a well-written dissertation can provide them the most rewarding intellectual experiences, and "earn them the esteem of fellow

scholars, and bring pride and satisfaction to family and friends" (D. Madsen, 1983, p. 6).

Lack of self-discipline: Some students after being used to strict schedules in their undergraduate studies have difficulty in disciplining themselves to work on their own, which requires a higher degree of independence. In these instances, they get distracted by the events going on within the environment and can never concentrate on their work. In working towards a dissertation, students need to give their work constant attention. If they stop working for a week, they need another week to adjust themselves to the point where they have left off. Thus, while working towards a dissertation, students are expected to work according to a regular schedule with great concentration. It is like a loop of a piece of knitting. Once it is off the needle, the loop will not stay on that line; it will go further down. In order to get that straightened out, the knitting has to be undone to the very first line where the loop has gone. Thus, all the effort and time will be wasted because everything needs to be straightened out before starting all over again.

Conventions of Scholarly Writing

In discussing the attributes of a good researcher, the qualities of a piece of research, and reasons for failures in completing dissertations, certain conventions are cited but it might be better to review the basic conventions to be obeyed in writing a thesis or a dissertation:

In accordance with the norms of expository prose. As Albaugh (1957) puts it, "scholarly writing must be readable, and to be readable it must observe all the principles of natural, formal, expository prose" (p. 8). The structures and the vocabulary items utilized in the research should not cause any ambiguity. In order to be comprehensible, Bly and Blake (1982:, p. 2) suggest that the researchers keep their writing short and simple, avoid jargon, and know their readers. In employing correct spelling, punctuation, and grammar, some manuals need to be utilized.

A comprehensive guidance can be obtained from the Internet. It is so easy for the researchers to have access to the World Wide Web (WWW) everywhere in the world. Once they get into WWW through the homepage and click on the SEARCH BUTTON ON the top of the browser, icons of the search engines (Yahoo, Infoseek, Magellan, Excite, etc.) appear on the screen. They decide which search engine they would like to use and accordingly click on the icon representing that search engine. Afterwards, they write some specific key words related to their research topic in the box provided using the required format. Consequently, they get all the related WWW addresses from which they can obtain the relevant information.

Once WWW addresses appear on the screen, the researchers click on any address they would like to get connected and wait for the opening of the page of the address to access the information. If they already know the WWW addresses, they do not need to go to the search engines. They directly click on the open button on the homepage and write down the WWW address they would like to

connect to. Knowledge about how to explore the Internet is a **must** for every scholar.

Otherwise, the following books and facilities could be referred to for this purpose:

- Style and Form Manuals
 - A Manual for Writers of Term Papers, Theses and Dissertations (Turabian, 1996)
 - Publication Manual of the American Psychological Association (APA) (American Psychological Association, 1995)
 - MLA (Modern Language Association) Handbook for Writers of Research Papers, Theses and Dissertations (Gibaldi, 1996)
 - Doing Research: The Complete Research Paper Guide (Seyler, 1993)

- Guides to Expository Writing
 - The Elements of Style (Strunk & White, 1972)
 - Harbrace College Handbook (Hodges et al., 1990)
 - Guides to Preparing Theses and Dissertations (see the Reference Section)
 - Dissertation Abstracts International
 - Computer Services (Social Science Citation, ERIC, WWW)

-Reference Books

- A good dictionary (thumb-indexed)
- A handbook of synonyms and antonyms
- Writing guides and style manuals
- One or more references on statistical methods
- A world almanac
- A card file for abstracts and literature reference
- A thesaurus
- A systematic listing of the principle periodicals related to research topic
- A typewriter or word-processor, and the required skill to use it

Accurate: The information given should be scientifically accurate. Inaccurate statements may be the indications of inadequate knowledge of the topic.

Consistent: In the use of measurement units, or citation, or any other format relevant to the research, consistency is a must. If the research starts with inches and yards, no shift should be made to centimeters or meters unless there is a concern of comparison. If the sources of information are given in reference format, there should not be a shift to footnoting. The bibliographical format should follow the principles of only one manual rather than variations of different manuals.

Persuasive: The results of the research should be supported by scientific facts in order to persuade the reader of its validity. The generalizations made should be based on rational reasoning, not on personal opinion.

Objective: When the research is based on personal opinion, it will not be detached and objective. Avoiding such reference and replacing expressions such as "my thesis" or "my first chapter" with "the present study," "the present investigation," or "the analysis to follow" are favored.

Steps to be Followed in Conducting Research

Researchers usually follow similar steps in conducting their research. The research activities can be categorized under the following headings:

Focusing on a problem: The first step is to identify a general problem. The topic should be of interest to the researcher or should be related to his/her own field of expertise. There may be a problem for which the researcher is in need of finding a solution. Problems can be derived from theory or from one's personal experiences (see Chapter 2).

Formulating a purpose statement or research question: The next step is to narrow down the general problem so that it could be specific enough to conduct the research on. After a library search, and initial reading, one starts narrowing the topic. This can be done by clearly formulating a specific question regarding the problem. A research problem is considered acceptable if investigation can be done within the given time, on the base of the collection, and the analysis of the data which can be obtained from available resources. In other words, by formulating a research question or giving a specific statement focused on a specific problem, the researcher finds himself/herself in the position of stating the purpose and the scope of the research (see Chapter 3).

Giving the background and the rationale of the research: At this stage, general background information and the theory the research is going to be based on is determined. Generally, in this section, the researcher gives references crucial to the research. This section acts as a transition between the research to be conducted and the prior research. In other words, the researcher, by giving a summary of the rationale underlying the research to be conducted, tries to provide a justification for the investigation of the proposed problem.

Formulating a hypothesis: In starting out a research project, one has to have some expectations regarding the results of the research. Each tentative explanation of these expectations is defined to be the statement of a hypothesis (see Chapter 3).

Reviewing the literature: Once the research question is formulated, the literature in that field is reviewed in great depth. This is especially true in writing a thesis or a dissertation where a thorough survey of the related literature is

needed. Thus, the researcher has to give detailed information on the theoretical base of the study.

If the answer is found in the literature, the research design does not go beyond a survey. If the answer still remains vague, a research method to investigate the problem has to be looked into. While reviewing the literature, one has to be aware of note taking procedures and storing bibliography cards (see Chapter 4).

Choosing the research design: After formulating the problem and the hypothesis, the researcher chooses a research design that will best suit the purpose of the study. Now is the time for the researcher to decide on the techniques and instruments to be utilized for obtaining information related to the problem and the hypotheses (see Chapter 5).

Making a detailed plan of the study: When the research design to be applied becomes definite, a detailed plan of the study has to be made. This is first done in the form of an outline (see Chapter 2). Once the rough outline is made, the researcher can work towards the analysis, trying to consider the scope, the hypotheses, the specific objectives of the study, and the method of data collection and analysis.

As an indication of this overall plan, graduate students are required to submit a research proposal as a partial fulfillment of a degree they are seeking (see Chapter 6). After having reviewed the related literature, the students write their *research proposal* focusing on the statement of the problem, background of the study, hypotheses made, and the research design to be implemented.

All the steps mentioned above enable the researcher to obtain enough knowledge to design the research to be conducted. At a university, the layout of the design is written for approval in the form of a research proposal. Once the proposal is approved by the research committee, the following steps need to be taken into consideration in order to complete the research (for detailed information see Vol. 2).

Collecting data: Once the research design gets its final form, the researcher starts collecting data or information that will shed light to the problem. The method of data collection varies according to the problem and the design of the research (see Vol. 2).

Analyzing the data: The collected data has to be categorized, and analyzed depending on the research design to be adopted (see Vol. 2).

Generating conclusions: This is the last step of the research. At this stage, the researcher tries to arrive at a conclusion on the basis of the analysis of the collected data. The conclusion also includes a discussion on the fulfillment or rejection of the hypotheses formulated at the early stages of the research. Reasons for the fulfillment or the rejection of the hypotheses should be explicitly stated.

Organizing the collected information: The collected information is organized depending on the context. In order to do a successful job, the researcher has to be

aware of the organizational patterns in writing and the means of combining ideas together to compose a coherent and a cohesive piece of writing (see Vol. 2). During the organization of the information, the research outline is revised according to the notes obtained from the literature review.

Writing a thesis, a dissertation, or a research article: This is where one needs professionalism and expertise. For that reason, one has to be aware of some commonly used phrases and structures utilized in formulating the information at different sections of the research (see Vol. 2).

Writing style is very important as well. There are three main formats adopted by scholars of different field: MLA (see Appendix 2), APA (see Appendix 1) and Chicago Manual Style. The form commonly used in social sciences is the APA format, and this book applies the same format as well. When writing an article for a journal, the researcher must adopt the format required by that particular journal the article is going to be published in. Most of the journals indicate the required format generally inside the cover page.