Chapter One

What is Research?
What Research Is Not:

- Mere information gathering
- Mere transportation of facts from one location to another
- Merely rummaging for information
- A catchword used to get attention
Research is:

- a systematic process of collecting, analyzing, and interpreting information (data) to increase understanding of a phenomenon about which we are interested.
Characteristics of Research

- Originates with a question or problem
- Requires clear articulation of a goal
- Requires a specific plan for proceeding
- Usually divides the principal problem into more manageable subproblems
- Is guided by the specific research problem, question, or hypothesis
- Accepts certain critical assumptions
- Requires the collection and interpretation of data
- Is, by its nature, cyclical or helical
Hypothesis:

• A logical supposition, a reasonable guess, an educated conjecture

• Provides a tentative explanation for a phenomenon under investigation

• May direct thinking to possible sources of information necessary to resolve the research problem and its subproblems.
Theory:

- An organized body of concepts and principles intended to explain a particular phenomenon

- Tentative explanations that new data either support or do not support

- Apt to drive further research
Assumptions:

- Self-evident truths
- The bedrock upon which the study must rest
- Vitally important to the quality of the study
Methodology:

• Dictates how data are acquired

• Arranges data in logical relationships

• Sets up the approach for refining and synthesizing data

• Suggests how data will be interpreted

• Yields one or more conclusions that lead to expansion of knowledge
Data Interpretation:

- Inevitably subjective
- Depends entirely on researcher’s hypotheses, assumptions, and logical reasoning processes
- Essential to the research process
- Different minds often find different meanings in the same set of facts
Research: Developmental Steps

• An initial question is asked.
• The initial question is formally stated as a problem.
• The problem is divided into subproblems.
• Preliminary data are gathered.
• A tentative hypothesis is formed.
• Data are systematically collected.
• Data is processed and interpreted.
• A discovery is made—a conclusion is reached.
• The tentative hypothesis is supported or not supported.
• The cycle is complete.
The Internet:

- A computer network linking millions of computers around the world
- A powerful way to access a wide variety of information on an almost limitless number of topics
Types of Research Reports:

- A *juried, or refereed*, research report has been judged by respected colleagues in one’s field and deemed to be of sufficient quality and importance to warrant publication.

- A *nonjuried, or nonrefereed* research report is one that appears in a journal or on the Internet without first being screened by one or more experts. Some nonjuried reports are excellent; others are not.
Checklist: Evaluating Research:

1. Is the research article juried or nonjuried?
2. Does the article have a stated research question?
3. Does the article describe collection of new data?
4. Is the article logically organized and easy to follow?
5. Does the article contain a section that describes and integrates previous studies on the topic?
6. Are the procedures clear enough to be replicated?
7. Is there a clear description of how data were collected and organized?
8. Do you agree with interpretation of the results?
9. What are the strengths and weaknesses of the article?
Guidelines for Reviewing Research:

1. Keep a running record of helpful articles in a notebook or computer file; include bibliographic information (author, date, article title), information about the journal, keywords and phrases that capture focus of article.

2. When you review someone else’s work, think about how it can help you improve your own work.

3. Don’t read only one or two articles and think you are finished.