

Chapter 5: Conducting Research

Overview

This chapter introduces several concepts related to research, its importance, and its implications. These topics may be new to students, depending on their work and previous educational experience. It is important that they understand the role of research in an organization.

Lecture Notes

A. The Purpose of Research

All kinds of information can be collected, summarized, and used to justify changes or make predictions about the future. Research is the means by which information is collected, so it is important in every aspect of work.

1. **Information and Analysis Guide for Effective Decisions.** The reason for collecting information is to make decisions; they are guided by information and analysis. Information can be used to compare choices and potential outcomes during the decision-making process. The goal is to make decisions that reflect the best option of those considered. Decisions should be guided by reasoned and well-documented choices, NOT by guesses and personal preferences.
2. **Types of Information** include subjective and objective.
 - a. Subjective information refers to the perception of events from an individual's point of view. It includes attitudes and feelings (about quality). When collecting data, be careful to gather information from everyone in the group.
 - b. Objective information includes things like numbers of events, measures of time and money, descriptive qualities like color, size, and shape. It does not rely on expectations or attitudes; it can be counted by anyone.
3. **Types of Data** can be broken down into quantitative and qualitative, but both can include subjective and objective.
 - a. Quantifying data includes information that can be recorded in numbers; it is often called data. The meaningfulness of the data is determined by the process by which it was gathered and how it was quantified.
 - b. Types of quantitative data include the nominal scale (puts each piece into a category or class), ordinal scale (uses a single dimension to rank data), interval scale (makes intervals between data clear), and ratio scale (limits analysis; special type of interval scale).
 - c. Qualitative data refers to non-numerical information; includes a description of events, timelines, comments, emotional responses, etc. Items can be ranked on nominal or ordinal scales, but not on interval or ratio scales. It can be broken down into observational qualitative data (script or tally based on watching an event) or inter-judge reliability (observations collected by more than one trained observer).
4. **Validity and Reliability** can be easily confused; both are critical for achieving research goals.
 - a. Validity is the extent to which a measurement measures what it is intended to measure; it also applied to conclusions drawn from research. Types include

empirical (outcome derived from evidence gathered from observation), face (simplest form, whether claims come from common sense), criterion (action measured called criterion), and construct (measures something thought to represent a particular concept).

- b. Reliability refers to the **consistency** and precision of a measure, test, instrument, or behavior. The methods are reliable if they consistently report the same outcome with the same circumstances or data. Reliability is established through inter-judge reliability (cross-checking data), test-retest (measurement is retested), or split halves (measure 1/2 at one time and the other 1/2 at another).
5. **Research Methods** must be selected based on the information needed.
- a. Literature and archive search reviews existing reports and published information. It is a common research method when further study isn't necessary.
 - b. Interviews involve an in-depth questioning process with participants; the method may be used with a survey or questionnaire.
 - c. Surveys obtain information through a face-to-face, telephone, or mail question-answer process.
 - d. Experiments involve carrying out a trial solution to a problem while trying to control other factors.
 - e. Observations gather data by observing and recording actions. The main advantage of this method is that it results in quantitative measurements of actions and behavior patterns; however, the usefulness is limited in some situations.
6. **Research Supporting Strategic and Tactical Planning**—strategic and tactical plans should involve research to support it.
- a. Understand the current situation by examining internal and external information. This analysis is also referred to as SWOT (Strengths, Weaknesses, Opportunities, Threats).
 - b. Examine the options available relative to their feasibility; they must be capable of helping the organization reach its goals.
 - c. Objectives must be measurable; the results must be quantifiable to determine success.

B. Types of Research

Research includes any means of collecting data or information (in any format). The quality of the analysis is linked to the quality of the data.

1. **Corporate Records/Internal Sources** include personnel records to financial records, and everything in between. These items are archived because of legal or historical purposes.
2. **Open Information Sources** (external) include a variety of public institutions.
 - a. Libraries and archives are open to the public for research; they may be found at local universities or government agencies.

- b. The Internet and WWW provide an excellent source for research; however, they must be used with caution.
 - c. News media make copies of their publications/broadcasts available for purchase. The search may be provided free or for a small fee.
 - d. Research services and consultants are available for hire.
3. **Market Analysis** is the systematic gathering, recording, and analyzing of data about marketing problems toward the goal of providing information useful in marketing decision-making.
- a. Sources of data include internal and external sources put to use in marketing decision-making. Both types of sources are essential.
 - b. Areas of market analysis include activities that find facts about consumers, competition, and internal operations.
 - c. Market research projects are planned searches for information. Plans include four important decisions: setting research objectives, identifying information, selecting sources of information, and deciding on research methods.
4. **Sales Analysis** consists of a thorough and detailed study of sales records to detect marketing strengths and weaknesses. It is completed at periodic intervals and used by management to allocate future efforts for a larger return.
- a. Need for sales analysis is based on the belief that company may be less profitable than it could be because analysis has been based on marketing efforts and cost relative to customers' territories' or products—it should be based on actual or potential dollar sales.
 - b. Primary types of sales analysis include analysis by sales territory (how much sold where), by products (what is being sold and how much), and by customers (who and how much). The “why” question is the responsibility of the marketing manager.
5. **Researching Job and Task** is an important step in developing personnel policies.
- a. Job analysis is a detailed study of the job to determine the nature of the work (tasks performed), quantity/quality of output expected, organizational aspects of the job, and the necessary personal qualities for success (leadership, judgment, tact, ability to cope with emergencies).
 - b. Task analysis is an integral part of the job analysis. A task is an element of total work process that can be performed separate from the other elements in the process. Task analysis is the process of breaking work into smaller elements. Information comes from employees, employers, observation, and computer measures.

C. Statistical Analysis

Basic statistical methods are divided into classes: descriptive statistics, correlation, and probability.

1. **Descriptive Statistics** focus on how to organize a set of data so that it is clear; the information must be collected in a numerical form.

- a. Measures of central tendency and measures of variability include the mean (average), median (middle), and mode (most). They are useful to establish patterns of typical performance.
 - b. Measures of variability demonstrate the extent to which things vary from one time to another. Common measures include range (difference between highest and lowest) and standard deviation (index of variation, more complex procedure).
2. **Correlations** show the extent to which the change in one factor relates to the change in another. A positive correlation occurs when an increase in one factor occurs with the increase in another; a negative correlation occurs when the increase in one factor occurs with a decrease in another.
- a. Correlation coefficient is a simple index that illustrates the direction and strength of a correlation; it is written as a number between -1 and $+1$.
 - b. Pearson correlation is used to develop a simple index that illustrates the direction and strength of a correlation; produces the correlation coefficient.
 - c. Scatterplots graph two factors being correlated.
3. **Inferential Statistics** make generalizations about events.
- a. Probability and chance relate to the likelihood of a certain event occurring.
 - b. Statistical significance is a measure of the confidence that researchers have in their results.

Additional Resources for Students

Recommended readings (no texts should be more than two years old):

- Bateman, Thomas S. and Scott A. Snell. *Management: Building Competitive Advantages*. Irwin/McGraw Hill.
- David, Fred R. *Strategic Management: Concepts & Cases*. Prentice-Hall.
- Dessler, Gary. *Essentials of Management*. Prentice-Hall.
- Griffin, Ricky W. *Management*. Houghton Mifflin.
- Hersey, Paul, Kenneth H. Blanchard, and Dewey E. Johnson. *Management of Organizational Behavior*. Prentice-Hall.
- Robbin, Stephen P. *Organizational Behavior*. Prentice-Hall.
- Robbins, Stephen and Mary Coulter. *Management*. Prentice-Hall.
- Stoner, James, R. Edward Freeman, and Daniel R. Gilbert, Jr. *Management*. Prentice-Hall.

Current issues of periodicals or business publications are also an excellent resource. Some of the following periodicals have an accompanying Web site.

<i>Current Periodical</i>	<i>Web Address</i>
<i>BusinessWeek</i>	http://www.businessweek.com
<i>Fortune</i>	http://www.fortune.com
<i>IAAP Complete Office Handbook</i>	http://www.iaap-hq.org/products/handbook.htm
<i>Modern Office Technology</i>	
<i>OfficePro</i>	http://www.iaap-hq.org/officepro/toc.htm
<i>The Office</i>	