

## RESEARCH DESIGN CONCEPT: A NEW FRAMEWORK

Mladen Koljatic, Pontificia Universidad Catolica de Chile  
Francisca Rosene, Pontificia Universidad Catolica de Chile

### Abstract

The concept of research design is inconsistently defined by marketing research scholars. A selective review of marketing research textbooks illustrates the nature of the problem. This paper presents the Research Design Matrix (RDM) as an alternative framework for categorizing the different types of research projects.

### Introduction

For marketing research scholars, the concept of research design has no clear cut definition. This lack of agreement has meant that many textbook authors have faced this issue by addressing it in a superficial manner or by completely ignoring it. As shown later in the paper, a survey of eight well-known textbooks unfolds a diversity of positions on this topic.

In this paper, we introduce the Research Design Matrix (RDM) in an attempt to clarify this concept. It is our contention that research design should not be considered a required step of the research process, but a form of classification of any study as a whole. Through the use of simple double-names any piece of research can be easily labelled.

### Background

#### Two Different Approaches

Among marketing research scholars there is a co-existence of two lines of thought that has influenced the treatment of this topic. On one hand, is the scientific method or methodological thought applied to the social sciences and particularly to marketing research, and on the other, lies the decision-making approach derived from the management perspective.

The scientific approach pursues the application of valid and reliable methods. Exploratory designs are used to define research problems, but they lack methodological precision. Descriptive and causal designs, on the other hand, yield more valid conclusions.

According to the decision-making approach, different research designs suit different purposes in terms of the

stages of the decision-making process. In this sense, exploratory designs are suited for the recognition and the definition of a decision problem and the identification of possible alternative courses of action. Conclusive studies are appropriate for later stages, when the manager is faced with the need to evaluate and select one way to go.

Even though one can easily identify the particular line of thought which guides any author's categorization, the explicit following of one line does not preclude an implicit consideration of the other. For example, the researcher with a methodological guiding perspective keeps in mind that his/her research is connected with a marketing decision. However, explicit consideration of both lines of thought simultaneously has proven to be a hard task to accomplish. Accordingly, the treatment of the topic has been both entangled and incomplete.

#### A Review of Marketing Research Textbooks

Marketing research authors have taken different approaches to deal with this topic. **Table 1** summarizes the findings of the review of a sample of eight, well-known, marketing research textbooks.

This review allows us to identify three possible ways to deal with the issue of the treatment of research design. One is to abandon the concept. That is the case of Dillon et. al. (1990). In fact, these authors do not consider research design a marketing research concept at all. It is neither defined in the glossary nor is it explicitly employed as an overall framework or as a specific step in any research project. A careful review of the text allows us to realize that it is used in a loose manner, like "planning the research design" (p.65), but is never fully discussed later on. They mention experimental design (p.71), but ignore exploratory designs.

A second option is illustrated by those textbooks in which the concept is employed, but either is never defined or is used in an ambiguous manner. Such are the books by Parasuraman (1986) and by Aaker and Day (1983). In the first, besides giving no explicit definition of the concept, Parasuraman states that "strictly speaking, no single research classification has an unambiguous label for every research project" (p.132). More so, many times it appears

hard for him to justify whether a study is exploratory or descriptive, which makes him conclude that "research designs differ more in terms of degree than in terms of kind" (p.146). Besides, the concept as such has no place in the text's glossary.

Aaker and Day, in turn, do not help their readers when—although having a clear definition of the concept—they present two Figures with the same name, "The Research Process", but different in content (Figure 2-1, p.20 and Figure 3-1, p.48). The first Figure makes reference to the concept of research design as "design of the research" (fourth step); while the second distinguishes three Research Approaches (or three general categories of research, as shown in the following page of the book), as a required substep (with the Research Tactics), of a major "Research Design" phase!

Along these lines, other authors can be labelled ambiguous in their treatment of the topic. For Tull, [Tull and Hawkins (1990); Green, Tull and Albaum (1988)], having different co-authors has meant two different positions on the subject. With Hawkins, research design is equated with the research process. In fact, together they present the "research design process" as a series of distinct, but interrelated steps. "These... steps represent the general order in which decisions are made in designing a research project" (p.44 and Table 3-1, "Steps in the Research Design Process", p.45). However, with Green and Albaum, the definition of research design becomes a step within the overall research process (Figure 2-1, "The Research Process", p.30).

Finally, it can be said that Boyd, Westfall and Stasch (1989) also have an ambiguous position on this issue. In three different parts of their textbook, the same concept is given three different names. In fact, when describing the Plan of the Book, the first three steps of the marketing research process (to be dealt with in Chapter 3) are named "Research Objectives, Information Needs and Research Designs" (p.23). Later, when detailing the seven steps of the research process, step number three becomes "Designing the Data Collection Project", within which the researcher should ask himself whether the research should be exploratory or conclusive (p.43). And, when we check the name given to Chapter 3, we find that "Research Designs" has been substituted for "Types of Research" (p.65).

A third option is that taken by authors who explicitly choose to follow one or the other line of thought. That is the case of Churchill (1990), who clearly defines the concept and follows the methodological or scientific approach. For him, the definition of the research design constitutes the second step of the marketing research

process. On the other hand, we find authors like Kinnear and Taylor (1991), who distinguish the research designs according to their appropriate usefulness in the different stages of the decision-making process. Thus, they identify the exploratory and conclusive designs and even add a new type, the performance-monitoring design.

### Three Reasons for an Alternative Framework

Three basic ideas underlie our proposition of a Research Design Matrix: first, that this concept should not be considered a step of the research process; secondly, that the two basic lines of thought are not "either/or", but rather should be considered simultaneously; and, thirdly, that the implementation of a research project should be taken into consideration. We shall address each one of these ideas in turn.

#### Not a Required Step

As evidenced by Table 1, marketing scholars differ with respect to the inclusion of the research design notion as a required step in the overall research process. It is worth noting, however, that most authors coincide in its definition as a framework or plan with which to guide the research. Our contention is that it should not be a step, but rather way of classifying research according to its characteristics in terms of research objectives, information need, data collection procedures and sampling plan. In other words, each project, no matter how flexible or rigorous it may be, must go through the same stages. These are inevitable. What varies is their degree of formalization. For example, in an exploratory research project, even though, little is known about the marketing problem or opportunity, the project has a goal or objective, such as clarifying concepts; has a data collection method, such as a loose questioning guide; and is to be applied to some group of people, most probably, a convenience sample. Thus, the concept of research design becomes a label which names or summarizes a particular way of carrying out research.

#### The Approaches are Complementary

The second idea which underlies our proposition refers to the fact that the two basic lines of thought are not "either/or", but rather should explicitly be considered simultaneously. The above results from the fact that most of the times marketing research is applied research and not basic research; that is, it is done with a practical purpose in mind—in this case, a marketing decision. Therefore, the decision-making approach must be considered. At the same time, we know that these decisions are a combination of several inputs such as the managers' knowledge and experience on the marketing issue, his/her personal intu-

ition and the marketing research findings he/she has at hand. The first two are mainly subjective types of help. But, on the contrary, the specific contribution of marketing research to his/her decision-making process lies precisely in its objectivity and in its associated degree of methodological rigor. Thus, this line of thought must also be a part of the Matrix. It is worth anticipating, that we have substituted the "exploratory" type of research of the decision-making approach for the word "non-conclusive" to avoid confusion. In this way, it becomes clearly different from the "exploratory" type of the methodological approach.

#### A Third Criterion

The third idea refers to the need to consider the implementation of the particular research. We have labelled it the time-frame dimension, which breaks up into "before" and an "after" options, for the sake of classifying any research project in both instances—before the data gathering process and after its completion. Why this third criterion? First, because the end result should not be different from the planned one; but, many real-life situations call—in the end—for a change in the research design classification of the project. Second, the status of the project might change from non-conclusive to conclusive design or, vice versa. Therefore, the definition of research design is to be done not only *ex-ante* (that is, after agreeing upon—researcher and marketing manager— what particular objectives and procedures will be followed), but also *ex-post* (that is, after the data collection stage) faced with the actual findings, on one hand, and the decision to be taken, on the other. In other words, the research design must be labelled both, in the planning stage and later, when the project has ended.

#### The Research Design Matrix

According to these three dimensions or criteria, the Matrix of 12 cells is built (Figure 1). How does it work? Taking into consideration the initial project conclusiveness (the underlying decision problem) and the rigor of the planned research (the methodological approach) an initial or "before" classification is made. Later, when the project is completed, a re-examination of the methodological rigor, initially defined, as well as a re-examination of the decision purpose, must be done in order to determine a second or "after" classification of the research design.

All research designs are categorized by simple double names. Some examples of "before" research designs include exploratory/non-conclusive, descriptive/conclusive, and causal/conclusive. These, in an "after" stage, may become exploratory/non-conclusive or descriptive/conclusive designs.

#### The Matrix as a Unique Solution

In addition to the possibility of classifying typical research projects, this alternative framework offers a unique solution to the labelling of "anomalous" investigations. It allows the researcher to place them into a meaningful classification, something which could not be addressed through the previous approaches. Two illustrative examples of this use are discussed below. The first one deals with a decisional change between the "before" and "after" stages of a research project and the second, with a methodological change between these same stages.

Imagine a project which starts using focus groups (an exploratory/ non-conclusive research) beforehand, but, when finished, the marketing manager who asked for the study, considers that he/she lacks the financial resources to continue with a second step of some form of descriptive/conclusive research. Therefore, he/she makes up his/her mind and decides to carry along certain marketing tasks, in the absence of more conclusive findings. This is a risky decision. In this case, methodologically speaking, the study itself remains unaltered, but there has been a change in the conclusiveness given to the research findings as they are utilized for decision-making purposes when not appropriate. According to the Matrix, the same project, then, becomes afterwards, exploratory/conclusive research.

A methodological variation is illustrated by a descriptive/conclusive research project, in which the needed information is to be gathered through a probability sample (simple random, for example), but which encounters, at the end of the data collection process, a serious methodological problem—a very low response rate. The research findings, therefore, are drawn from a smaller sample, whose representativeness is, at least, questionable. According to our Matrix, in terms of methodological rigor, the project turned out to be something different from that which it was initially intended to be. Then, methodologically speaking, instead of being a descriptive research it should be considered exploratory. If the manager, in spite of the above, decides to go ahead and makes a decision, the study becomes—in a second stage—an exploratory/conclusive research.

#### Summary

This paper proposes an alternative framework for the purpose of clarifying the meaning of the research design concept. As discussed, by taking simultaneous consideration of three dimensions—the methodological, the decisional as well as the time frame—the categorization of any piece of research is easily obtained. The need to include a time frame responds to the recognition that real-life

situations have an impact on research projects, which cannot be ignored.

Also, the concept of research design should not be considered a step of the research process, but rather an overall label. In addition, besides categorizing usual studies, the Matrix offers a solution to the labelling of "anomalous" ones, which otherwise, remain unclear.

### References

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Kinnear Thomas C. and James R. Taylor (1991), Marketing Research: An Applied Approach, 4th ed. New York: McGraw-Hill, Inc.

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TABLE 1

Treatment of the Concept of Research Design in a Sample Current Marketing Research Textbooks

	Churchill	Parasuraman	Aaker & Day	Dillon, Madden & Firtle
Text	Marketing Research: Methodological Foundations 5th Ed. (1991)	Marketing Research (1986)	Marketing Research 2nd Ed.(1983)	Marketing Research in a Marketing Enviroment (1990) 2nd Ed.
Use of the Research Design Concept	Yes	Yes	No	No
Definition	It is the framework or plan for a study used as a guide in collecting and analyzing data (p.127)	No	It is the detailed blueprint used to guide the implementation of a research study toward the realization of its objectives (p.47)	No
Types of Research	Exploratory research design Descriptive research design Causal research design	Exploratory research Conclusive research (Descriptive and Experimental)	Exploratory research Descriptive research Causal research	Qualitative research methods Quantitative research methods Experimental research methods
Step in the Research Process	Yes, Step 2	Yes, Step 5 (p.93), but No (p.122)	No, (p.20), but Yes as research approach (p.48)	No
Research Design as a Chapter	Yes, Ch 4 Research Design	No	Yes, Ch 3 Research Design and Implementation	No
Approach	Methodological (scientific)	Decision-making	Scientific	Scientific

	Green, Tull & Albaum	Tull & Hawkins	Kinnear & Taylor	Boyd, Westfall & Stasch
Text	Research for Marketing 5th Ed. (1988)	Marketing Research: 5th Ed. (1990)	Marketing Research: 4th Ed. (1991)	Marketing Research: Text 7th Ed. (1989)
Use of the Research Design Concept	Yes	Yes	Yes	No ?
Definition	It is the specification of methods and procedures for acquiring the information needed to structure or to solve problems (p.96)	It is the specification of procedures for collecting and analyzing the data and analysis phases of the necessary to help identify or react to a problem or opportunity (p.44)		It is the basic plan that guides the data collection research project (p.64)
Types of Research	Exploratory studies Descriptive studies Causal studies	Exploratory research Descriptive research Causal research	Exploratory research Conclusive research (Descriptive and Causal) Performance Monitoring research	Exploratory research Conclusive research (Descriptive and Experimentation)
Step in the Research Process	Yes, Step 4	No	Yes, Step 3	No
Research Design as a Chapter	Yes, Ch 4 The Tactics of Marketing Research-Research Design	Yes, Ch 3 The Research Process and Research Design	Yes, Ch 5 Research Design and Data Sources	No
Approach	Methodological (scientific)	Scientific	Applied (decision-making)	Scientific

FIGURE 1

THE RESEARCH DESIGN MATRIX

		Time Frame			
		before		after	
Scientific Criteria		Decision-making criteria			
		Non Conclusive	Conclusive	Non Conclusive	Conclusive
Exploratory	Exploratory				
	Descriptive				
	Causal				