

Chapter 5

Demystifying the Delphi Method

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ABSTRACT

The Delphi research method was specifically designed as a forecasting tool for the Rand Corporation in the 1950s. However, in the last several decades, Delphi research has been more frequently used for facilitating group communication for decision making and planning. Because of the Delphi Method's increased use, more information is needed for researchers to understand how to best utilize the method to precisely complete a Delphi study with rigor. This chapter explores the Delphi Method's origin, provides an explanation of the methodology, acknowledges the types and variations in Delphi studies, discusses the advantages and limitations, and provides clear, step-by-step guidelines for employing a successful research study.

INTRODUCTION

When the Delphi research method (Delphi Method) was originally developed for the RAND Corporation in the late 1950's, it was primarily intended for military forecasting purposes during the Cold War (Dalkey & Helmer, 1963; Linstone & Turoff, 2002, 2011). However, Delbecq, Van de Ven, and Gustafson (1975) maintained that Delphi methodology could also be used to support judgmental decision-making, which could potentially support fields outside the military. In fact, Delbecq et al. (1975) suggested the Delphi Method could achieve the following objectives:

1. To determine or develop a range of possible program alternatives;
2. To explore or expose underlying assumptions or information leading to different judgments;
3. To seek out information which may generate a consensus on the part of the respondent group;
4. To correlate informed judgments on a topic spanning a wide range of disciplines, and
5. To educate the respondent group as to the diverse and interrelated aspects of the topic. (p. 11).

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Later, Ziglio (1996) pointed out that as a result of the method's applicability to derive decisions made from expert judgments, multiple fields have used the methodology to support creative decision-making.

In the last fifty years, the use of Delphi Method has increased tremendously in order to facilitate group communication and encourage consensus among a panel of experts on a selected topic such as curriculum decisions and strategic planning (Cuhls, 2004; Fischer, 1978; Hsu & Sanford, 2007; Linstone & Turoff, 2011; Twining, 1999). Moreover, Twining (1999) attributed an increase to the method's ability to use computer-mediated conferencing and asynchronous online survey techniques. In fact, online survey tools and ready-to-use statistical software have made the Delphi Method much easier to facilitate. However, the increase in use of Delphi may also be attributed to its adaptive application for using human opinion.

Primarily, nursing and healthcare, business, and education are the disciplines where the majority of Delphi studies reside. However, within those disciplines, there are a variety of applications. For example, within education, the Delphi Method has been used on various topics that are best addressed by collective opinion or judgment such as curriculum planning and modifications, treatment planning, policy development, program evaluations, course evaluations, and strategic planning. In addition to healthcare, business, and education, the Delphi Method has also been used in societal policymaking, industry, and psychology (Linstone & Turoff, 2002; Moriarity, 2010). Although original studies were completed to forecast long-range trends (Dalkey & Helmer, 1963; Ziglio, 1996), many different applications of the Delphi methodology have since been developed (Okoli & Pawlowski, 2004; Ziglio, 1996). For example, Linstone and Turoff (2002) reported the following potential uses for the Delphi research method:

- Gathering current and historical data not accurately known or available,

- Examining the significance of historical events,
- Evaluating possible budget allocations,
- Exploring urban and regional planning options,
- Planning university campus and curriculum development,
- Putting together the structure of a model,
- Delineating the pros and cons associated with potential policy options,
- Developing causal relationships in complex economic or social phenomena,
- Distinguishing and clarifying real and perceived human motivations,
- Exposing priorities of personal values, social goals (p. 4).

In addition, Franklin and Hart (2007) suggested the following research phenomenon best suited for Delphi Method: researching an institutional or environmental phenomenon without previous history; a quickly changing event that outdates the literature; or a very complex phenomenon that truly requires experts for understanding.

Because of the increased use and application of the Delphi Method, more information is needed for researchers to understand how to best utilize the method and precisely complete a Delphi study. This chapter explores the Delphi Method's origin, provides an explanation of the methodology including advantages and limitations, discusses the types and variations in Delphi studies, and provides clear step-by-step guidelines for employing a successful research study.

BACKGROUND

Developed during the Cold War for military purposes, the Delphi Method was established to forecast technological impact during warfare for the RAND Corporation, whose research focused on national security topics (Dalkey & Helmer, 1963). For the next decade, RAND continued

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