

The basic Delphi concept is the design of a collaborative communication structure and process that is tailored to the nature of the problem and the nature of the group^[1]. Although it was used largely in the early days for predicting future technical breakthroughs, it has been used to address a wide range of complex problems that are often current and it has been used subsequently to try to understand the past as well as the future. There have, for example, been a number of examples of experts in a given field using a Delphi to establish the most significant contributions to their field.

Contents

- 1
Participation
- 2
Motivation
factors
- 3 Round
structure
- 4
References
- 5 Further
reading
- 6 See also

Participation

Anonymity of the responses is one fundamental property so that people will feel free to express themselves and to be able to expose ideas that could turn out to be stupid as well as brilliant. However, in some current online approaches it is possible to allow the participants, if they chose, to put in a comment with their true name, or when they want to be anonymous, or when they want to use a pen name. An advantage of the pen name is that they can develop a series of comments to express a coherent viewpoint. In some cases, the respondents are told who is participating so they will feel they are part of a peer group of people they would like to communicate with about the particular topic. Usually those acting as the design team will commit to the fact that who said what would never be divulged to the other participants or to the sponsor.

Delphis that are well done usually try to capture and seed the process with the material that can be found in the literature on the subject, so that those participating realize that they are not being asked to educate the design team on what should be obvious. The material to be asked of the respondents is what would be difficult to find in the literature and what is not obvious. Too many poor Delphis have attempted to give people a blank piece of paper that says "tell me what I should know about this problem!" reference needed.

Motivation factors

Associated with the above is that people have to be motivated to put in the effort to participate in a Delphi exercise. The sort of motivation factors that have to be considered and made clear to the participants are:

- Is this an important problem that should be addressed by a larger group of experts who will all have an equal opportunity to contribute?
- Is this the right group to undertake this effort?
- Is someone or some organization going to make real use of the results of this effort?

- Is it worth it for me to spend the necessary time to make a good contribution?
- Will I learn things I should learn from those in other professional areas that are participating?
- Is it clear to me what the process is and what I will be committing to in time and effort?
- If some of the above is not true, am I going to be paid, and what is my time worth to participate?

Round structure

The typical view of Delphi is that it has a round structure and goes through at least three phases:

1. Exploring the problem and exposing new insights and additional relevant material.
2. Gaining a collective understanding of the material generated.
3. Evaluating the material and hopefully reaching a consensus.

This is usually what leads to a three round exercise for Delphi processes done via pencil and paper. Sometimes it does suffer because the design may lead to a premature consensus when there is not an adequate structure to expose hidden disagreements. Sometimes the pressure is to get just quantitative subjective estimates of variables such as costs, likelihood of success, effectiveness, etc. without a sufficient design in the structure to expose hidden or underlying disagreements. Voting is often used as a conclusion rather than for its real purpose, which is to expose potential disagreements and get rid of possible ambiguities so that true uncertainties can be dealt with. This leads to a number of other requirements that when done with paper and pencil can require five rounds for the complete process. They add the following phases after phase one above.

- 1.1 Initial voting on generated material to expose disagreements.
- 1.2 Exploration of the underlying reasons for disagreements.

Underlying the above is the requirement to have a morphological structure for the information that is contributed that allows the participants to input their knowledge into appropriate categories that will organize and cluster information. Today this is referred to as a knowledge structure and it is exhibited in many of the Delphis that deal with complex problems.

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Definitional_aspects_of_the_Delphi_method

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See also

[Delphi survey](#)