ABSTRACT
                An approach to policy analysis for college officials
is described that is based on evaluating and using information about
the external environment to consider policy options for the future.
The futures approach involves the following tasks: establishing an
environmental scanning system to identify critical trends and
emerging issues, identifying and assessing the impact of critical
trends and events, forecasting alternative scenarios of the future,
developing policy options for each future based on an analysis of key
events and trends within each scenario, and assessing the relative
impact of each option across the range of alternative futures.
Identifying alternative future environments helps to provide a
realistic sense of the range of possibilities that may emerge in the
future. Understanding the range enables policy analysts to better
identify the features that may be common to all or many of the
alternatives and thus likely to have an impact on the college no
matter which alternative does occur. An alternative future is a
narrative description or scenario that is based on and disciplined by
the quantitative estimates derived through a process like the Delphi
technique. (SW)

A FUTURES APPROACH TO POLICY ANALYSIS

James L. Morrison
School of Education
University of North Carolina at Chapel Hill
Chapel Hill, NC 27514

Seminar presentation, "Approaches to Policy Analysis, annual meeting of the
Association for institutional Research, June 22-26, 1986. Orlando, Florida

2

A FUTURES APPROACH TO POLICY ANALYSIS

One of the critical issues college administrators must address is the way in which they analyze their institutional environments and formulate the strategic policies necessary for their institutions to adapt to all of their environments, internal and external. Without knowledge c these environments, it is difficult for administrators to develop appropriate policies to achieve organizational goals. The formulation and selection of strategic policies require an accurate assessment of the opportunities and threats the environment poses for the institution. It is important, therefore, to be able to identify and forecast critical trends, events and their interrelationships which enable us to develop images of possible future environments within which the institution may function. That is, well developed scenarios of alternative futures illustrate unique configurations of trends and possible future events with which the institution may have to contend, thereby providing the basis for selecting strategic options.

Most policy analysis models, however, do not focus attention on identifying future events and assessing their impact on educational institutions. At best, they assume a surprise-free future in which present trends continue unabated. Moreover, these models implicitly assume that the interrelationships between and among social, economic, political, and technological forces will remain essentially the same. We know, however, that this is not true, and the further we go out into the future, the less it will be true. What is needed is an analytical model which enables us to detect signals of change (i.e., emerging issues or events which may make the future different from the past), link this information to the formation of robust policies, and then estimate the effect(s) of these policies.

The purpose of this presentation is to present an approach to policy analysis based on evaluating, analyzing and using information from the external environment

to design and evaluate policy options. This approach requires accomplishing the following tasks:

1. establishing an environmental scanning system to identify critical trends, events, and emerging issues;

2. developing experience in evaluating, ranking, and forecasting the most important trends and events;

3. developing alternative visions (scenarios) of the future;

4. specifying the nature of the organization;

5. identifying and evaluating strategic policy options in response to the scenarios; and

6. incorporating these policies in the operational and strategic plans of the institution.

Task I: Establishing an Environmental Scanning System

The purpose of an environmental scanning system is to identify those trends, eve.:ts, and emerging issues which signal changes in the external environment and which may be of importance to the future of the institution. For purposes of this presentation, trends, events, issues and emerging issues are defined as follows:

• A trend is a series of social, technological, economic or political characteristics which can usually be estimated and/or measured over time, such as the number of adults entering college as full or part time students. Trend information may be used to describe the future, identify emerging issues, and project future events.

• An **event** is a discrete, unambiguous, confirmable occurrence which makes the future different from the past. An event would be Congressional passage of the flat tax.

• An **issue** is a controversy with defined stakeholder interests that requires some form of action. An issue for higher education, for example, is the amount and nature of federally funded student financial aid.

• An **emerging issue** is a potential controversy that arises out of a trend or event which may require some form of response. For example, during World War II, many married women entered the labor force for the first time. An emerging issue at that time would have been controversy over women's roles in the home and family.

Establishing the scanning system requires accomplishing the following subtasks:

a. Orient volunteer scanners to the system and its relationship to the overall planning process;

b. Establish the structural relationship between the scanning activity and strategic planning;

c. Develop a scanning taxonomy;

d. Train scanners how to write abstracts;

e. Identify and assign information resources.

Task 2: Identifying and Assessing the Impact of Critical Trends and Events

After three or four months of scanning activity, the institutional research office should have collected a rich data base of trends and potential event information (particularly if scanners are encouraged to review all issues of their assigned information resources for the past year). The task now is to forecast the "most likely" future of those trends and potential events deemed critical to defining the context within which the institution will function in the next decade. The "most likely" future has two

page 4

important properties: first, it, plus its attendant uncertainties, is the future one would bet on given only one choice (which, it might be added, i never the case), and, second, it is the future out of which--and only out of which--it is possible to construct meaningful and important alternative futures. That is, all alternative futures are alternatives to the "most likely" future. This requires accomplishing the following subtasks:

a. Identify critical trends and events from the scanning abstracts and from a round one (R1) Delphi questionnaire.

b. Forecast the "most likely" future of those trends and events identified in subtask 2(a) above and assess their impact on the institution through a round two (R2) Delphi questionnaire.

Task 3: Developing Alternative Futures (Scenarios)

Alternative future environments are worth careful delineation and evaluation for at least two reasons. First, no one can predict the future environment that will actually materialize; it is therefore important to have a realistic sense of the range of possibilities. Second, an understanding of this range enables policy analysts to identify more authoritatively the features that may be common to all or many of the alternatives and thus likely to have an impact on the college no matter which alternative does occur.

An alternative future is a policy-relevant, plausible, and internally consistent narrative description, usually of a specific pattern of developments judged by some algorithm to have happened over time. It is based on and disciplined by the quantitative estimates derived through a process like the Delphi. Such a narrative is called a scenario.

Scenarios are like histories of the future. They are integrating

page 5

6

mechanisms--devices for organizing or synthesizing many separate developments, such as the individual trend projections and event forecasts from the round two Delphi. They provide a rich context, or framework, within which it is possible to ask vital questions about one's own planning assumptions. But scenarios go beyond histories. Because they provide a way of making forecasted events not only "happen," but happen in full view of their causes and consequences, they are also devices that can be used to ask specific "what if" questions and to examine strategic policy options. In these and other ways, scenarios serve as tools that force the user to think in the future tense, to be explicit about expectations and their rationale, and to probe models of how the world works. Unlike a history, which is good to the extent that it is both accurate and readable, a scenario is good to the extent that it is useful in achieving these purposes.

In order to expand our vision of the future, it is desirable to build at least three alternatives to the "most likely" (i.e., nominal or baseline) scenario. This may be accomplished by allowing certain combinations of events to be permitted to "happen" (or fail to happen) in accordance with their estimated probability levels in the future. This requires building a complete cross-impact model which specifies the causal relationships, if any, among the forecasted trends and events. That is, we will estimate how the occurrence of each event in the selected set might affect the probability of every other event in the set, as well as the nominal forecast of each of the selected trends. Thus, when these relationships have been specified, it is possible to make various events "happen" and then trace out a distinct, plausible, and internally consistent future. Through this means it is possible to develop, for example, an "unsettled" future (in which those events with a 60 percent probability level occur); a "turbulent" future (in which all of the preceding events, plus those events with a 30 percent probability level occur); and a "chaotic" world (in which all of the events from

the "turbulent" world, plus all of the remaining events which have a 10 percent probability level, occur).

Together with the "most likely" scenario these futures should provide a good sense of the range of possible futures likely to confront the institution. None of these alternatives will represent a forecast, still less a prediction. They are strictly hypothetical constructions, and the odds are overwhelming that the actual future which materializes over the next ten years will be different in important respects from all of them--as well as from the so-called "most likely" future. Nevertheless, these scenarios will provide institutional policy makers with a greater understanding of the range of future possibilities, the sometimes subtle mechanics of the process whereby a future comes into being, and the need for imagination and flexibility in policy formulation to anticipate and meet the actual future as it rushes in.

Developing alternative futures requires completion of the following subtasks:

a. Develop a round one and round two Delphi questionnaire.

b. Administer both questionnaires to any member of the staff or faculty who will agree to complete and return each questionnaire by a given date.

c. Analyze and present the results of the round two questionnaire.

d. Conduct a review of the trend and event forecasts.

e. Construct a cross-impact model of the most important trends, events, and performance indicators.

f. Train selected (volunteer) administrators and/or faculty members to write scenarios.

g. Write the "most likely" and at least three alternative scenarios.

Task 4: Identifying Policy Options

It is important to specify the nature of the institution in order to focus on those

aspects of the institution's mission, performance indicators, and perceived strengths and weaknesses which could be affected by forecasted trends and events. Specifying the nature of the college requires accomplishing the following subtasks:

a. Define the specific elements which comprise the mission, i.e., the groups of students and/or clients served, the social needs fulfilled, and the programs and/or services provided.

b. Identify indicators of institutional performance, e.g., placement rate of graduates, retention rate, and awards received by students.

c. Identify strengths and weaknesses.

Task 5: Developing Robust Policy Options

Developing policy options requires accomplishing the following subtasks:

a. Examine the plausibility of each scenario. If omissions are discovered, they must be filled. If trends or event forecasts are dubious or incredible, they must be revised.

b. I.entify the implications of each scenario for the college.

c. Brainstorm a preliminary list of strategies appropriate for nomination as strategic options for each scenario, i.e., strategies that are appropriate and feasible responses to one or more of the implications previously identified for each scenario in 5 (b) above.

d. Review the options to ensure that each option significantly places the college in an advantageous position in relationship to the future environment described in a particular scenario. Statements of proposed options which focus more on operational aspects of the institution may be either rewritten to reflect a more strategic emphasis or combined with other options into a new strategic option statement.

e. Assess the potential of each option to enhance institutional strengths or inhibit

page 8

institutional weaknesses.

f. Assess which options are the most robust and could, if implemented, address the implications of more than one of the alternative futures presented in the scenarios.

Summary

The approach to policy analysis advocated in this presentation is based upon securing information about the changing external environment, forecasting alternative futures based upon this information, developing policy options for each future based upon an analysis of key events and trends within each scenario, and assessing the relative impact of each option across the range of alternative futures.

Of course, each of the alternative futures depicted in the scenarios has a very low probability to materialize. Why? A scenario is not a model of objective reality, but is, when done well, an informed and thoughtful description of a specific possibility based upon a mix of experience, imagination, and intuition. Time will show that particular developments and relationships that could and should be included were overlooked; that the interpretation or emphasis given to some things that were included was imperfect; and that the actual future was shaped in part by developments that no one could have foreseen when the scenario was written.

Why, then, advocate going to the considerable effort involved in developing multiple scenarios? Because, as the individual who responded to the question about being happy on living to 80, it is better than the alternative. That is, most approaches to policy development and analysis are based upon an assumption that the interrelationships between social, technological, economic, and political variables will remain the same; consequently the analysis is based upon historical data, and cannot

include the possibility of events which could occur that would affect those interrelationships. The approach advocated here, however, does attempt to anticipate changes in these relationships in a rigorous and systematic manner based upon the best judgment we can bring to bear. Although it also has weaknesses, through a continuous iteration of the process, it can produce an analysis of more utility to the institution than the alternative.