An Alternative Futures Approach to Planning for School Systems

An uncertain future is one thing administrators can be certain of, but the ED QUEST model can help them plan more effectively for what may lie ahead.

Photograph by Edward A. Wynne

Before a district actually begins the ED QUEST process, its newly formed planning team spends several days learning about the goals of the process and strategies that will help them look at the future from new perspectives.

Like leaders in all sectors of life, school administrators need foresight. By anticipating the future, they can create the vision required for their districts to adapt to changes in the external environment over time (Bennis and Nanus 1985). However, uncertainty about those external forces challenges their capabilities to formulate strategic plans and accomplish their district's long-range goals.

Administrators, thus, need an approach to strategic planning that addresses these uncertainties (Boulton et al. 1982). Further, they need to be able to link information signaling change in the environment with the alternative conditions that schools may face in the future. Here we describe an educational planning model that incorporates such an approach to strategic planning.

Analyzing External Changes

The alternative futures approach helps administrators identify signals of changes and emerging discontinuities in a sector of the external environment (social, technological, economic, political, or educational) that require their attention or response (Morrison and Mecca 1989). These signals may be detected from their personal experiences or through environmental scanning (Morrison 1987).

District planners then analyze these external changes to determine their component trends and events. *Trends* are objective or subjective estimates or measurements over time of a series of social, technological, economic, political, or educational variables (Morrison and Mecca 1989). Statements of such estimates describe the general direction of external change. "A change in the number of school-aged children being educated at home" is an example of a trend. *Events* are discrete, confirmable occurrences that make the future different from the past (Morrison and Mecca 1989). An example of an event is "Congress mandates employers with more than 1,000 full-time employees to provide child-care services for employees."

The administrators' next step is to subjectively forecast both the likely level of the trends and the likelihood of occurrence of the events over the planning time frame. These forecasts define their expectations for the future—their vision of the "most likely" future. Then, for the sake of comparison, they develop alternatives to that future based upon the occurrence or nonoccurrence of specific events, defining the relationships between each of the forecasted trends and events through cross-impact analysis. To describe the alternative futures, they subsequently develop written scenarios around particular configurations of future external conditions.

As strategists, the planning team's task is to develop goals sufficiently robust to address the organizational implications arising from both the "most likely" and the alternative futures. Once developed, the strategies are detailed and then implemented as action plans.

A strategic planning model that incorporates the alternative futures approach is ED QUEST. This process integrates futures research techniques and divergent thinking methods into a participatory group process that eventually yields the scenarios of alternative futures. It was adapted for use in education by the Institute for Future Systems Research (Mecca and Adams 1980) from the QUEST (Quick Environmental Scanning Technique) model (Nanus 1979).

The ED QUEST process provides a framework within which administrators can incrementally develop a more sophisticated process of planning and strategic decision making.

The ED QUEST Process

Several steps are necessary before a district begins ED QUEST activities. First, the members of the planning team should be identified. The membership should represent as broad a range of district functions and educational specialties as feasible. Generally, 8 to 15 individuals are drawn from across the district's administrative, teaching, and support staffs.

Next, a planner-facilitator to guide the deliberations of the ED QUEST planning team must be selected. This person can be chosen either from within the district or employed from outside. In either case, he or she needs a solid background in both group process techniques and futures research methodologies.

Finally, the planning team should be briefed about the objectives and major activities of ED QUEST. Seven procedural elements make up the complete process, which can generally be completed in two daylong sessions (see fig. 1).

Defining the nature of the district. During the first day of the process, the planning team begins by examining the current status of the district. By understanding the district as it exists in the present, decision makers are better able to assess the consequences of predicted environmental changes and to evaluate the effectiveness of strategic goals once they are proposed.

To begin, the team identifies the distinctive aspects of the district's current mission. Then, through general discussion, they classify variables into several categories, including the pupils the district serves, their specific needs, and the programs and services provided by the district to meet them.

Next, the team prepares a list of key indicators of district performance. *Key indicators* are measures of such organizational attributes as effectiveness (graduation rate, educational achievement level of pupils, and so on), efficiency (for instance, pupil/teacher ratio), and cost (per pupil, for example). Typically, these represent the criteria used by persons internally and externally to judge the educational quality of the district (Rockart 1979).

Finally, the planning team develops a comprehensive profile of the district's strengths and weaknesses, which represents its "distinctive competence" (Tilles 1963, p. 111). The team members will use this profile later to evaluate the robustness of proposed strategies on varied levels of competencies within the district (Steiner 1979).

Scanning the external environment. To provide information to the planning team, the facilitator has, in advance of the session, prepared a notebook of materials depicting the environmental trends, issues, and developments which might affect public education over the next 5 or 10 years. The materials included—abstracts of articles, book excerpts, charts, tables, graphs, and trend extrapolations—should be drawn from

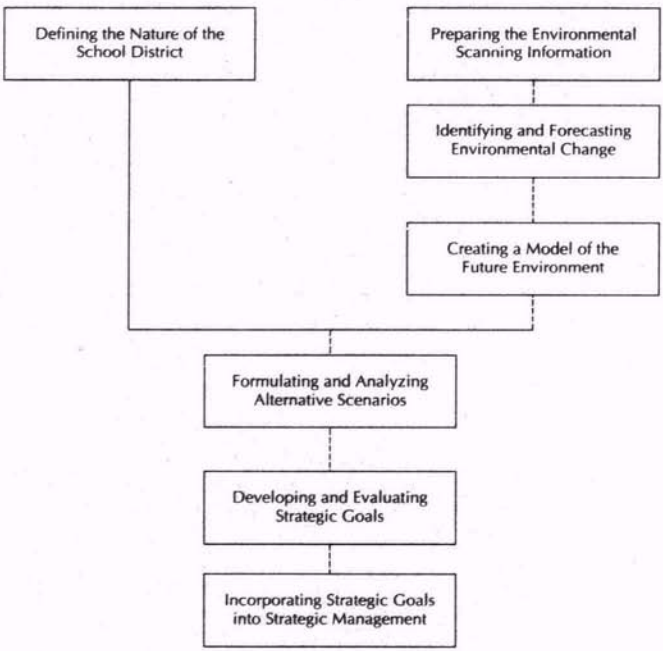
sources within education (for example, *Education Today*, *Educational Leadership*, *Educational Researcher*, *T.H.E. Journal*), as well as from general sources (*U.S. News and World Report*, *Newsweek*, *Time*, *New York Times*, *Washington Post*, *USA Today*, and so on). Information should additionally be gathered from "fringe" publications (for example, *Mother Jones*, *New Age*); specialized periodicals in the social, technical, economic, and political sectors (*Working Woman*, *Business Week*, *American Demographics*, *High Technology*, *Computer World*, *Washington Monthly*, and so on); and futurist literature (for example, *The Futurist*, *What's Next*). Finally, data describing the recent history of district variables (for example, college-going rates of high school graduates, tax rate, state aid, grade enrollments) should be included.

Identifying and forecasting external changes. Referring to the information contained in the environmental scanning notebook, the ED QUEST planning team generates a list of trends and future events that the members believe will affect the district's future. The trends and events are generally identified using one of two Delphi procedures (that is, repeated polling of ideas).

With the first procedure, the planning team uses a group process, such as brainstorming or the nominal group technique, to produce a list of trends and events. Then, from this list, the members select 15 to 20 trends and events they consider most critical to their district. Although the simpler of the two, this procedure requires more time and may produce a less comprehensive list.

With the second procedure, two Delphi rounds are administered to the planning team members (and any other members of the district's staff or the community) before the initial full-day session. A third round is then conducted during the session itself to select the critical trends and events. Although this procedure takes substantial time and expertise to implement, it allows more staff participation and generally results in a more inclusive set of trends and events than the other procedure.

Fig. 1. The ED QUEST Strategic Planning Model



Creating a model of the future. Once the team members have selected the critical trends and events, they complete two cross-impact matrices to structure a model of the future (Enzer 1970). These matrices define the interrelationships within the set of *events-on-events* (see fig. 2) and *events-on-trends*. Each matrix can be completed using a variety of scales, including "+/−" signs (Wagschall 1983) or numeric scales, such as "+3 to −3" (Enzer 1970). For each cell of a matrix, the planners make an estimate of each cross-impact. These estimates can be determined by an informal poll of the team's members. When there is wide variation among individual estimates, a discussion ensues, and members reassess their original estimates. An agreed-upon score is then placed in the appropriate cell.

The event-on-event model permits team members to estimate whether the prior occurrence of a particular event would affect the likelihood of the other events within the set occurring using a cross-impact matrix. For example, the occurrence of E2 (*The federal deficit is eliminated*) might be assessed as increasing the likelihood of E1 (*Congress passes a national child-care bill*) and decreasing the likelihood of E3 (*Congress reduces federal aid for special education programs*).

Using a similar matrix, the team also assesses the impact of an event's occurrence on the level of each trend. For example, the occurrence of E4 (*Voice-activated microcomputers are available in the U.S.*) might be assessed as increasing the number of microcomputers used in elementary schools over the planning period.

The planning team develops a comprehensive profile of the district's strengths and weaknesses.

Once both matrices are completed, the cell scores of each matrix are summed across each row *without regard to sign*. The row totals of the event-on-event matrix represent the impact of an event's occurrence on all other events—the larger the sum, the greater the impact. Those for the event-on-trend matrix indicate the degree to which trend levels are affected by each event. For example, the event described in E2 (*The federal deficit is eliminated*) is assessed as being the major "actor" within the set of events shown in Fig. 2. This information can be later used to develop scenarios of the future.

Finally, the team determines the importance of the critical trends and events by assessing their impact on the key performance indicators they identified earlier in the day. Specifically, they identify the particular changes in the district's performance likely to result if the critical trends and events materialize as predicted. A performance indicator such as *student scores on state competency tests* would be positively affected by the availability of voice-activated microcomputers in the U.S. (E4). The procedure for estimating these impacts is similar to that previously used in creating the cross-impact models.

Formulating alternative scenarios. Between the first and second ED QUEST sessions, the facilitator develops a series of scenarios showing the probable alternative futures facing the district. The scenarios can be generated using a variety of approaches, ranging from a single individual's writing a description of a future situation (Martino 1983) to the use of interactive computer models that generate outlines of the alternatives (Mecca and Adams 1985).

The first scenario represents the district's "most likely" future, as defined by trends identified as critical to its future. In this sense, the "most likely" scenario functions similarly to the assumptions used in most planning models. The additional scenarios created, usually three, are variations of the "most likely" future. Each scenario describes the changes in the level of the trends resulting from the impacts of alternative sequences of events over the period covered by the strategic plan.

Analyzing the alternative scenarios. During the second session, the ED QUEST planning team develops strategic goals for the district based upon the alternative scenarios. After evaluating the credibility, plausibility, and policy relevance of each scenario, they then assess the consequences for the current and future mission of the district should that scenario materialize. The impact of each scenario on the set of key performance indicators is also analyzed. From the review, the team develops a list of consequences common to all scenarios. These consequences are of critical importance during the next step in the process, establishing the district's strategic goals.

Developing and evaluating strategic goals. After generating a list of strategic goals that address each consequence, the team evaluates each one individually. A goal that places the district in an advantageous position in relation to the external changes described in the scenarios is a good candidate for further evaluation by the team. The members assess each goal's potential relative to the strengths and weaknesses identified earlier. Using a scale of +10 (greatly enhance) to −10 (greatly diminish), they develop a matrix for assessing the impact of each strategic goal on the strengths. A similar matrix is developed for assessing the impact on district weaknesses. Those goals estimated to enhance

Fig. 2. A Completed Cross-Impact Matrix

Event Descriptor If each of these events occurred ...	**Events Affected** ... how would it change the likelihood that each of these events will occur?				
	E1	E2	E3	E4	absolute sum
E1. Congress passes a national child care bill.	*	−1	+1	0	2
E2. The federal deficit is eliminated.	+2	*	−3	0	5
E3. Congress reduces federal aid for special education programs.	+1	+1	*	0	2
E4. Voice-activated micro-computers are available in the U.S.	0	0	0	*	0

strengths (large positive scores) and diminish weaknesses (large negative scores) are considered effective and selected for adoption.

To illustrate, a district might decide to adopt a strategic goal of expanding existing computer labs in all schools with voice-activated microcomputers as they become available on the market. This goal might be assessed as enhancing the effects of a district strength of *using instructional technology effectively* and as diminishing the effects of an identified weakness of *insufficient numbers of instructional aides*.

Incorporating the strategies into the daily routine. The strategic goals that result from the ED QUEST planning process can be incorporated into the district's ongoing activities in several ways. For instance, specific plans can be developed for implementing each goal and personnel assigned responsibility for developing an implementation plan. Or the district staff can incorporate aspects of the strategies into the annual operational plan. Regardless of the approach used, the results of the planning process should be used to set the district's long-range strategic direction. Ultimately, of course, the proposed strategies must be presented to the board of education for approval.

Benefits of the Alternative Futures Approach

Administrators report that they find the alternative futures approach to planning incorporated in the ED QUEST process to be intellectually stimulating and relatively easy to employ. It provides a framework within which they can incrementally develop a more sophisticated process of planning and strategic decision making.

By using information about emerging trends and developments gleaned through a process of environmental scanning, the ED QUEST model also allows district planners to anticipate plausible alternative futures from which to derive appropriate strategic goals. These goals form both the district's collective "vision" for the future and a basis for ongoing operational planning and management.

ED QUEST integrates futures research techniques and divergent thinking methods into a participatory group process which eventually yields the scenarios of alternative futures.

The ED QUEST process also requires administrators to confront district issues which might otherwise be overlooked with conventional planning approaches. For instance, administrators can better plan current and long-range purchases of instructional equipment if the instructional implications of emerging computer technologies are determined across several alternative scenarios.

Perhaps the most important outcome for administrators is a new mode of thinking. Those who have engaged in the alternative futures planning process report that they now look at their communities and districts from an expanded perspective. They exhibit greater awareness and sensitivity to the possible effects of external changes on the programs and operation of their districts. Equally important, they more frequently "scan" sources of information for signals of discontinuities in the broader environment that might affect their district's future.□

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