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ABSTRACT

This paper discusses the design, development, and results of a one-year pilot implementation of an emerging issues tracking system by the Southwest Educational Development Laboratory (SEDL) for state-level educational policymakers and decision makers known as SEDL-SCAN. SEDL-SCAN offers policy-makers lead time on crises by flagging emerging issues, anticipating societal developments, encouraging widespread constituent involvement, and integrating a vast array of data for political and fiscal decision making. The conclusion that SEDL-SCAN benefits school districts was based on favorable district evaluations in a five-state area. Because the tracking system furnishes a mechanism to identify and analyze issues before they reach a crisis stage and because it increases response options, it may help simplify complex problems that typify school district policy-making. (JAM)

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DESIGN AND DEVELOPMENT OF AN EMERGING ISSUES TRACKING
SYSTEM FOR STATE-LEVEL EDUCATIONAL POLICY- AND DECISIONMAKERS

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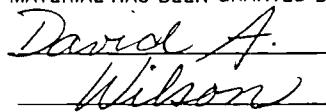
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Introduction

Environmental scanning, issues identification, and trends analysis are processes generally associated with private sector organizations. During the last decade, however, managers in state and local public sector organizations have shown a growing tendency to use environmental scanning techniques to identify issues beyond their immediate budget, planning, or policy agendas (Cook, 1987).

At the state level, the Council of State Policy and Planning Agencies (CSPA.) coordinates the activities of scanning networks in governors' planning offices in participating states. Units within comprehensive state universities such as the Continuing Education Division of the University of Georgia have used environmental scanning networks for their own long-range program planning. And in local school districts such as Branscombe, Michigan and Montgomery County, Maryland, issues management programs identify emerging issues that may be relevant to local school planning and operations.

Education decisionmakers and policymakers, like their counterparts in the private sector, are adopting processes and techniques that help them deal with conditions in their rapidly-changing contexts and thus support their decisionmaking. "More and more, it has become obvious that decisions based on inadequate information and understanding about potential change can be very costly, in terms of money, [and] product/program failure...(Neufeld, 1985, p.39).

As part of its mission and contractual obligations as a regional educational laboratory, the Southwest Educational Development Laboratory (SEDL) seeks to support state-level

decisionmaking by providing policymakers with objective, non-partisan information about emerging issues in K-12 schooling in the Southwest Region. In addition, the ED-AIDE project seeks to answer the following questions:

1. What is the relationship between issues and the context of individual states?
2. What variables in the state affect which issues are attended?

To provide such information services and to answer these questions, SEDL's ED-AIDE project operates a policy information system, the foundation of which is an issues identification system, SEDL-SCAN, a multi-state, volunteer environmental scanning system (see Exhibit 1). Environmental scanning is an appropriate process on which to base such a system because it is able to "provide a view of future conditions in the context of what current events and changing conditions might mean for established assumptions" (Neufeld, 1985, p. 39). SEDL-SCAN offers policymakers "lead time" on crises by flagging emerging issues; anticipating societal developments which will affect education; encouraging widespread involvement and communication among educators and policymakers; and integrating diverse pieces of information for decisions regarding strategic planning and better allocating resources. This systematic information-gathering process allows participants to work with trend analyses, forecasts and issues refined for the education context by experts in education and policy development.

Background

Southwest Educational Development Laboratory (SEDL) is conducting a one-year pilot implementation of an issues identification system for state-level decisionmakers in a five-state region that includes Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. In developing a mechanism that is responsive to policymakers' information needs for state-level education policymaking, SEDL staff first reviewed research findings about (1) policymakers' information needs, (2) information sources, and (3) search patterns

and cycles. Some of the primary implications of that body of research suggested the creation of a systematic process for identifying emerging issues and handling policy-relevant information. SEDL staff engaged in a process consisting of the following steps:

- o Reviewed the literature and effective practices on environmental scanning and issues management.
- o Searched for and identified practitioners and consultants.
- o Designed SEDL's tri-level, multi-state issues identification system for regional policymakers.
- o Sought support and engagement from high-level policymakers in each state.
- o Implemented a pilot environmental scanning system.

Context of Educational Policymaking

The face of educational policymaking has changed. Legislators, governors and governors' aides have assumed a more substantive role in making decisions about education in their states. During the past few years, as policymakers have been exhorted by the public as well as business and industry to take a more active role in shaping educational policy, the way in which policymakers collect and use information has changed.

First, their constituency has expanded. Policymakers interested in pre- and postsecondary education habitually have responded to education groups such as membership associations or special interest networks and to individuals such as local school superintendents, deans, vice presidents for research or administration, and presidents of colleges and universities. Now, their constituency includes the business community and local communities, and educational administrators find they must account for the cost and track the impact of their policies to a broader constituency.

Second, the content and the use of information has changed. "Those in general government who traditionally focused...on the allocation of fiscal resources to schools are now enacting policies that directly affect the substance of education..." (McDonnell, 1988, p. 92). Traditionally, policymakers requested information from education communities, usually in preparation for budget making, and educators have complied by transferring such information. Now, policymakers seek information that is a blend of research-based or expert knowledge and practical, craft knowledge. In addition, because they are interested in substance as well as impact, state-level policymakers seek information that extends beyond the next budget or legislative cycle. Where policymakers turn to for information and when policymakers seek information is related to their ultimate use of information to support policy- and decisionmaking.

Information Sources. Generally, policymakers turn to in-state information resources--their own staff members, the state department of education, members of informal networks. Governors and chief state school officers tend to look beyond the boundaries of their own states for information resources to national associations and organizations. Regardless of the position, policymakers' tendency to use the information is contingent on their trust in the information provider and on the quality and validity of the information (Cohen, 1985; Fuhrman & McDonnell, 1985; McDonnell, 1988; Nelson & Kirst, 1981; Van Horn & Hetrick, 1985).

Search Patterns & Cycles. Although they seek information continually, state policymakers and their staffs exhibit patterns of searching for information that are related to legislative and budget cycles. During interims between legislative sessions, policymakers search for "new ideas, initiatives, and innovations" (Van Horn & Hetrick,

1985, p.19). Conversely, during legislative sessions, policymakers want specific, simple, information presented in a straightforward style. Legislative aides concur on two points: (1) Legislative decisionmakers do not have time to read the information they have and (2) They prefer to read information displayed in a brief format. Several key legislative aides said that "We have difficulty finding the time for them [policymakers] to read the information we give them." And "if the information is more than one page, they [legislators] won't read it." Clearly, policymakers do not lack for information.

Given their expanded constituency and a new, proactive role in shaping educational policy, state-level policymakers now are seeking information that deals as much with the substance as with the finance of schooling; that allows them to consider viewpoints other than those advocated by their traditional educational constituents and to frame policies that meet the needs of their expanded constituency; and that has long-term significance in terms of the education-related issues that they will face in their states (McDonnell, 1988; Van Horn & Hetrick, 1985).

Implications. The preceding research implies changes in policymakers' cognitions and mindframes--in the information they seek and in the ways they use it. Policymakers' patterns of information search and utilization have implications for SEDL's proposed issues identification system. Clearly, such a system should help to "shape" information and how policymakers might think about it, rather than simply to create or provide information. In shaping and supporting the way policymakers consider issues and their likely impacts, such a system also should help to:

- o Provide leadership on emerging issues
- o Identify policy-relevant information with long-term significance

- o Develop "regionalized" organizational or social structures
- o Strengthen instate information networks
- o Manage or select from existing information, not create new information.

Design and Development of SEDL-SCAN

Taking the primary implications of the research on policymakers' use of information, and working with consultants, staff designed SEDL-SCAN, an issues identification and information management system based on the use of environmental scanning. SEDL-SCAN is a tri-level environmental scanning system designed to systematically and continuously organize information from a broad range of sources and perspectives. SEDL-SCAN operates with volunteers in three levels of participation: scanning, analysis and issues management (see Exhibit 2).

Scanning Committee. Scanners are volunteers from educational institutions, state education agencies, state legislative committees, as well as persons from the community--parents, students, teachers. Scanners are the foundation of the program. They provide the information necessary to identify trends and emerging issues in the environment.

To perform their role, scanners quickly skim or review publications they are currently reading or publications they are assigned to read. They are asked to monitor one of the following themes in a given publication:

- o Education
- o Business and Economics
- o Politics and Government
- o Science and Technology

- o Social and Behavioral Sciences

The scanner abstracts those articles that meet the following criteria:

1. The article involves an idea or event that represents a trend or shift in the environment.
2. The implications to be drawn from the article should have some relation to the long-range concerns of education in the state.

After writing an abstract, scanners are encouraged to offer their insights on how the conditions depicted in the article may affect education in their state. These insights along with the abstracts are mailed to SEDL where they are reviewed by an Analysis Committee.

Analysis Committee. Every three months, 10 to 15 analysts, chosen for their diversity of background and knowledge, meet to discuss the abstracts submitted to SEDL. They identify and discuss the emerging patterns, trends and issues apparent in the abstracts and their implications for education.

By analyzing patterns or trends in the body of information provided by the entire abstract package, the Analysis Committee gives a "value added" aspect to the issues identification/tracking system. Each abstract represents an independent pieces of information, refined only in the sense that the scanner thinks the data is of interest. Collectively, the abstracts form a body of information from which the analysts delineate emergent trends and begin to project the issues forthcoming from these trends. The analyses form the basis for all further system activity with regard to an issue as follows:

- o The analysis process is reported back to the system in an quarterly system update publication.
- o SEDL-SCAN administrators create "monitoring files" of the delineated trends and issues. These files provide resources for issue briefs and other in-depth papers.

- o The analysts may request periodic "scans," or overviews of a monitored issue, or the committee may request a roundtable meeting with experts and specialists.

The outcomes of analyst discussions are made available to participants in the SEDL-SCAN program and to SEDL's target audiences among state-level decision- and policymakers. Issues that surface repeatedly in the Analysis Committee meetings are chosen by analysts for indepth study. The research, conducted by SEDL staff, is made available to all the scanners. The research and implications for action are also sent to the third level of the program, the Issues Management Committee.

Issues Management Committee. The Issues Management Committee, called State Policy Groups in the SEDL-SCAN system, is composed of five to seven policy-level officials: representatives from the governors' education offices, legislative education committees, state superintendents for education, major education associations, and state boards of education. These policymakers are responsible for deciding what policy actions to take on an issue. The options for action vary from issue to issue. Usually, action may take the form of further issue analysis, continued monitoring of the issue, no action, or a recommended response.

Outcomes of Issues Identification System. Outcomes of the scanning process are reported in the following formats: abstracts, issue briefs, in-depth issue studies, quarterly scanning updates, trend projections, forecasts and state trend reports. Periodically, issues identified in the program will become topics for regional conferences. Outcomes are shared with everyone involved in the education intelligence system and to state policymakers. It is important that the outcomes of such a system be policy-relevant and linked in some way to the state's policy development cycle (Cook, 1987).

Implementation of Procedures

Preparing to implement any new program and then implementing that program are iterative, rather than rational, processes with several subprocesses. Implementing SEDL-SCAN has been a time-consuming process that includes several subprocesses identified in various forms in the literature of implementation (Berman, 1980):

(1) developing a "policy image" of the system, (2) planning, (3) generating internal/external support, and (4) pilot testing the system.

Developing a "Policy Image"

Developing a policy image is "the formation of a future vision that its holders would like to see occur" (Berman, 1980). The activities of the phase include developing an awareness of a problem to be addressed and generating ideas about the program or solution that might best address the need. How an issues identification system might operate, how it would link with the state policy development cycle, and who would participate in it are all part of a "policy image" for SEDL-SCAN. Weick (1976) found that the "image" may change over time and that it may be appreciated long after the change or program has been implemented. During the initial stages of SEDL-SCAN's development, developing and communicating a policy image has been the role of SEDL staff. As the system is implemented and institutionalized by policymakers in one or more state's in SEDL's region, it is anticipated that the image (and indeed, the operations) of the system, will change.

SEDL staff developed awareness of a need through the following activities:

- o In Spring, 1987, SEDL's "needs sensing" meetings in each state, during which policy- and decisionmakers described their information needs to support decision- and policymaking.
- o Analysis of logs of requests for information or technical assistance that fell outside of the scope of regular projects of the laboratory.

- o Analysis of the results of telephone interviews with legislators and key legislative aides regarding their patterns of seeking and using information in decisionmaking.

Staff undertook the following activities to generate ideas about mechanisms that might address the existing need:

- o Conducted a review of literature and practices on policymakers' information needs, their patterns of knowledge search and utilization, and strategies to support institutional decisionmaking, and identified five major implications.
- o Generated the idea of developing an emerging-issues identification and tracking system.
- o Consulted with Chris Dede and the faculty of the Department of Futures Studies at the University of Houston--Clear Lake, to (1) explore the idea and format of a regional policy information system, (2) to identify issues related to such a system, and (3) to identify practitioners and other consultants or experts who are operating similar systems.
- o Interviewed practitioners and experts, and met with one of them, Lauren Cook, coordinator of the State Scanning Network for the Council of State Policy and Planning Agencies. As the image of ED-AIDE's issues identification system emerged, staff decided that the system would be congruent with, yet distinct from, the State Scanning Network (SSN) sponsored by the National Governors' Association and of which ED-AIDE is a member. SEDL-SCAN differs from SSN in several ways: it is a regional, education-focused structure; it spans the boundaries of different education-related institutions from policymakers in legislatures to policy influencers among statewide associations; the scanning effort is directly administered, rather than coordinated, by an external institution.

SEDL-SCAN augments the SSN in three important ways: it brings a more comprehensive educational focus to the SSN and will provide the broader perspectives of multiple regional policymakers to augment the gubernatorial viewpoint. Most important, by working within the existing system, SEDL-SCAN will extends, rather than duplicates, the capabilities of the SSN to assist state-level policymakers' planning and decisionmaking.

Planning

Berman (1980) calls planning--the allocation of resources and funds, identifying "players," and setting goals and objectives--the most rational of the phases, though it recurs throughout the life of a project. SEDL undertook the following planning

activities:

- o Proposed goals and objectives for the ED-AIDE project in general and for the issues identification system in particular.
- o Identified key decisionmakers who would be the primary constituencies of the ED-AIDE project--chief state school officers and their designates in the state departments of education; legislative education committee chairmen or other key legislators with an interest in education, key legislative staff; state board of education chairmen; and chairmen of statewide educational association. These key players would comprise the State Policy Groups, which would be tantamount to an Issues Management Committee of the system.
- o Conducted a survey of these decisionmakers to validate other key "players" in their respective states and to solicit their opinions on how an issues identification system might work best in their states.
- o Engaged a consultant identified as a result of the meeting with Dede Consulted with Lena Lupica, President of Early Signals, Inc. of Washington, D.C. and former Director of the Congressional Clearinghouse for the Future, to design and plan the procedures for implementing SEDL-SCAN.

Generating Support

Environmental scanning programs must have the support of the highest authority involved in the area (Cook, 1987). In the case of CSPA's State Scanning Network, the governor is that person; for SEDL-SCAN, it is the chief state schools officer, or state superintendent of public education. Furthermore, activities related to support generation must generate internal support within the sponsoring or administering institution, as well as external support among the offices or institutions within participating states. Internal support must also engage the highest institutional authority, at SEDL, that person is the executive director.

After identifying key decisionmakers in each state of SEDL's service region, staff met with them to generate support for the concept and implementation of an issues identification system. Three findings were evident:

- o Decisionmakers in the states had different reactions to environmental scanning. Three states were not interested at the time. Even between the two states that were interested the "image" of the system was substantively different. Instead of favoring a continuous system of scanning and analysis, all four decisionmakers State A seemed to prefer an approach more akin to crisis management. That is, decisionmakers would request information after an issue was identified and required attention, instead of identifying an issue as it emerged. The different reactions among people in the two states may be related, in part, to the relative power of the decisionmakers with whom we talked.

In New Mexico, meetings to generate support and participation generally were with the persons who would be in a position to benefit directly from such a system. In State A, such meetings were with influential and active persons in education who tended, nevertheless, to occupy responsive positions--to the governor, to the legislature, and to the chief state school officer.

- o The process of generating support has been iterative, continuing throughout the year. Since February, 1988, staff have met with New Mexico decisionmakers and/or their designated staff several times to explain the system, to solicit input and suggestions, and to invite participation in SEDL-SCAN. Staff continue to maintain support in the pilot state, as well as plan to generate support among other states of the region.
- o The importance of generating support within the sponsoring institution cannot be underestimated. Besides engaging the support of SEDL's Executive Director and Assistant Executive Directors, staff also have met with SEDL's program liaison with its primary federal funding agency to enhance institutional support.

Pilot-testing the System

Starting in January 1988, staff began to design and implement the SEDL-SCAN system.

The goal was to establish a *systematic process to handle information* in order to:

- o Gather information on emerging issues with the potential of affecting education.
- o Identify trends with long-term significance for policy development.
- o Develop state-level policy groups to assist ED-AIDE staff in determining the impact and life-cycle of trends and issues.
- o Support and strengthen instate information networks.
- o Disseminate timely and issues relevant research-based information to ED-AIDE constituency, state-level policy and decisionmakers.

The first step was to explore the design and development of such an information system. With the assistance of Chris Dede, ED-AIDE staff consulted with faculty and graduate students of the Futures Department of the University of Houston at Clear Lake, including:

- o Peter Bishop, and the staff of the NASA Space Business Information Center
- o O.W. Markley, co-author of *Policy Development Handbook*, and
- o Lorna Stroebel, developer of a educational policy analyst group in Canada.

Dede further recommended that staff interview a number developers of environmental scanning systems nationwide. Staff pursued interviews and reviewed the literature about the following efforts:

- o Jim Morrison, University of North Carolina at Chapel Hill
- o Shirley McCune, Mid-Continent Regional Educational Laboratory
- o The Continuing Education Center at the University of Georgia (Simpson, et al., 1986)
- o Lauren Cook of the SSN, CSPA (Cook, 1987)
- o Lupica, former director of the Congressional Clearinghouse for the Future, and currently President of Early Signals, a consulting firm based in Washington, D.C. (Lupica, 1985)

Exhibit 3, the SEDL-SCAN Emerging Issues Scanning System Information Flow-Chart represents our first effort at synthesizing the literature for the SEDL-SCAN design.

At the same time, staff communicated with state-level policy and decisionmakers identified as the core constituency for ED-AIDE policy information services. Each of these persons were asked to complete a list of decisionmaker nominees for membership on the State Policy Groups. Efforts were made to meet with select policymakers in each state.

During the months of March and April, 1988, staff met with policymakers in the state of New Mexico and State A. In New Mexico, staff met individually with Alan Morgan, State Superintendent for Education; John Thorpe, Executive Budget Analyst, Office of the Governor; and William Simpson of the Legislative Education Study Committee. The meetings had two objectives: (1) to invite these policymakers to use ED-AIDE policy information services; and (2) to elicit support of a pilot issues identification system. During this meeting each policymaker was asked for names of potential participants.

Upon securing the interest of these policymakers in New Mexico, ED-AIDE staff engaged Lupica to consult on the design of the pilot SEDL-SCAN system on two levels--as it would exist in a state and a regional superstructure (see Exhibit 4).

Lupica recommended that:

1. The system, if volunteer, should have three levels: scanner, analyst, and policymaker.
2. The scanner level should be regionwide with representatives from IHEs, corporations, communities, state-level associations, as well as state education agencies (SEAs), local education agencies (LEAs), and SEDL.
3. The analyst level should include about 15 key staff members who are likely to be members or designates of the State Policy Groups.
4. ED-AIDE should produce products for policymakers such as abstracts of sources, issues briefs, periodic trends analyses, and annual conferences focusing on a major issue for the region.
5. Staff should explain the proposed system to the State Policy Group members and invite them to add comments and suggestions to the design and to suggest people who might participate.
6. Training efforts should be developed for participants at the scanner, analyst, and policy levels and should be continuous. At the scanner and analyst levels, efforts should be made to maintain motivation and interest; at the

policy level training might include workshops on strategic planning and policy development.

7. An annual regional meeting should be held on a specific issue to include all members of the scanning network, related experts, and State Policy Group members. Simultaneously, ED-AIDE joined the State Scanning Network in an effort to link with an existing system.

Lauren Cook, director of the SSN, also met with ED-AIDE staff to give new-member orientation and technical assistance and to explore linkage of the two systems. During this meeting it was agreed to use a scanner's abstract form fairly similar to that used by the SSN.

At the request of Alan Morgan, ED-AIDE staff met with the Superintendent's cabinet during the latter part of July, 1988. It was Morgan's intention for staff to offer ED-AIDE's policy information services to his top-level personnel as well as to invite them to consider participation in the SEDL-SCAN system. SEDL's Executive Director, Preston Kronkosky also attended this meeting, which was an important event in the continual efforts to generate internal SEDL support for the pilot implementation. While staff failed to achieve agreement to participate in the system on the part of the five cabinet members present, the Associate Superintendent for Instruction arranged with ED-AIDE staff to work with the State Department on their efforts in language assessment. This was perceived as an important milestone in the implementation process because it was an opportunity to provide policy information services.

At this time, it was decided in consultation with Lupica, to plan a workshop for the New Mexico leaders in education who had been recommended as participants during the year of meetings and communications with the policymakers. The objectives of this meeting would be to: (1) introduce the SEDL-SCAN system in a practical fashion

to a larger group of people, and (2) provide the base-line trends and issues with which to begin the SEDL-SCAN monitoring and scanning process. This meeting was planned for early October, 1988.

As a result of the July meeting, ED-AIDE staff attended a conference sponsored by the State Department of Education during August, and also had the opportunity to meet again with John Thorpe and Bill Simpson to plan the membership of the analyst committee. While in New Mexico, staff also met with a number of educational leaders who had been highly recommended to participate in the SEDL-SCAN system, including:

- o Julliane Boyle, Database Manager for the New Mexico Bureau of Economic Research, in order to link with this council and invite their director, Brian McDonald, to become a SEDL-SCAN analyst.
- o Paul Resta, Director of Educational Technology for the University of New Mexico and the Albuquerque Public Schools, and who is a national leader in educational technology who works with the state department. He joined the system as an analyst.
- o Tamara Ivy, Executive Director of New Mexico Association for Community Education. Tamara joined as a scanner/analyst.
- o Eugene LeDoux, director of the New Mexico Research and Study Council. SEDL-SCAN has forged a link with the council as well as having Susan Holderness join SEDL-SCAN as an analyst.
- o Alex Sanchez, University of New Mexico Vice President for Continuing Education, who joined the system as an analyst.

In addition, all of the above were asked to nominate other education and private sector participants as either analysts or scanner/analysts.

Finally, at the end of August ED-AIDE staff attended the annual meeting of the CSPA, during which they participated in a State Scanning Network meeting in order to gain more information about both the scanning and analysis processes.

The Forming Our Futures Workshops

Two major developmental events occurred in the Fall of 1988: two workshops were conducted, one for the larger group of potential system participants in New Mexico, and another for a select group of state-level policymakers from the remaining four states of the SEDL region. The concept of the Forming Our Futures workshops was developed in consultation with Lupica in order to initiate the SEDL-SCAN system on a regionwide basis. Not only did both meetings generate initial working trends and issues for the SEDL-SCAN system (see Exhibit 4), but the New Mexico meeting yielded sixteen volunteers for participation in the analyst committee.

SEDL-SCAN Participants

The invitation list for the New Mexico Forming Our Futures meeting included forty individuals representing education, government, and private industry. Each person invited had participated previously in an educational effort in the past, including for example the Governor's advisory committee for the development of New Mexico's funding formula. Twenty people attended the meeting, including members of the legislature, staff members of the legislative education study committee, state department of education personnel, representatives from the governor's office, members of the state school board, educators both from higher and K-12 agencies, and professional organization officers.

Of these twenty people, fourteen volunteered to participate in the SEDL-SCAN system as either analysts or scanner/analysts. One of these volunteers suggested scanner/analyst membership for two additional leaders in education. These were contacted and they agreed to participate as well. Sixteen analysts were invited to the first committee meeting.

Scanning Activities

Once the membership of the analyst committee was established, staff began to develop a group of scanners. As result of the efforts to generate internal SEDL support, certain staff members elected to participate in the SEDL-SCAN pilot system as scanners. One of them scanned ED-LINE electronic bulletin board, and another scanned the major newspapers from all five states. ED-AIDE's two staff members also scanned the journals and other publications normally available to them.

Because it was difficult to recruit scanners, staff decided to enlist the help of students enrolled in courses on the future. With the help of Dede, two graduate students at the University of Houston, Clear Lake were identified to scan certain technology and school administration journals. In addition, Lupica offered to award extra credit to her students for their efforts in identifying articles on subjects with potential educational effects. Finally, the State Scanning Network contributed abstracts with educational relevance. A total of 140 abstracts were generated for the first analyst committee meeting. These abstracts were packaged with an except from the SEDL-SCAN Guidebook about the Analyst Committee and mailed to the sixteen analysts approximately 10 days before the mid-February meeting.

The Analyst Committee Meeting

On February 15, 1989, ten analysts met for the first committee meeting. During the six-hour meeting, analysts processed the abstracts to delineate 27 trends and issues with potential educational effects. Exhibit 5 lists the trends and issues delineated during this meeting. The analysis process consisted of the following group techniques: (1) discussing all abstracts, (2) selecting one trend with the highest priority, and (3) using an implications wheel to explore the impinging and related issues and trends,

and to project the impact of the issue.

The top priority issue was: the increasing use of schools for delivery of social services, including health care delivery, shelter and services for homeless students, child/daycare services for students with children, programs for pregnant students, and adult education. In analyzing this trend, analysts considered the differences/similarities of the trend to current issues in education, and the potential role of the SEDL-SCAN system in addressing the issue.

Results and Discussion

The process of implementing of the pilot SEDL-SCAN system in New Mexico has been achieved to a remarkable degree. It is difficult at this time to assess the effects of a mechanism initiated to serve policymakers over the long term. What is apparent, however, is that ED-AIDE staff have secured the cooperation of educational policymakers in New Mexico in designing the system, creating interest among several constituent groups, and recruiting sixteen participants for the analyst committee. In addition, the system has completed one full scanning cycle. Analyst Catherine Smith, President of the New Mexico State Board of Education, commented, "I'm terribly excited about the potential of this program. I think that this project probably is one of the best things that could happen to education. Policy-makers simply do not always have in their hands the trends that are out there -- or quality resource information about those trends." Other indicators of success include:

- o Members of the analyst committee are recruiting scanners from their own constituency or acquaintances. For example, analyst John Mitchell, President of the New Mexico Federation of Teachers has indicated an interest in engaging New Mexico teachers to be scanners.

- o The newsletter of the New Mexico Research and Study Council has carried an article about SEDL-SCAN.
- o The process has forged new links for SEDL itself as well as among members of the committee.
- o As a direct result of the regional **Forming Our Futures** meeting, ED-AIDE staff were invited to speak on demographic trends and issues for the meeting of the new members of the Oklahoma School Boards Association.
- o SEDL staff were able to use SEDL-SCAN abstracts to develop briefings in response to state policymakers' requests for information.

The implementation of the pilot SEDL-SCAN system, however, is approximately four months behind initial projections. One of the problems associated with developing a system that spans the boundaries of many organizations is that each organization has its own work schedule. That problem is exacerbated when the system also includes organizations that must represent their own or their constituents' interests during policy cycles. Another problem in building this system entailed locating the individuals within each of these organizations who would volunteer to participate. Finally, attempting to develop and manage the system from another state presents a significant challenge to overcome in both recruiting and maintaining the commitment of participants.

Because SEDL is external to state-level organizations it is an objective, non-partisan manager for an environmental scanning system that attempts to inform state-level policy and decisionmaking. Being an external organization, however, introduced two problems. First, the geographical distance between SEDL and the participants of the New Mexico SEDL-SCAN increased the difficulty of generating interest. Second, contact with state-level agencies and organizations is constrained by the "with-and-through" dissemination/service strategy proscribed by SEDL's funding contract. This strategy was intended to provide guidelines for regional educational laboratories

(RELs) to serve their regions without duplicating existing state services. In addition, this strategy requires that REL projects be aimed at a fairly specific audience, for example policy and decisionmakers. Rather than being able to appeal to the broadest education population at the school level, ED-AIDE staff had to work through its designated audience, state-level policy and decisionmakers, in order to generate interest.

Another problem is a result of SEDL's own resource constraints. Inasmuch as the ED-AIDE staff include 1.5 FTE personnel, who are also responsible for the total scope of ED-AIDE work (see Exhibit 1), the amount of time available to meet with potentially interested individuals and groups is severely limited. In addition, another difficulty is that management occurs at the project level, rather than at the institutional level. At this time, ED-AIDE, and therefore SEDL-SCAN, is not structured as a permanent function of SEDL. As a project it is part of a limited time contract, and has no guarantee of continued support.

It will be difficult to complete adequate evaluation before the end of the one year pilot period. Although some formative evaluation efforts are being implemented as the pilot continues, i.e., the use of *ad hoc* evaluation questions about process and materials, it is too early to gain substantial information about the effects of the system both on the participants and on educational policymaking in New Mexico. It is not to be expected that the system will be institutionalized by the end of the project year. In order to achieve the established goals for SEDL-SCAN, the project needs at least several more years of continued and expanded efforts (See Exhibit 6).

Conclusion

Because the processes to investigate, develop, and implement SEDL-SCAN began only a year ago, many issues and concerns must be addressed as the system continues to develop. In general, such concerns address development and operation of the system itself and implementation of the system in one or more states after pilot testing. In particular, those concerns include:

1. Continuing to generate support, i.e., recruiting/ training/maintaining participants' commitment among five states;
2. Standardizing and validating the quality of information identified through an environmental scanning process;
3. Linking the outcomes to states' policy cycles; and
4. Incorporating technologies into the system to (1) manage the information flow itself, e.g., analyzing trends and collecting, archiving, or retrieving data and to (2) support decisionmaking processes, e.g., developing a searchable, online database of issues; linking with existing online networks to create a forum for participants; using online mechanisms to support the analysis committee's decisionmaking processes, such as trying an online focus delphi process.

Many of these concerns are addressed already in the basic design and operations of the issues identification system, and will need only to be refined as the system develops. For example, the analysis committee serves a valuable "quality control" function much like that of an expert panel in social sciences field research. Analysts offer knowledgeable viewpoints within the context of a given state or states. They provide "phenomenon recognition," or expert appraisal to the trends identified. They can validate the information collected through scanning for their own contexts, and they can mitigate some of the biases possible in a scanning base. In its early stages, for instance, a new scanning effort such as SEDL-SCAN is likely to be concentrated among only a few people or among people with similar viewpoints or backgrounds. Other concerns, such as the continued incorporation of technologies are occurring already at some level, but the technologies are developing so rapidly as to be only

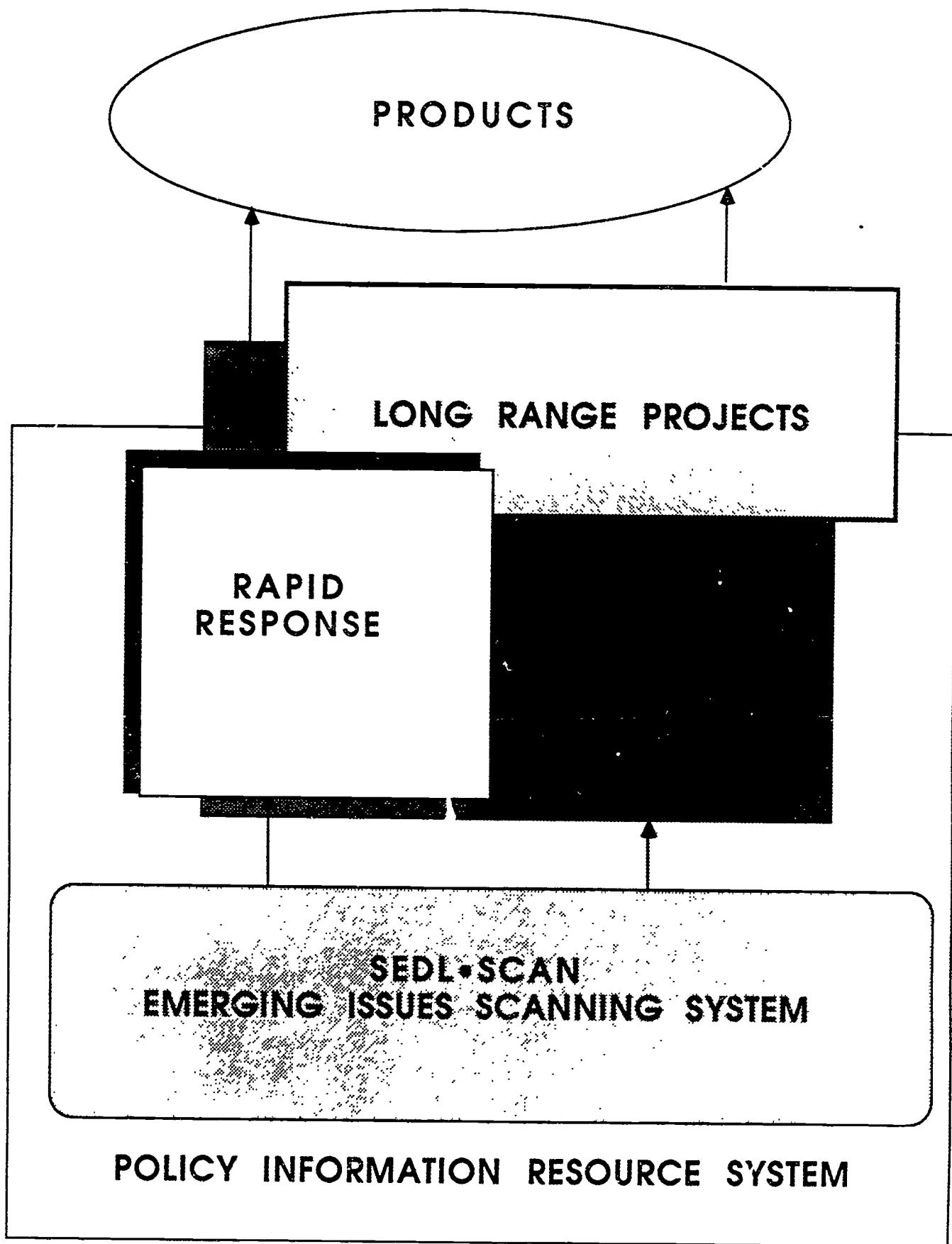
projected at this point. Still other concerns, such as continuing to generate support and linking the outcomes to states' policy development cycles are likely to remain complex, because of the political nature of organizations in the system.

Because most decisionmakers have limited financial, technological, and personnel resources, and even less time, to respond to the daily demands of their organizations, issues analysis has become a critical management tool. SEDL-SCAN offers a mechanism to identify and analyze issues long before they reach a crisis stage. As issues develop and grow in impact, options for action narrow and liabilities expand. With more lead time, decisionmakers may have more and less expensive options from which to choose in response to threats or opportunities created by emerging issues. SEDL-SCAN has potential as an information system to help educational policymakers in the Southwestern Region focus their resources on those issues which affect the education missions and goals of their states.

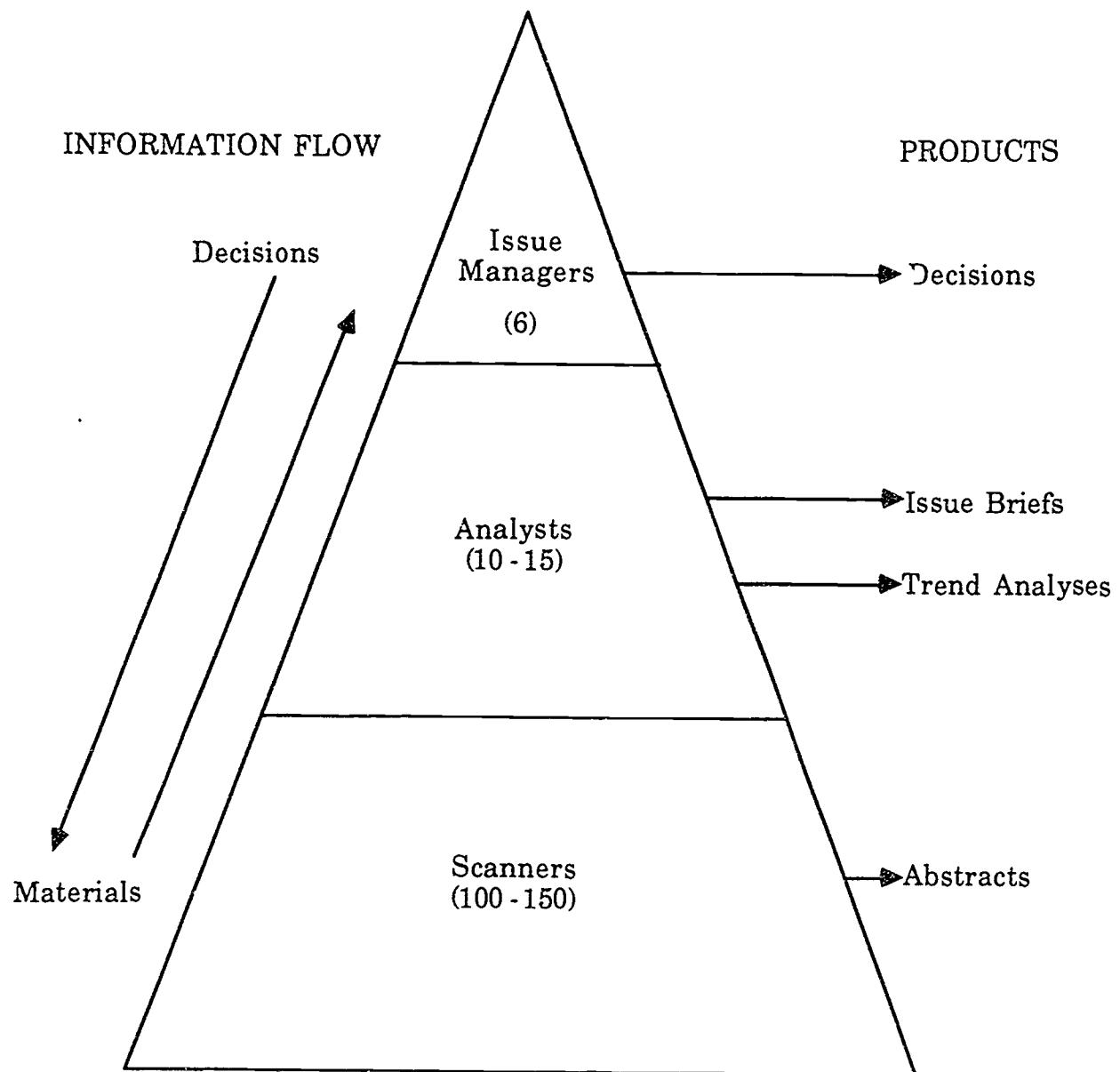
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EXHIBITS

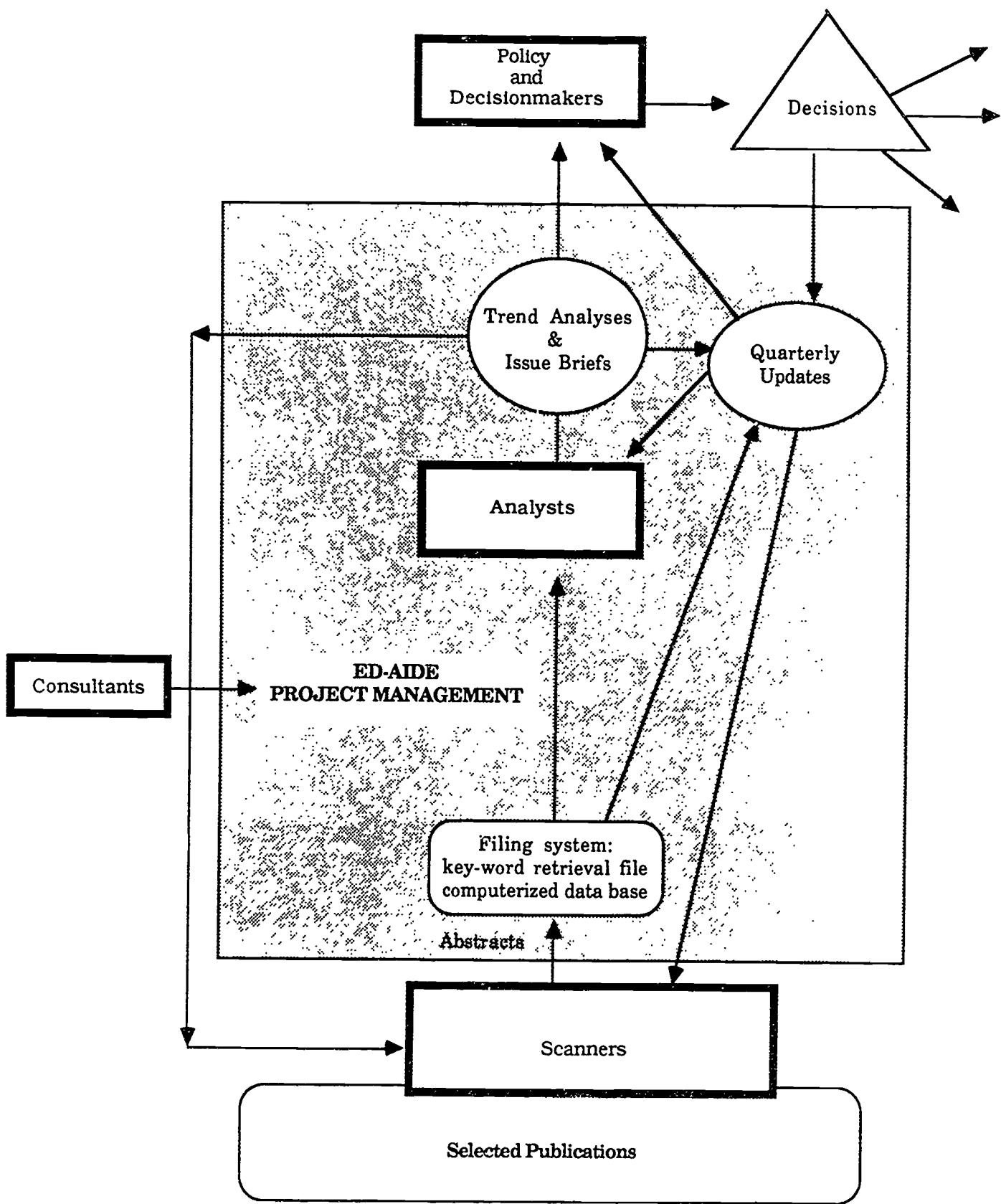


Ed-Aide Overview



Generic Model of Environmental Scanning System

SEDL•SCAN
Emerging Issues Scanning System
Information Flow-Chart



ISSUES IDENTIFIED DURING THE
FORMING OUR FUTURES WORKSHOP,
OCTOBER 11 & 12, 1988.
NEW MEXICO
SHERATON - OLD TOWN, ALBUQUERQUE

The following issues were discussed in the order suggested by Lena Lupica's handout entitled *Major Planning Assumptions* (attached).

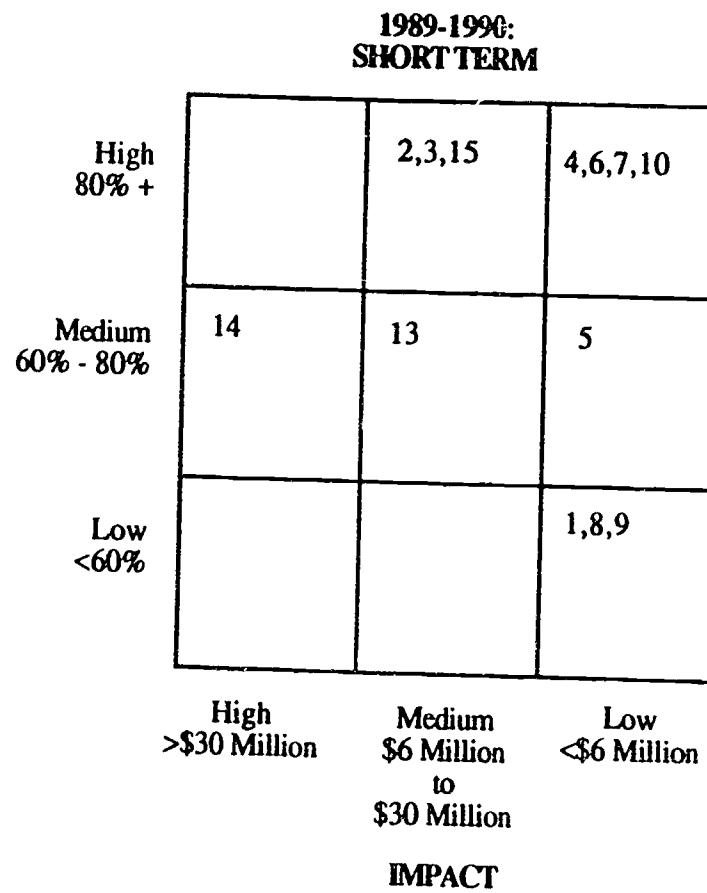
TRENDS	ISSUES
Social Trends	
1. Increase in legal & illegal immigrants (o) *	1. Illiteracy (in English) of parents
2. Teen age pregnancy (t)	2. Improvements in adult education
3. Teacher shortage (t)	3. Daycare
4. Emergence of community colleges as major training centers (o)	4. Medical assistance to teenage mothers and children
5. Increase in AIDS (t)	5. Teacher shortages
	6. Funds for social services and Insurance related to AIDS
	7. Education on AIDS
Economic Trends	
1. Manufacturing growth in small firms (o)	8. Manufacturing growth permits diversification/Training for entrepreneurship
2. Declining domestic energy production (o)	9. Need to have energy policies in place
3. Depletion of water supplies (t)	10. Legal issues involved in conservation and water depletion--re: ownership of supplies.
Political Trends	
1. Conservatism of Baby bust generation (t)	11. Need to market educational programs
2. Growing influence of legislature(t/o)	12. Developing cooperative spirit between legislature and communities
3. Federal government will provide human(o)	
Technology Trends	
1. Advances in microelectronics, etc(o)	13. need for R&D training /skills
2. Popularity of "low tech" automation systems	14. Keeping federal \$ in New Mexico -- need to keep retiring experts (turning consultant) in state.
3. Maintaining workforce with high-tech skills	15. Training in high tech fields and articulation with higher education

*(o) = opportunities

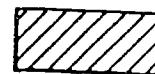
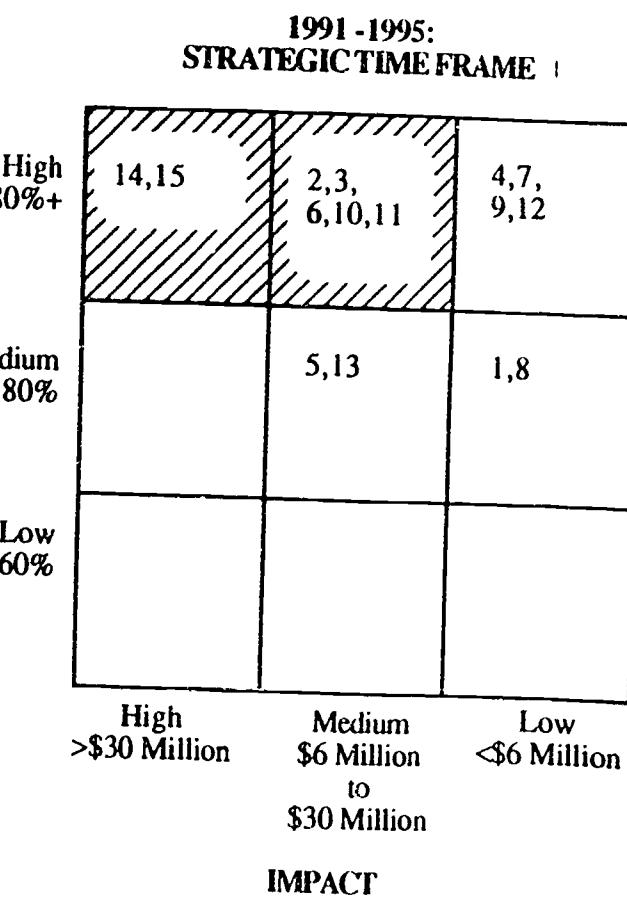
(t) = threats.

**FORMING OUR FUTURES
NEW MEXICO
OCTOBER 11 & 12, 1988
SHERATON - OLD TOWN, ALBUQUERQUE**

PROBABILITY OF OCCURRENCE



PROBABILITY OF OCCURRENCE



Strategic Issues

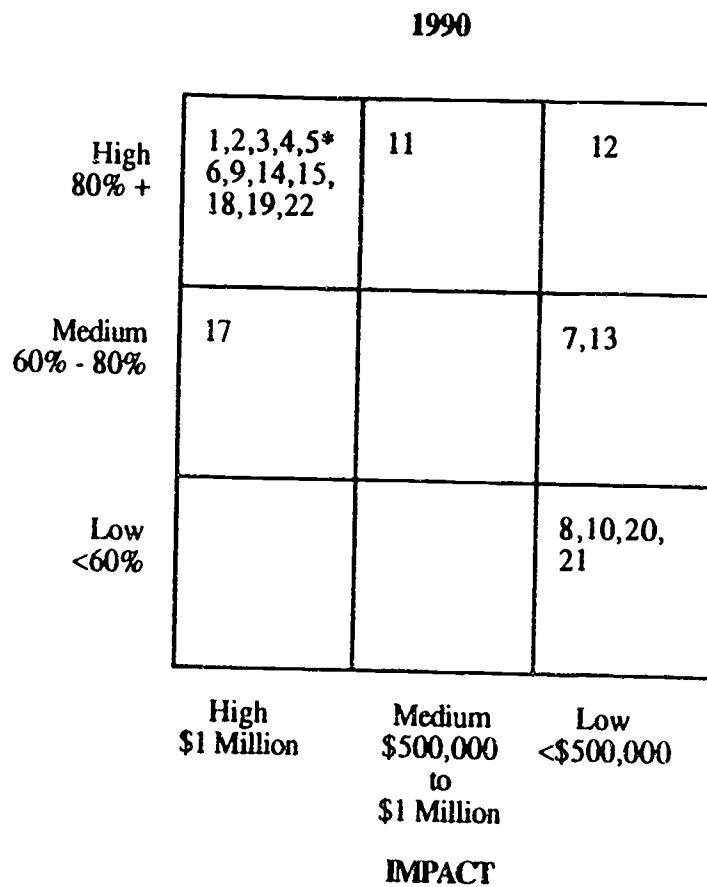
ISSUES IDENTIFIED DURING THE
FORMING OUR FUTURES WORKSHOP,
NOVEMBER 2 AND 3.
ATTENDED BY REPRESENTATIVES FROM ARKANSAS, LOUISIANA,
OKLAHOMA, AND TEXAS.
INFO MART, DALLAS, TEXAS

The following issues were discussed in the order suggested by Lena Lupica's handout entitled *Major Planning Assumptions* (attached).

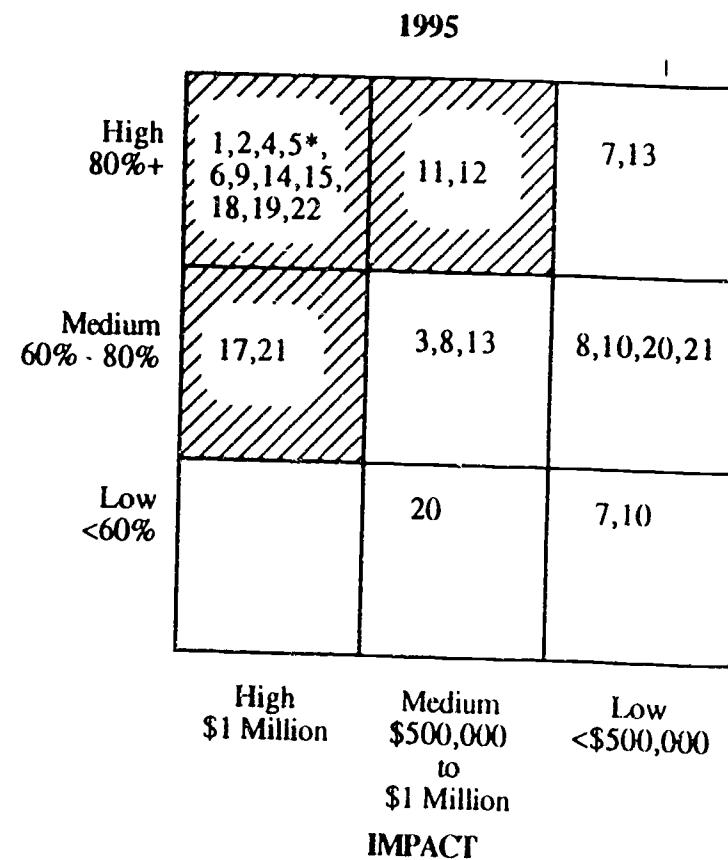
1. Drop-out prevention
2. Pre-school education
3. Lack of interagency cooperation
4. Retraining/re-educating adults
5. Bicultural/Bilingual education - as an asset
6. Funding for schools vis a vis an aging population
7. Teacher shortages
8. Adult education for immigrants
9. Children at risk
10. Education in the home
11. Gifted program for Hispanics, immigrants, and others
12. Religion returns to the public schools; with implications for sex education, health planning, AIDS, curriculum funding, attendance, and home schooling.
13. Alternative certification of college teachers, i.e., businesspersons teaching in adjunct positions.
14. The growing cost, and increased incidence of businesses in the business of education.
15. Growth of functional illiteracy
16. Basic skills versus more technical skills
17. The 4 R's -- Reading, 'Riting, 'Rithmetic, and Reasoning
18. Individual responsibility for health and schools offering more social services
19. Accountability
20. Entrepreneurship curriculum
21. Biotechnology
22. Use of technology for instruction

FORMING OUR FUTURES
ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS
NOVEMBER 2 & 3, 1988
INFOMART DALLAS, TX

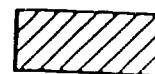
PROBABILITY OF OCCURRENCE



PROBABILITY OF OCCURRENCE



* The priority of issue #5 applies to Texas and New Mexico only



Strategic Issues

FEBRUARY 15, 1989
NEW MEXICO SEDL-SCAN
ANALYST COMMITTEE MEETING

Participating committee members:

- o Susan Holderness -- New committee member, representing the New Mexico Research and Study Council
- o Louise Carlson -- in the place of committee member Abad Sandoval¹. Louise has joined the system as a scanner.
- o Tamara Ivy
- o Alfonso Ortiz
- o Bryan McOlash
- o Helen Harriger
- o JoAnne Young
- o Catherine Smith
- o John Mitchell
- o John Thorpe

TRENDS DISCUSSED:

1. Population & political power shift to the Southwest.

Abstract 03 - According to the U.S. Census, America's population and political power is shifting to the South and West, away from the Northeast and Midwest. These population changes will affect reapportionment of Congress in 1990.

Abstract 78 - In Nevada a group of senior citizens are working to repeal the legislation for medicare coverage of catastrophic illness because as it is written now the type of custodial care required for patients with chronic illnesses is not provided.

2. Student involvement in community service as part of the curriculum

Abstract 01 - The Carnegie Foundation is recommending a new Carnegie unit for community service, which would be required of all graduating seniors.

¹ Outside of this one exception, should a committee member be unable to attend an analyses meeting there will be no designated substitute.

3. Increased use of schools for delivery of social services, including
- Health care facilities
 - Shelter/services for homeless students
 - Childcare/daycare for students with children
 - Programs for pregnant students
 - Adult education

Abstract 28 - The state of Arkansas is establishing school-based health clinics to combat its high teenage pregnancy rate.

Abstract 73 - Some communities are using their under-used school buildings for day care and pre-school centers. In Independence, MO, a mother says she trusts the program because it is run by the school board. By sharing overhead expenses with the schools, child care, whether all day or after school, can be offered at lower fees than possible at private centers, while child care workers may be paid more thus reducing turn-over rates.

Abstract 104 - Libraries are faced with the need to restrict their use by children in order to curb the tendency of parents to use the library as free after-school child care. The dilemma for libraries is how not to become highly educated "baby-sitters" and yet not discourage children from using the library

Abstract 24 - The state of Colorado is pilot testing preschool programs for language-delayed 4 and 5 year olds. Each participating school district must form a preschool program advisory council with representatives from the district, social services, the local Head Start agency, child care centers, and parents of preschool children. The project is intended to offer services for the whole family.

Abstract 42 - The Texas Joint Interim Committee on High School Dropouts recommendations include establishing pre-kindergarten programs for 3-year olds, at-school day care for young children, special programs for pregnant students, child care for children of students, and allowing dropouts who want to return to school to make up missed work beyond the current five-day limit for unexcused absences.

Emergent issue: Extension of public school facilities, staff, and resources beyond teaching and learning with traditional populations and calendars.

Driving Forces (political, social, economic, technological):

- o Changing economics, and increased poverty in the populations
- o Changing family structure
 - both parents work

- fewer traditional families, ie., two parents
- changing support structure
- o Mobility of families
- o Shrinking community services
- o Decline in the number of taxpayers with children
- o Desire to utilize existing resources
- o Increased cost of health care
- o Easy access to schools
- o Use of existing transportation/food facilities
- o Dropout prevention
- o New services attract more people to school

Constraining Forces:

- o Fundamentalist movement
- o Reluctance of school personnel to work longer hours
- o Increased stress on school personnel
- o Adds utility, custodial, and maintenance costs
- o Need to re-negotiate labor union contracts
- o Liability/insurance costs
- o New materials/equipment needed

Developments:

- o Federal funding
- o Natural disasters
- o Health epidemic
- o Loss of economic base
- o Taxpayer revolt
- o More parents working at home
- o Home schooling

4. Restructuring of schools

- educational/pedagogical
- institutional
- financial

Abstract 5 - Using the German school Kolin-Holweide as an example, the president of the American Federation of Teachers, Al Shanker, called for a complete restructuring of the American school and suggests strategies such assigning teachers responsibilities for students for a number of years, peer tutoring, small study groups and cooperative learning.

Abstract 39 - A leading advocate of learning style-instruction, Rita Dunn, said it will take a fundamental change of educational philosophy and a new set of teaching tools/practices, and an intense in-service teacher training effort, to convert schools to accommodate student learning style preferences.

Abstract 65 - Colorado's Governor Romer announced an "educational creativity schools" initiative. About 20 - 30 schools will receive \$5000 and waivers from state regulations to support their improvement efforts. Emphasis of the program is on making students responsible for their own learning, and to include all sectors of the community in the improvement effort.

Abstract 27 - Carnegie Corporation established a new task force to chart comprehensive plan for restructuring middle grade education. The task force consists of experts from education, government, health, journalism, and the youth sectors.

Abstract 40 - The NCSL summary of emerging issues found that school accountability and at-risk youth are increasingly important to lawmakers.

Abstract 38 - The Colorado Public Schools of Choice Act, if passed, will urge all school districts to offer open enrollment within their districts and provide state aid to follow any child who enrolls outside the home district.

Abstract 43 - Noting that there is a gap between the skills demanded of today's workforce and the intellectual capability of entry-level workers, U.S. Secretary Cavazos urges the American workplace, schools, and businesses to work together in cultivating a generation of better workers. Cavazos said four things must be accomplished: (1) More early childhood programs with trained educators teaching parents parenting skills; (2) Attract more quality people to the education field; (3) Encourage more high schools to offer more internships, back-to-work programs and apprenticeships; and, (4) Better communication between secondary schools and postsecondary institutions.

Abstract 89 - The Washington state legislature has set aside several million dollars to encourage schools to develop more innovative and effective curricula. All schools are invited to submit redesign plans, and the state would waive all requirements other than civil rights and fire codes.

Abstract 29 - Iowa state director of education William Lepley recommended that the state have open enrollment, simplified funding and a fresh start on calculating school costs.

Abstract 67 - Parents United for a Responsible Education, and the Mexican-American Legal Defense and Education Fund are bring suit against the Chicago Board of Education and the Illinois Board of Education alleging that more than \$2 million has been diverted from the Illinois Title I account to the general fund. Officials said this practice started in the 79-80 school year to buffer longstanding deficits.

Abstract 88 - Four districts in Minnesota will be combined into a regional school in an effort to share costs, courses and students. The regional school is eligible for a \$800,000 state economic recovery grant. The new school will cost \$750,000 a year less to operate than the four existing schools.

5. Growing emphasis on having educators teach morals and ethics (Is this a problem?)

Abstract 133 - William Bennett, former Secretary of Education, writes about the common qualities of good schools, including leadership, teaching of the basics, involved parents, and a focus on values and character with the schools taking responsibility for teaching ethics.

6. Recommitment to more classic family and child centered society. (Countertrend to trend #5)

Abstract 25 - Boston U. took over governance of the public schools in Chelsea, Mass, and corporations are spending more on remediating and retraining employees. On the other hand, there is a recommitment to the idea of a classic family and a more child-centered society; a move toward a more rigid morality; a trend toward more formalism like parental pressure for codes of conduct.

7. "Cocooning," and the movement back into the home

Abstract 4 - Identified trends toward cocooning, people exercising and home based hobbies, and all age levels are placing high priorities on eating right. Further, women are returning home, either starting their own businesses at home, or quitting work to take care of children.

Abstract 25

Abstract 135 - New technologies allow the creation of fantasy houses with complete home entertainment centers and backyard parks with waterfalls or fountains, greenery, etc.

Abstract 45 - Health club membership is declining and people are moving home, focusing on children and career.

Abstract 138 - Computer software is now available to prepare students for taking the SAT. Programs include a built in timer, automatic scoring, a catalogue of information for every question, and an outline pad for making computations.

8. Increase in global interdependence and systems thinking.

Abstract 6 - NASA is planning to launch an Earth Observing System (EOS) in 1995 which will link worldwide information gathering stations with two orbiting platforms to develop a global database from oceanography, atmospheric chemistry and physics, meteorology, geology, ecology and other fields of study. Japan and the European

Space Agency will each launch EOS labs making for a total system of four labs.

Abstract 12 - Global issues in economics and the environment are demanding that all citizens have at least a working knowledge of the interdependence of nations. Title VI of the Higher Education Act provides support for centers for international problems.

Abstract 13 - There is a national incompetency in language skills and geographical awareness. If the U.S. is to continue to be an international leader more people need to know of global issues like drugs, migration, immigration, and ethnic conflict.

Abstract 124 - According to Reverend Forrester Church we have a choice to either convert others who are different from us, destroy them, try to ignore them, or try to respect each other, differences intact, while looking for common ground. We must realize that our future survival depends on the security and strength of others.

Abstract 77 - The ways in which history and social studies are being taught in school are changing for a wider and more in depth focus on events and cover more of the roles of women and minorities, as well as the recent past with the effects of the arms race on local and national economies.

Abstract 117 - Carl Sagan and Ann Druyan's open letter to Pres. Bush outlined the following serious problems: chemical pollution, acid rain, the greenhouse effect, nuclear waste, and the depletion of the ozone layer. Also of concern is the state of the economy and the status change in the US from a creditor nation to a debtor nation.

Abstract 14 - Thirty schools in the U.S. have entered into an academic exchange partnership with the Soviet Union. Students in the program attend school for four weeks in the Soviet Union.

Abstract 87 - A Japanese university will be building and supporting a boarding school for Japanese students in Alaska. Keio University of Tokyo will open the first Japanese high school in the U.S. to be located on the campus of Manhattenville College in New York.

Abstract 74 - Right wing groups are instigating the move towards English Only using fear tactics describing conspiracies between U.S. based radical groups, radical groups in Canada, and Castro.

9. Increasing need for high technology skills vis a vis the limited school response.

Abstract 7 - The Office of Technology Assessment's new report, *Power On!* finds the use of technology for education spotty and improvements steady but slow, and recommends regional research centers and technology demonstration schools.

Abstract 122 - High technology companies are recruiting foreigners with advanced degrees because there aren't enough Americans in the fields of mechanical and electrical engineering. These workers come in on a temporary visa and there may be a reason to worry about the vulnerability of American industry if these workers decide to return to their homelands.

Abstract 36 - Rochester Institute of Technology has expanded its technical curriculum to include Imaging Science, Microelectronic Engineering, Biomedical Photography, Electronic Printing & Publishing, and Technical Communications.

Abstract 25 -

Abstract 131 - Information Resources of Chicago has developed shopping carts with video display screens that give directions to products, announce daily specials and feature trivia games, local news and the weather.

Abstract 35 - Teachers participating the NEA's Master in Learning project are linked on the new IBM People Sharing Information Network (PSInet) to allow them to share ideas and information on how to create top quality learning environments for students.

Abstract 37 - McGraw-Hill's MATHLINK is an electronic bulletin board that allows users to exchange ideas and information about the teaching and learning of math.

Abstract 103 - Employers are complaining that worker skills are getting poorer, up to two-thirds of the job applicants are failing basic skills tests, and employers are having to offer skills development courses.

10. Continued lag in the use of computers in schools relative to business.

Abstract 7 -

Abstract 8 - A new model of research on the effectiveness of computers in education to include the use of microcomputers. Henry J. Becker of Johns Hopkins University is starting a three-year project to establish standards for effectiveness research.

Abstract 107 - The failure of the computer revolution is due to the following factors: A general shortage of up-to-date equipment; lack of suitable teaching software; and lack of training for teachers.

Abstract 123 - The problem with the curriculum outlined by William Bennet is that it is geared toward college-bound students and ignores the need of vocational education students. As the industry becomes increasingly high tech, vocational programs need to prepare students for microelectronic.

Abstract 127 - The educational requirements for the class of the year 2000 will include preparation for service jobs in the fields of programming, health care, and law. Almost all jobs will require a working knowledge of computer technology and skills in information-processing technology. The knowledge base will double four times by the year 2000.

Abstract 10 - The teacher is central to the development and implementation of technology in education. More inservice teacher training in technology is needed, preservice teacher education must include familiarity with technology; and for inservice training more release time is needed, increased status for master teachers, available computers that may be used at home.

Abstract 8 -

Abstract 109 - Graduates of even prestigious computer departments are lacking in skills in maintenance, programming and communications.

Abstract 123 -

Abstract 127 -

11. Increasing need for minority teachers because of changing student demographics.

Abstract 11 - By 1995 about one million teaching positions will need to be filled. But by that time student demographics will be largely Black, Hispanic, Asian, and Native American, while teachers will be largely Anglo.

Abstract 12 -

Abstract 66 - The New York Board of Regents have adopted a new bilingual education policy that requires all school districts to identify and provide programs for students with limited English skills. This is important because it looks at language as a resource rather than a liability.

Abstract 42 -

Abstract 74 -

Abstract 112 - The average age of the population in America is rising, however it is rising more in the Northeast, where the median age is expected to rise to 40.3 in 2010, while the national median age will be 39.

12. Increasing polarity in assessment between standardized measures and empirical evaluation.

Abstract 15 - high stakes testing of kindergartners is harmful to students because they affect the curriculum and constrain creativity. Also they demean teachers' professional judgment. Instead assessment should focus on identifying problems, class size should be lowered, and cross-aged tutoring programs should be instituted. Also home communications should be improved.

Abstract 30 - The five events that has significant impact on curriculum in 1988 include mounting protests against standardized assessments, the poor showing of U.S. students in math and science, restoring the classics to basal readers in California, a growing sense that schools can no longer avoid morality and ethics in the classroom, and across the country more authority is given to parents and faculties to make educational decisions.

Abstract 33 - The author of a new book, *Teachers on Trial*, argues that education improvement efforts fail because new programs are politicized and more research on teaching and learning is needed.

Abstract 121 - There appears to be bias against women and minorities in the SAT, but it is difficult to pinpoint exactly which questions. The question is now whether it is the test or the educational system that introduces this bias.

Abstract 138 -

Abstract 24 -

Abstract 19 - Julie Jensen, the president of the National Council of Teachers of English calls for more informed discussions of literacy.

Abstract 25 -

13. Increase in educational partnerships--family, business, community.

Abstract 16 - According the OERI report, *America's Schools: Everybody's Business*, 40% of the nations public schools are involved in educational partnerships.

Abstract 31 - A retrospective study of the Cleveland Scholarship Program (CSP) found that the participants graduated from 4-year colleges at a rate 60% above the national average, participating Black students graduated 80 - 190% above the national average.

Abstract 30 -

Abstract 18 - The Boston Compact has formed Compact II with a focus on more parental choice and more individual school responsibility and accountability.

Abstract 17 - Burger King has launched a campaign to encourage Americans to thank the teachers who made a difference in their lives. Burger King's new advertising campaign includes different kinds of teachers.

Abstract 25 -

14. Movement toward extended school day & school year.

Abstract 23 - Texas is considering lengthening the school year by 5 days, and may do so by eliminating 5 staff development days.

Abstract 94 - A Ford Foundation study of the elements that contribute or limit educational achievement reports that mother's level of education is the singly most important factor in predicting the child's achievement.

15. Restoring classics to texts

Abstract 30 -

16. Movement towards teaching to learning styles.

Abstract 34 - Research on learning styles is having a growing influence on education reform, and at-risk student will reap the greatest benefit because these students have the greatest difficulty with traditional single mode formal teaching strategies.

Abstract 38 -

Abstract 39 -

17. By-products of technology and chemicals in foods are increasingly affecting the immune system of youth.

Abstract 60 - In compliance with federal law, the Oklahoma Planning Council for Developmental Disabilities is conducting surveys to determine consumer satisfaction with present services.

Abstract 129 - New technology will help create a better future if we learn to dispose of the by-products of technology in a way that is environmentally safe and sound.

18. Continued decrease in Federal spending for education.

Abstracts 72 - The needs for government spending include: (1) bailing out the country's insolvent thrifts and S&L's; (2) cleaning up or removing weapons plants; (3) cleaning up hazardous waste pollution on military stations; (4) repairing and maintaining the crumbling infrastructure; (4) and implementing SDI. Educational programs for which Pres. Bush has pledged support include a childcare tax credit

and tax breaks for college tuition.

Abstract 137 - P.L. 100-436 FY89 appropriations for the Departments of Labor, Health and Human Services, and Education represent an increase of \$1.6 billion above comparable FY88 appropriations and \$746 million more than requested by the President's budget.

Abstract 101 - The Nebraska Supreme Court decided that the state will offer free education to handicapped students until their 21st birthday, but not beyond.

19. Rising costs for environmental pollution and the maintenance of the infrastructure.

Abstract 72 -

Abstract 76 - Congress is attempting to enforce its requirements that all school districts remove from all school buildings asbestos materials. School districts are winning delays due to the costs of this renovation effort.

20. Population is aging.

Abstract 78 -

Abstract 112 -

21. Increasing public/private school partnerships & ventures.

Abstract 79 - Private schools are developing assertive new marketing strategies to attempt to increase enrollments. Such strategies include efforts to entice more affluent students, to offer financial aid to upper-middle class and middle class students, and to recruit students from Latin America and the Far East.

22. Space is a new area for business growth and new careers.

Abstract 82 - New businesses include services to transport food, materials and satellites to low Earth orbit or to Moon colonies; no-frills orbiting scientific laboratories; free-floating manufacturing plants to produce semiconductors and new medicinal products; and recovering jettisoned fuel tanks (15-stories tall) for use as pressurized habitable space "condos," laboratories, greenhouses, or whatever.

23. Movement towards "Japanese" high schools in the United States

Abstract 87 -

24. Increasing need for college faculty particularly by 1995.

Abstract 92 - Demographers project a shortage of college faculty by the mid 1990's because of aging. Lack of incentives caused fewer

students to enter academics in the 70's and 80's. The shortage will hit at just about the time that the baby boomer will increase college enrollments.

25. Decreasing federal support for medical education.

Abstract 102 - Medical school enrollments have decreased over the past six years because of increased educational costs; changing federal regulations; increased malpractice premiums; a changing tax structure; and advice from physicians to potential medical students. Federal support has been reduced because of the projected doctor glut.

26. Growth of service jobs

Abstract 128 -

Abstract 129 -

27. Privatization of public services

Abstract 116 - U.S. cities are beginning to contract with private companies for municipal services such as fire fighting, vehicle maintenance, and public transit. The San Diego transit board saved \$500,000 by contracting out, which resulted in cheaper fares and increased ridership.

Exhibit 6
**ED-AIDE Information Services &
SEDL-SCAN, Issues Identification System**

Milestones and Projected Milestones

Dec '87

- o Begin designing ED-AIDE database linking issues, resources, requests
- o Produce ED-AIDE information flyer

Jan '88

- o Hold day-long meeting with Chris Dede and the Futures Studies faculty and the Space Business Information Center to consult on concept of ED-AIDE rapid response system and database; and to consult on design of emerging-issues tracking system

Feb '88

- o Meet in Baton Rouge with decisionmakers to discuss proposed system for tracking emerging issues; they decide not to participate at this time, because a new governor will be inaugurated in March, but offer suggestions for a system that would most likely benefit them
- o Meet in Austin with decisionmakers to discuss proposed system for tracking emerging issues; they decide not to participate at this time

Mar '88

- o Meet in Santa Fe with decisionmakers to discuss proposed system for tracking emerging issues; they are interested in participating

Apr '88

- o Meet with decisionmakers in Arkansas to discuss proposed system for tracking emerging issues; they decide not to participate at this time, but offer suggestions for the system that would most likely benefit them

May '88

- o Meet with Lauren Cook; discuss SSN and SEDL's emerging-issues tracking system, SEDL*SCAN

June '88

- o Meet with Lena Lupica; design emerging-issues tracking system, SEDL*SCAN

July '88

- o Produce first "Insights on Policy & Practice," quarterly update
- o Meet with New Mexico State Superintendent and cabinet members to discuss ED-AIDE and piloting SEDL-SCAN in New Mexico

August '88

- o Magadalena Rood meet with key decisionmakers in New Mexico; generated list of potential analysts for SEDL-SCAN

Oct '88

- o Hold first biannual emerging issues meetings in New Mexico
- o Produce commissioned paper on emerging trends and issues affecting New Mexico education

Nov '88

- o Hold first regional biannual emerging issues meetings in Dallas
- o Produce four commissioned papers on emerging trends and issues affecting education in Arkansas, Louisiana, Oklahoma, and Texas

Feb '89

Receive 1st test scans
Hold 1st quarterly analysis meeting; test process

- o Test quarterly update format, "New Things Considered"
- o Produce Issues in the Region: Review & Preview

Mar '89 Produce "New Things Considered"

May '89 3d quarterly Analysis Meeting

June'89

- o Produce "New Things Considered"
- o Hold 2-day workshop for legislative staff in Austin

Aug '89

- o 4th quarterly Analysis Meeting
- o Convene decisionmakers, and system participants in second of bi-annual regional meetings

Sept'89 Produce "New Things Considered"

- Nov '89 Convene Scanners/Analysts, policymakers
Issue-oriented meeting
State Meetings w/Scanners/Analysts, policymakers
- Dec '89 Produce "New Things Considered"
- Jan '90 Begin establishing online bulletin board system and electronic messaging on Quick BBS or The ELECTRIC PAGES.
- Feb '90 Produce "Review & Preview 1988-98"
o Quarterly Regional Analyst Meeting (teleconference?)
- Mar '90 Produce "New Things Considered"
- May '90 Quarterly Regional Analyst Meetings (onsite)
- June'90 Continue Analyst Meetings, as appropriate