Formal environmental scanning procedures can provide key administrators of higher education institutions with valuable external information regarding both the probability and impact of external trends and forces. Such information may then be used in various strategic planning stages including scenario development, institutional mission and goals identification, evaluation of internal institutional strengths and weaknesses, selection of appropriate alternative strategies, and post-planning monitoring and control operations. Environmental scanning also provides professional development by helping to maintain a leadership team's awareness of current research, viewpoints, and trends. Costs and benefits of scanning are discussed, and the relationship between environmental scanning and strategic planning is described. Scanning activities of three diverse institutions of higher education—a community college (DuPage County Community College, Glen Ellyn, Illinois), a land grant institution (University of Georgia), and a major urban university (University of Akron, Ohio)—are identified. Includes nine references. (DB)
The Necessity of Environmental Scanning Prior To Long-Range Planning Activities at Higher Education Institutions

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Abstract

Formal environmental scanning procedures are increasingly being adopted by institutions of higher education. The rationale for this trend lies primarily with greater environmental awareness resulting from participation in a scanning program. The purpose of scanning is to provide key administrators valuable external information regarding both the probability and the impact of volatile external trends and forces. This information may then be used in various strategic planning stages including scenario development, institutional mission and goals identification, evaluation of internal institutional strengths and weaknesses, selection of appropriate alternative strategies, and post-planning monitoring and control operations. Additionally, participation in environmental scanning provides an inexpensive, but effective, form of professional development which serves the institution's interest in maintaining a state-of-the-art leadership team aware of current research, viewpoints, trends, and activities which may be of value in assisting the administrator in solving current problems and/or more efficiently carrying out his/her duties. Costs and benefits of scanning are discussed, the relationship between environmental scanning and strategic planning is described and scanning activities of three diverse institutions of higher education - a community college, a major urban university, and a land-grant institution - are overviewed and strengths and weaknesses of
each program are identified. A call is made for all institutions of higher education to implement formal scanning programs.
The Necessity of Environmental Scanning Prior To Long-Range Planning Activities at Higher Education Institutions

Much of the current crisis in education has its roots in an inability of colleges to get beyond a "now-oriented" approach to problems within the educational system. It is time for the educational focus to be directed toward anticipating alternative futures since the application of selected perspectives and procedures drawn from the field of futurism offers a powerful means of renewal for the educational enterprise (McMullen, 1985, p. 1)

Strategic Planning by higher education institutions is not just a passing fancy. The strategic management perspective has, to a considerable degree, enveloped the thoughts, attitudes and actions of a significant proportion of today's college and university administrators. Adapted from the business community where it is utilized to help businesses "increase performance through improved effectiveness, efficiency, and flexibility" (Smith, Arnold, & Bizzell, 1988, p. 3) strategic planning is utilized by many colleges and universities as an administrative tool to aid in accomplishing one, several or all of the following; institutional mission definition, goals identification, evaluation of internal strengths and weaknesses, identification of external threats and opportunities, creation and selection of appropriate alternative strategies and post-
planning monitoring and control operations. A smaller minority of institutions effectively integrate strategic planning with futures forecasting and scenario development. It is these institutions which are at the cutting edge of the strategic process and who are poised to recognize early significant environmental change and capitalize on the resulting opportunities while minimizing the impacts of emerging threats.

The Need For Foresight

Imagine the competitive advantage a university would have if it knew which areas of study would be most in demand twenty years from now, the type of research the federal government would be sponsoring fifteen years from now, or the impact of changes in state politics five years from now. The institution that has insight into these areas has a significant advantage over competing institutions who "fly by the seat of their pants". Ellison and Smith (1985) note that in an period of time characterized by a sluggish economy, decreasing student enrollments, an increasing rate of change, proliferating technologies, global competition, and socio-political pressures and challenges it becomes ever more important that institutions engage in a form of strategic planning which focuses on the interaction of the institution with its external environment. Caldwell (1988) calls on institutions of all types to make informed decisions on the basis of key external and internal trends and to evaluate their internal strengths and weaknesses.
in light of external threats and opportunities. In short, he asserts that the best strategic planning is accomplished following futuristic foresight.

Morrison, Renfro, and Boucher (1984) state that information about the future is valuable because it allows us to create a better future than would otherwise occur. Even though our ability to anticipate the future is faulty at best, the insight gained by developing a forecast provides valuable information regarding potential events. But as Morrison and his colleagues suggest, educators build solid reputations based upon strict adherence to traditionally established rules and procedures and futures forecasting, based in large part upon subjective reasoning, often goes against the grain of sound research. How then does an institution implement a strategic planning process which makes informed use of futures research? The answer lies in environmental scanning.

The Role of Environmental Scanning

Environmental scanning is a term which has varying degrees of meaning. In its simplest and most undeveloped form environmental scanning refers to any unsystematic search for information on an emerging trend. Thus when the dean of the college of education sends a graduate assistant to the library to "bring me everything you can dig up on outcomes assessment" the dean is indeed performing an environmental scan. In the context of this paper, however, the term environmental scanning
takes on a more formal meaning - the deliberate and systematic identification of emerging or potential trends or forces which may have a substantial impact on the efficiency or effectiveness of an institution in the years to come. Morrison, et al. (1984, p. 18) see scanning as "a process of screening a large body of information for some particular bit or bits of information that meet certain scanning criteria" and identify the following scanning steps:

1) searching for information resources
2) selecting information resources to scan
3) identifying criteria by which to scan
4) scanning and
5) determining special actions to take on the scan's results.

While numerous methods of implementing scanning programs exist, Morrison and his colleagues note that "the most popular of the formal systems by far is through an in-house, interdisciplinary, high-level committee of four or five members (but no more than 12 or so)" (p. 16). Generally, a scanning taxonomy is developed and the scanning results are logically classified within this structure. Morrison, Renfro, and Boucher (1983) identify four areas which should be scanned. These are: economic developments, technological innovations, social change, and legislative and regulatory developments. A fifth area, activities of competitors, probably deserves
scanning as well. Items identified by the scan and selected as important by the committee are summarized and distributed to key personnel whose work will likely be impacted by the emerging trend or force.

The relationship of environmental scanning with strategic planning is diagrammed below. Environmental scanning is a necessary forerunner to the remainder of the planning process as it aids the planners' external awareness and assists them in positioning their institution in relation to its environment. Note also, however, that the scanning process does not end at this point. Formal scanning activities continue beyond the strategic planning period as an aid in the monitoring and control of the implemented strategic plan. This helps to ensure that significant changes and/or new developments in the environment are identified and their potential impacts are considered. In some cases, events will be significant enough to warrant changes in the strategic plan.

The Benefits of Environmental Scanning

The primary purpose of environmental scanning is to provide key administrators valuable external information regarding both the probability and the potential impact of volatile external trends and forces. This information, acquired prior to identification and selection of a strategic plan of action, is then used to both develop and critique the various strategic alternatives foreseen by the administration. When considered in
The Strategic Planning Process

1. Conduct Formal Environmental Scan
2. Identification of External Threats and Opportunities as Well as Internal Strengths and Weaknesses
3. Institutional Mission and Major Objective Identification
4. Identification, Analysis, and Selection of Strategic Alternatives
5. Implementation of Selected Strategies Alternatives
6. Institutional Performance Monitoring and Control
7. Continuous Environmental Scanning, Reassessment and Strategic Plan Revision as Necessary

Environmental Scanning
light of the institution's internal strengths and weaknesses it is hoped that viable plans of action emerge. Thus, a major benefit of environmental scanning is that it encourages a proactive management style rather than a reactive management style and administrators are provided the opportunity to respond to developing trends before they become critical events.

A second benefit of environmental scanning is the unifying force it can have upon key members of the administration and faculty. As key personnel scan for these trends and forces or receive executive summaries of environmental scans for their thoughts and comments a camaraderie results from the recognition that the future direction of the university is in our hands and that we, as a team, will decide the future direction of our school. This team concept, in which each player has access to the entire body of knowledge shaping the school's direction, replaces the less effective planning model in which one office, or worse yet one individual, is responsible for developing the strategic plan which is then filed on a shelf in the president's office.

A third benefit of a formal environmental scanning program is that it constitutes an inexpensive, yet effective, form of professional development which serves the institution's interest in maintaining a state-of-the-art leadership team aware of current research, viewpoints, trends and activities which may be of value in assisting the administrator in solving current
problems and/or more efficiently carrying out his/her duties. A primary goal of professional development is to keep leadership current and up-to-date with regards to the field of their expertise as well as higher education in general. By having administrators focus a majority of their scanning efforts on their area of expertise this goal is achieved. Additionally, the on-going dialogue between the various scanners regarding their findings provides administrators with creative insights into their fields and challenges them to analyze their attitudes and policies in light of the larger educational picture.

The Costs of Environmental Scanning

Having identified the benefits of environmental scanning, what then are the costs? The financial resources required to implement a scanning program would seem to be minimal. Key personnel will probably already be receiving most of the various journals and newspapers identified for scanning. An existing office, such as the department of institutional research, can coordinate the search, and the addition of one secretary or a few graduate assistants (think of the educational value for GA’s) to maintain the files and develop summaries of the articles are all that is required.

It would seem reasonable to expect a broader distribution of power to exist at an institution using environmental scanning. As key personnel contribute to the scanning database opinions will form, and these opinions will be marketed to
others with the result being a feeling of empowerment and control not found in institutions whose chief executive officer calls most of the major shots with other officials acting in, at best, an advisory capacity. This result is likely to be viewed as a cost only in the eyes of those who must make sacrifices to the "new management".

Third, it can be envisioned that the burden of anticipating the future and developing long-range plans to capitalize on the likely state of the future environment may add an additional stress factor to those at the decision-making level. This stress is a result of the recognition of increased responsibility for the future of the school as well as the realization that key decisions are being made upon information containing a large element of uncertainty. This additional stress, however, may be partly or even completely mitigated by the success of strategic planning. One would expect fewer critical situations needing immediate attention as a result of foresight and the fire-fighting role of management is one of the managerial roles which creates great stress. Additionally, a structured method of identifying future trends and collecting information on those trends provides a database which can offer comfort to those making a decision. Administrators may be able to reduce the pressure by recognizing that, even though uncertainty exists, they have made as informed a decision as possible.
Finally, faculty and administration who criticize the methodology of scanning as unscientific will come to see the process as more than just a search for the truth. They will come to see environmental scanning as a procedure for enhancing the value of the institution and for awakening it to the realities of its existence in an oftentimes hostile environment. In a sense, they will come to see it as a "review of the literature" which allows hypothesis formation around the question of "How do we make this institution a better institution and one that is better able to live up to the expectations of its constituencies?".

Summing up, it seems apparent that the benefits of an environmental scanning program far outweigh the associated costs. In a world where external forces arguably have a greater impact on the success or failure of an institution to achieve its long-range goals than do internal forces, strategic planning without sufficient attention to the identification and consideration of emerging trends and forces leaves much to be desired. Environmental scanning, for reasons previously identified, is the most appropriate way to encourage this proactive style of administration and therefore it is strongly recommended that all institutions of higher education implement a formal environmental scanning program. The remainder of this paper considers three institutions engaged in differing forms of environmental scanning and identifies the strengths and
To illustrate the variety of scanning methodologies currently in existence in higher education, programs at three diverse institutions have been selected for review. Programs at a community college, a land-grant institution and a major urban university, have been chosen so that the application of environmental scanning at different types of higher educational institutions becomes apparent. Strengths and weaknesses of each program are pointed out, however, it is noted that any environmental scanning program is an improvement over not having such a program.

DuPage County Community College

In April of 1989, the Futures Committee of DuPage County Community College published the results of a project designed to give direction to the institution as the twenty-first century approaches (Futures Committee of College of DuPage, 1989). This committee was created by the college president, made up of 26 key administrators, faculty, and students who were selected from 70 applicants, and charged to, among other things:

1 - Identify the college's strengths and emerging opportunities,

2 - Develop a vision statement on where the college should be by the year 2000, and,

3 - Make recommendations consistent with the vision for
Environmental scanning was chosen as the method by which the committee would seek to identify its emerging opportunities. The committee sought information about four areas of their external environment. These were Demographic/Land use, Business/Industry, Government, and Education. An environmental workshop lasting three hours was held during which key issues within each of these areas were identified. An additional outcome of this workshop was the decision to utilize the expertise of special interest groups and to obtain their ideas as to external opportunities available for DuPage Community College. Such groups included the College's Board of Trustees, alumni, and community business leaders. Following the workshop, a two-day retreat was held during which the ideas developed during the workshop were polished and a preliminary school vision was created. Following this first retreat input was solicited from the special interest groups identified during the workshop. A second retreat was then scheduled and the process of finalizing the vision statement was begun.

The positives to note from this attempt at environmental scanning are numerous and include:

- Strong presidential support resulting in a feeling of empowerment by the Futures Committee,
- A committee composed primarily of high level administrators and faculty who are in the best positions...
to utilize the findings of the scan,
- A scanning workshop designed to introduce committee members to environmental scanning, its role, and the contribution it can make to effective planning,
- The use of Special interest groups to gain a broader perspective as well as provide the opportunity for additional expertise which can more accurately interpret potential opportunities,
- A rather large scanning committee (26 persons) which allows for both a variety of perspectives regarding issues as well as focused attention by several individuals on a single topic.

Some negative aspects of the scan include:
- The scan was an isolated event. Thus the college loses the ability to continually monitor changes in the opportunities identified as well as to identify newly emerging opportunities,
- The scan focused solely on college strengths and external opportunities. No attention was paid to identifying institutional weaknesses and emerging threats which may undermine the effectiveness of the institution.

The University of Georgia

The Public Information Office at the University of Georgia publishes Georgia Morning on a daily basis (Handy, July 1990). The publication is prepared by two work/study undergraduate
students who have been charged with scanning four local and regional newspapers and clipping every article dealing with higher education, the University of Georgia, or its employees. This they do on a daily basis between the hours of 5:30 am and 9:00 am. The articles are given to the Director of Public Information who prioritizes them, has them copied, and sees that they are distributed to 48 key administrators by 9:30 am each morning.

The primary positive associated with this scan is the timeliness of the information provided. Each day, administrators can track the development of an issue, or issues, which may have implications for the performance of their job duties. Additional positive aspects include:

- Cost efficiency - The cost of the program is minimal as work/study students generate the document,
- Wide distribution - 48 key administrators receive the document each day, thus increasing the probability that all areas impacted by an issue have an opportunity to keep up with it,
- Good coverage of regional developments in higher education as reported by the press.

Negative aspects of the scan include:

- Exposure to bias - By allowing one individual to prioritize the articles important issues may be deemed unworthy on the basis of one opinion,
- **Lack of National Focus** - Emphasis on regional newspapers limits ability to identify significant national trends and issues.

- **Lack of source breadth** - By focusing solely on newsprint, valuable data from other sources is missed.

- **Lack of formal feedback** - Failure to have formal feedback channels limits opportunities for improving the publication, suppresses dialogue regarding significance of the issues, and encourages disregard for the publication.

- **Lack of Presidential Support** - As a publication of the Public Information Office, the publication lacks the presidential support valuable in giving the scanning program an "air of authority".

- **Low-level scanners** - The use of student workers as scanners may be inexpensive, but it gives administrators an incentive to gloss over the material without digesting its importance. Were the administrators performing the scan, they would spend much more time evaluating the impacts of their findings.

**The University of Akron**

One of the most formalized college-based scanning programs in the nation is the Ohio Issues Scanning Program organized by the Center for Urban Studies and the Institute for Futures Studies and Research at the University of Akron (Handy, June
One of approximately 15 such state-supported scanning programs contributing to the State Scanning Network, the Ohio Issues Scanning Program is unique in that it is the only member of the State Scanning Network operated out of a university rather than a governor's office. Members of the network come from the University, the State Government, and major Ohio-based profit and non-profit institutions. The Scanning Network meets bimonthly to identify, discuss and select emerging issues and trends expected to impact Ohio policy makers. These issues are researched and a publication, The Ohio Foresight, is prepared and distributed to over 1000 public and private policy makers. The Ohio Foresight includes articles summarizing the issues deemed appropriate by the Scanning Network to provide guidance in developing effective policy. As a supplement to the Ohio Scanning Network the Program conducts a statewide roundtable discussion series around emerging issues identified by the scanning activities.

Members of the network are to have a prepared list of scans to nominate during the issue identification stage of each meeting. If the scan is perceived by the network to have significant ramifications for public policy it will be included in some detail in a bimonthly report. Generally, 4-6 such scans are identified bimonthly. The proponent(s) of an accepted scan may then be asked to construct the lead sentence around which the network staff will write the findings of their research.
In addition to scans developed within the network, scans produced by one of the other state-wide scanning programs are reviewed and may be included in the bimonthly report.

Numerous positives can be extracted from the scanning program's procedures including:

- The support of the state governor who lends a "degree of value" to the network's efforts,
- The Network's charge to members to identify important scans, thus insuring active participation of high level policy-makers in the program and encouraging reflective thought about their findings,
- Frequent meetings (bimonthly) which are efficiently organized and allow for continued monitoring of emerging trends and issues,
- The use of roundtable discussions to generate feedback from non-members of the network which can be used both to make others more aware of the program as well as to continuously refine the scanning technique,
- The network seeks to identify and use valuable scans performed by other scanning organizations rather than reinventing the wheel.

While the scan is intended for a broader audience than University of Akron constituencies, some negatives can be considered:

- No procedural connection exists between the scan results
and policy planning. That is, it is hoped officials use the information, but it is not required that they defend their decisions in light of the scans,

- The procedure is somewhat expensive and requires funding from outside agencies and foundations,
- Scans are made available to university officials on request. Scans on issues of relevance to specific areas of the institution are not automatically forwarded to those areas. There are probably areas within the university which might benefit but are unaware of the scans' existence.

Conclusion and Recommendations

As evidenced by the above selected programs, environmental scanning can take on a variety of methodological forms. While the exact format of an effective scanning program would be inappropriate several well founded suggestions may be made:

1) visible support of the Chief Executive Officer is needed,
2) active participation of key administrative personnel is desirable,
3) meeting frequency should be sufficient to maintain interest in the program,
4) results of scanning activities should be made available to as wide an audience as possible and,
5) the scanning program should be formally linked to the
strategic planning activities of the institution. Administrative attention which focuses on the development of a scanning program which incorporates all of the above suggestions is likely to result in a highly effective program which not only aids the strategic planning process but also contributes to the development and morale of professional faculty and staff as well as fosters the development of a community of purpose within the institution.
References


Handy, T. (1990, June). [Telephone interview with Jan Grell, Project Director of Ohio Issues Scanning Program at the University of Akron].

Handy, T. (1990, July). [Telephone interview with Tom Jackson, Director of Public Information at the University of Georgia].


Appendix 16

END

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