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ABSTRACT

The study surveyed 134 institutions to determine if significant differences existed between public research and doctorate-granting universities concerning: (1) the most important external environmental areas to scan; and (2) the scanning activities that provide the most information for planning processes. A total of 105 responses (78%) was received, composed of 60 research and 45 doctorate-granting universities. While it was found that strategic planning is a major topic on university campuses today, environmental scanning is presently implemented at barely over half of public research and doctorate-granting institutions. No significant difference was found in the amount of time spent scanning between research institutions and doctorate-granting institutions. Also, there was no significant difference found to exist between public research and doctorate-granting institutions as to which areas of the environment are important to scan, whether formally or informally. Although not significant, informal scanners at doctorate-granting institutions spend a larger percentage of time scanning the educational/competitive organizations area than do their counterparts at research institutions. Additionally, there was no correlation between the length of time universities have employed environmental scanning and their satisfaction with the process. Currently, the dissemination of environmental scanning information at public research and doctorate-granting universities is low. The survey form is appended. The document contains 32 references. (GLR)

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Environmental Scanning Activities at Public Research and Doctorate-Granting Universities

Introduction

On the field of warfare, radar plays an important role in formulating the strategies used to deal with adversaries. If an enemy vessel appears on the outer edges of a radar screen, the commanding officer has time to plan how this challenge will be encountered. Is the vessel one to fear and defend against or is it one to confront in a surprise attack? Environmental scanning is the radar or early warning system for institutional commanders and planners. It searches an institution's external political, social, and economic environment to sense for the new and unexpected that might impact upon the institution's future.

Until recently the process of environmental scanning has not been a formal part of university planning. A reason for this involves the forms of planning that universities have employed. Methods of planning have gone through several stages in the course of university development in the United States, most of which have concentrated on the inner operational needs of the institution. There has been an unstated rule and tradition that institutions of higher education are sufficient unto themselves (Green, 1979;

Keller, 1983). According to Peterson (1986), little conscious, formalized planning, as we know it today, occurred prior to World War II. A process of change that was entrepreneurial in nature was employed to create new types of institutions to fit a new need or demand. However, in the tradition mentioned above, "once founded, continuity becomes the dynamic of each new institutional type" (Peterson, 1986, p. 7).

In the years following World War II, planning on United States campuses went from an interior focus to the more recent external focus (Bollinger, 1987; Cope, 1981b; Groff, 1981; Morrison, Renfro, & Boucher, 1984; Norris & Poulton, 1987; Peterson, 1986). Norris and Poulton (1987, pp. 31-32) identify four different stages of planning in higher education, "the age of authority" (1950s), "the age of quantitative techniques" (1960s), and "the age of pragmatic application" (1970s), deal with the institution's internal factors (pp. 28-31). It is not until the fourth stage of planning, identified as "the age of strategic redirection" (1980s), that an external orientation is given to planning.

Much of the information concerning planning that colleges and universities have adapted has come from such disciplines as management, political science, organizational behavior, and public administration (Norris & Poulton, 1987). Strategic planning, a process from management, has increasingly become popular in the arena of university planning (Cope, 1981b; Green, 1979; Guertin, 1987; Keller, 1983; Peterson, 1986). In a very broad sense, the major difference between former methods of planning employed in

institutions of higher education and strategic planning is the latter's emphasis on the external environment.

The process of external scanning has been written about in the business world since the 1960s (Aguilar, 1967; Terreberry, 1968). According to Norris and Poulton, environmental scanning as a planning activity in higher education probably had its debut in the 1980s (1987). One of the most ardent supporters of environmental scanning in higher education, in the form of articles and seminars, is James L. Morrison at the University of North Carolina. As more and more institutions adapt and increase strategic planning activities, the need for systematic methods of external scanning increases (Jain, 1984). An increase in the amount of literature devoted to strategic planning in higher education (Keinath, 1985/1986) would prompt one to believe that the process has become more prevalent on today's campuses. Have systematic methods of external scanning increased as well? In 1988, Keller found that while many universities are adapting business strategic practices successfully, a major problem with university planning is that administrators have not developed effective mechanisms for evaluating the external environment.

> We still haven't found a way to track external environments the way we employ institutional research for monitoring the inside. We haven't committed money or talent to the task of doing first-rate assessments of our society and of the new imperatives for higher learning so that universities can adjust to changes more promptly and reach out to new opportunities. (Keller, 1988, p. 5)

A problem Jonsen (1986) reported was while institutions may have environmental scanning activities in place, such as those employed by the admissions offices to examine demographics or development offices to examine philanthropic issues, there has been a failure to disseminate this information for general planning purposes. Jain (1984) also expressed this concern and felt that for best results, scanning done on the larger scale for the whole corporation should be coordinated with that done on the departmental level. A "close liaison must be maintained between the two levels so that each may reinforce the scanning effort of the other" (Jain, 1984, p. 127).

Purposes and Procedures of the Study

The purpose of this study was to determine if significant differences existed between public research and doctorate-granting universities concerning: 1. the most important external environmental areas to scan; and 2. the scanning activities that provide the most information for planning processes. The author constructed an attitudinal survey instrument, based upon information from a review of the literature and questionnaires used in previous studies, to identify: 1. the relationship between the numbers of years that external scanning activities have occurred on public university campuses and satisfaction with the process; 2. the external environmental areas public university planners consider important to scan; 3. the environmental scanning activities that provide the most information for planning processes at public universities; and 4. the relationship of disseminating

scanning information to the perceived satisfaction with external scanning (see Appendix A).

The content of the instrument was validated by asking three experts in the field to evaluate it according to the pertinence of the questions to environmental scanning and whether or not additions or changes should be made to the instrument. They were also asked to indicate whether the sub-categories were correctly assigned to the major headings of the taxonomy used in the questionnaire. The questionnaire was adapted to incorporate their recommendations.

The questionnaire was divided into two sections. The purpose of the first section was to gather information concerning the institution and its formal scanning activities, and the planner's level of satisfaction with the institution's scanning activities. Formal scanning activities were identified as either one or both of the following: 1. the activities of institution-based groups, committees, or individuals that had been charged with the task of looking at the institution's external environment to determine what issues, trends, and events may provide threats or opportunities for the institution; 2. the process of obtaining information from off-campus environmental scanning units such as those in operation at local or national businesses.

Satisfaction was used as an indicator of the effectiveness of the scanning process based upon the study done by Ramanujam, Venkatraman, and Camillus (1986) because "satisfaction with a system is likely to reflect fulfillment of objectives" (p. 353).

The second section of the instrument dealt with the environmental a 'as that are scanned. The six categories of environmental areas to be scanned (demographic, economic, political, educational/competitive organizations, technological, and social and cultural) were based upon Jonsen's (1986) taxonomy. Jonsen's taxonomy was chosen because his taxonomy has been suggested for scanners in higher education (Clagett, 1988-1989 & 1989). Although the division of the categories of environmental areas varies, the basic content and sub-categories of the taxonomies for suggested scanning have been similar in the higher education literature (Cope, 1981a & 1981b; Green, 1979; Groff, 1981 & 1986; Renfro & Morrison, 1983; Shirley, 1988). The sub-categories of the six environmental areas, as they appeared on the questionnaire, are found in Table 1.

To ascertain the importance scanners placed on the listed environmental area categories, a technique used by Kefalas (1971) was employed. Kefalas used the amount of time a manager spent on the acquisition of a factor of external information to determine its relative importance. Kefalas asked participants in the study to ndicate the amount of time that was spent each day in external scanning activities and the percentage of this time allocated to the different sectors of the external environment. The present study asked for the amount of time spent each week in external scanning activities instead of each day.

The population was comprised of university administrators identified as the directors of their institutions' planning activities. The targeted institutions were limited to public institutions included under the following Carnegie classifications:

1. Research Universities I -- These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree, and give high priority to research. They receive annually at least $33.5 million in federal support and award at least 50 Ph.D. degrees each year.
2. Research Universities II -- These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree, and give high priority to research. They receive annually between $12.5 million and $33.5 million in federal support for research and development and award at least 50 Ph.D. degrees each year.
3. Doctorate-Granting Universities I -- In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award at least 40 Ph.D. degrees annually in five or more academic disciplines.
4. Doctorate-Granting Universities II -- In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award annually 20 or more Ph.D. degrees in at least one discipline or 10 or

more Ph.D. degrees in three or more disciplines. (The Carnegie Foundation for the Advancement of Teaching, 1987, p. 7)

For this study, the four classifications above were placed into two groups, public research universities (1. and 2.) and doctorate-granting universities (3. and 4.). Public research universities and public doctorate-granting universities were selected due to the author's affiliation with the latter and because of the increasing impetus for doctorate-granting institutions to become research universities. The study was limited to public institutions due to the fact that they have a common task environment or governance control (Glover & Mills, 1989).

There are 134 schools (The Carnegie Foundation for the Advancement of Teaching, 1987) that fit the listing of categories above, seventy-one public research universities and sixty-three public doctorate-granting universities. Questionnaires were sent to the financial officer of each of these schools. These officers were identified through the HEP Higher Education Directory (1990) and compared against a membership listing of the National Association of College and University Business Officers (NACUBO). The financial officer was asked to forward the questionnaire to the person in charge of comprehensive planning at their institution, the overseer and coordinator of all planning activities. The random selection of the entire population was dependent upon the responses returned.

A Likert scale of one through seven (low to high) was used in the instrument to measure levels of importance, dependence, satisfaction and criticalness where applicable.

One-way analysis of variance (ANOVA), using the Statistical Package for the Social Sciences (SPSS^{x}), was performed on the collected data to determine if there were significant differences between research and doctorate-granting universities. Product-moment correlation (SPSS^{x}) and point-biserial correlation (International Mathmatical and Statistical Library (IMSL), Version 10, Fortran) were performed to determine relationships. Significance for all tests was determined at the .05 level. If there were any questions concerning the tests, appropriate post hoc tests were performed.

Results

General

A total of 105 responses (78 percent) was received, sixty (57 percent) research and forty-five (43 percent) doctorate-granting institutions. Of this number, forty-two (40 percent) stated that they used formal, institution-based scanning while thirty-six (34 percent) stated that external sources of scanning were employed. By isolating the number of participants who employed institution-based and/or external sources of scanning and therefore were considered formal scanners, the total number of formal scanners was found to be fifty-four (51 percent). Many of the comments written on the questionnaire indicated that formal environmental scanning was a future goal or that informal scanning was currently occurring. For example, one respondent indicated that substantial, informal, individual scanning took place continuously while another stated that scanning was a periodic, somewhat informal activity.

Most respondents volunteered information concerning the importance of areas to scan whether or not formal scanning was occurring. Because of this, the decision was made to conduct separate tests on those who employed formal methods (institution-based and/or external sources of scanning) and those who did not, where applicable. For clarity, those who said they were employing formal institution-based and/or external sources for scanning are called "formal scanners" while those who answered scanning questions regarding areas important to scan (questions 15. 16. and 17.) but did not indicate use of formal methods are considered "informal scanners." "Informal scanning is, most simplistically, paying attention to what is going on around oneself in relation to a specific activity" (Canady, 1989/1990, p. 42).

Years Scanning

When correlating the number of years that formal scanning had occurred with the rate of satisfaction, no systematic relationship ($r = .005$) was found.

The average number of years that universities had been employing formal scanning was six while the greatest length of time reported was twenty. The majority stated that they had been using formal scanning techniques ten years or less. The mean of the satisfaction level was 3.83, just below the "moderate satisfaction" level on the Likert scale of 1 (low) to 7 (high).

Areas Important to Scan

Forty-one respondents provided information on the number of hours spent in formal scanning each week. The average amount spent was seventeen, with the majority (68 percent) spending ten hours or

less. A significant difference was not found between the amount of time research institutions and doctorate-granting institutions spent on scanning. The mean of the amount of time spent by formal scanners (twenty-seven) was twenty-two hours and by informal scanners (fourteen), seven hours.

Forty-eight respondents (46 percent), thirty-five formal scanners (73 percent) and thirteen informal (27 percent), answered the section concerning the percentage of time spent each week scanning the areas indicated. The means of percentages, arranged in descending order, were demographic (29), followed by economic issues (23), education/competitive organizations (13), technological issues (11) and social issues (8). When the means of percentages for formal and informal scanners were examined separately, the order of percentages for formal scanners was demographic (30), economic (22), political (18), education/competitive organizations (14), technological (11) and social (9). The order of means of percentages for informal scanners was political (28), economic (25), demographic (25), educational/competitive organizations (12), technological (12) and social (7). The results of one-way analysis of variance showed no significant difference between research and doctorate-granting universities in the percentages of time spent scanning each of the above areas. However, there was one F value that was close to significance, occurring only in the group identified as informal scanners. This occurred when the research/doctorate-granting means of percentages for the educational/competitive organizations area were compared. It was determined that the doctorate-granting

universities had the higher mean after a Hartley test indicated homogeneity among variances (F_{max} (10, 2) = 2.977, $p < .05$).

In examining the data concerning how important each of the six categories were to scan, it was the intent of the study to determine whether or not planners at public research and doctorate-granting institutions considered different areas of the environment important to scan. A one-way analysis of variance was performed on the means of the rankings given to sub-categories contained under the six main environmental areas of the taxonomy discussed above. All tests showed, for both the formal and informal scanning groups, that there was no significant difference between the means of the research institutions and the doctorate-granting institutions.

The following observations were made when examining the means of the ratings of criticalness given to each of the environmental areas. Arranged in descending order, the means given by formal scanners were technological (4.99), followed by political (4.96), economic 4.69), demographic (4.66), social (4.47), and educational/competitive organizations (4.03). The means for informal scanners were in the same order with the following means: technological (5.06), political (4.83), economic (4.41), demographics (4.29), social (4.24), and education/competitive organizations (3.74).

When the data for formal scanners and informal scanners was combined (eighty-one), the highest ranked sub-category for each area was as follows: 1. demographic, "demographics in institution's geographic area;" 2. economic, "revenues of local, state and federal governments;" 3. political, "state regulatory legislation;"

4. educational/competitive organizations, "other institutions of higher education in geographic area;" 5. technological, "changes in information technology;" and 6. social, "the perceived value of education."

Environmental Scanning Activities

When asked for the ranking of dependency of the institution's planning activities upon scanning information obtained from institution-based environmental scanning activities, thirty-six formal scanners (66 percent) indicated that they were slightly more than moderately dependent (4.75). Twenty-five (69 percent) of these institutions were research institutions, while eleven (31 percent) were doctorate-granting. When asked the same question regarding information obtained from external scanning sources, thirty-three institutions (61 percent), twenty-five research (76 percent), eight doctorate-granting (24 percent), relayed that their planning was slightly less than moderately (3.36) dependent on this information. There was no significant difference between research and doctorate-granting institutions on the dependency of their planning on information from institution-based and external scanning sources.

The types of institution-based formal scanning units included formal, institution-wide scanning units (twenty-eight), formal college/departmental scanning units (eleven); formal central administration scanning units (twenty-one); and individuals charged with formal environmental scanning responsibilities (twenty-four). The most frequently employed institution-wide unit (eight) was comprised of faculty, academic department/school heads, academic

deans, operational department heads, central administrative personnel, and support staff. The most frequently listed college/departmental scanning unit (four) was comprised of faculty, academic department/school heads, and academic deans, while the most frequently used unit (eight) at the formal central administration level was comprised of central administrative personnel only. See Table 2. for a complete breakdown of institution-based units. Under the category "other" participants, one institution reported that students participated in their institution-wide and college/departmental scanning units.

When asked what methods of environmental scanning were used for institution-based scanning, the most frequently indicated (twenty) were consensus development techniques used to determine the issues, trends, and events personnel considered threats and opportunities for their institution. Fourteen formal scanners reported that their institutions assigned participants sources to scan for information pertinent to the institution. Abstracts were then prepared for review by a planning committee. Five stated that seminars were held to discuss environmental issues, trends and events in light of the impacts they may have on the institution. Among thirteen other methods indicated, one institution reported that a consultant was hired to help with the preparation of an environmental scan as a basis for subsequent seminars. Another method reported was a session held each year as part of the annual professional development institute for faculty.

Institutions that obtained information from off-campus environmental scanning units indicated that their sources included the United Way of America Human Care Network (ten), the American Council of Life Insurance (six), environmental scanning activities with other colleges/universities (nineteen), scanning of local businesses (ten), scanning of national businesses (five), and twenty other sources which included the institutions' governing boards, state agencies/governments, real estate companies, and local and national banks.

Following questions concerning both the institution-based environmental scanning activities and external sources for scanning information, planners were asked to indicate the use of scanning information for planning activities. Of those responding, the largest number of formal scanners (fifty-one) stated that they used this information to identify strategic issues and for program development. Fifty used scanning information in the preparation of strategic long-range plans. Forty-nine indicated that they used scanning information for solving specific problems while forty-eight used it for creative thinking. Three completed the "other" category, stating that scanning information was used for budget planning and for the development of alternative scenarios of the future. Participants were asked to what extent environmental scanning information was used for each of the above categories (identifying strategic issues, program development, preparation of strategic long-range plans, solving specific problems, creative thinking, and "other") on a scale of one (little) to seven (greatly). The means of the extent of use of environmental

scanning for these categories ranged from 4.061 to 5.333, slightly above mid-point ("moderately") on the scale.

Dissemination of Scanning Information

The results of the study reported in this paper show that at most only thirty-three institutions (31 percent) regularly disseminate information in some form to their faculty, administrators and/or staff. However, respondents who indicated that regular dissemination did not occur did note that annual or biennial information was distributed either as environmental scanning information or as part of the institutional plan. Another respondent replied that it was something they were planning to do in the future. Fourteen institutions (13 percent) noted that environmental scanning information was entered into a computer data base. Of these, seven reported that faculty, administrators, and/or staff had access to this computer data base. However, several of the remaining seven stated that information from the data base was provided to faculty, administrators, and/or staff upon request.

When a point-biserial correlation between dissemination of information and satisfaction with the scanning process was performed on the data from formal scanners (fifty-two), a positive point-biserial correlation was found (+.2815). This correlation was significant at the .05 level.

Discussion

The results of this study show that while strategic planning is a major topic on university campuses today, one of its major components, environmental scanning, is presently implemented at barely over half of public research and doctorate-granting institutions. However, there were indications that there is a great deal of interest in the process, as evidenced in the high number of requests (ninety-one, 87 percent) for abstracts of the study. The fact that informal environmental scanning is occurring shows that the external environment is a concern of university planners. In addition, the mean of the amount of time spent by formal scanners on environmental scanning each week was twenty-two hours. Kefalas (1971) found that the average amount of time spent in scanning each day was 1.82 hours or one-fifth of a normal working day consisting of eight hours. If one considers a normal working week to consist of forty hours, the formal university scanners in this study devoted over one-half (55 percent) of their normal working week to scanning. This would indicate that environmental scanning is considered an important part of university planning if one were to equate time with money.

This study has shown that there is no correlation between the length of time universities have employed environmental scanning and their satifaction with the process. However, the mean of the formal scanners' level of satisfaction, on a Likert scale of one (low) to seven (high), was just below the "moderate satisfaction" level. As mentioned above, Ramanujam, Venkatraman and Camillus (1986) stated that satisfaction is "likely to reflect the

fulfillment of objectives" (p. 352) and can therefore be used as an indicator of effectiveness. Based on the data from formal scanners at public research and doctorate-granting universities, one can consider environmental scanning activities to be moderately effective, as perceived by the university planners. Satisfaction (i.e., effectiveness) does not appear to be related to length of time environmental scanning has been in place. Therefore, institutions should expect satisfaction with the process soon after implementation.

Of interest to note is the difference between the rankings of the six areas of environmental scanning when examined for their criticalness and the percentage of time spent in scanning these areas. It appears that for formal scanners, the top two areas according to their criticalness were technological and political while the top two according to time spent were demographic and economic. This would appear to indicate that what is considered important to scan is put aside for the more immediate concerns of population and funding. In addition, when looking at the means of criticalness, all of the means were between four and five, slightly above "moderately critical," on the Likert scale of one ("not crtitical") to seven ("extremely critical"). This suggests that all of the areas warrant attention by university planners.

Although not significant, it was found that informal scanners at doctorate-granting institutions spend a larger percentage of time scanning the educational/competitive organizations area than do their counterparts at research institutions. This may reflect the major emphasis at doctorate-granting institutions to observe research institutions for emulation.

Scanners use institution-based environmental scanning units more frequently than they do external sources for scanning information. This may relate to the fact that the majority of environmental scanning literature in higher education relates to institution-based scanning units (Hearn & Heydinger, 1985; Morrison, 1985, 1986, & 1987; Morrison & Mecca, 1989). It may also be because planners recognize the fact that members of the academic community are more cognizant of what will affect their institutions than are outside organizations. Still another reason may be that planners are unaware of the established scanning networks of businesses or feel that their information is not applicable to universities. Hesse (1987) found that up to 80 percent of information from the United Way of America Human Care Network and the American Council of Life Insurance Underwriters scanning programs was applicable to her university's concerns.

Scanning information is used for planning activities such as identifying strategic issues, program development, preparing strategic long-range plans, solving specific problems and for creative thinking. One respondent indicated that scanning information is used for budget planning. The means of the extent of use of environmental scanning for these categories were slightly

above the "moderately" level on the Likert scale of one ("little") to seven ("greatly"), indicating that scanning is considered a tool in university planning activities.

This study found that when environmetnal scanning information is disseminated, satisfaction increases with the environmental scanning process. This supports Clagett's (1989) statement that "the most thorough environmental scan is of little value if decision makers are not made aware of its findings. Effective dissemination of scanning results is a key part of the process" (p. 27). If institutions spend the time and money to implement a scanning system, it is necessary to disseminate the resultant information so the whole campus community can use this information in its planning activities. Currently, the dissemination of environmental scanning information at public research and doctorate-granting universities is low.

Table 1. Environmental Scanning Areas and Sub-Categories

Demographic

a. demographics in institution's geographic area

b. socioeconomic composition of geographic area

c. characteristics of college-going population in geographic area

d. ethnic and racial make-up nationally

e. characteristics of adult population nationally

Economic

a. economic condition of institution's geographic area

b. economic condition nationally

c. revenues of local, state and federal governments

d. manpower situation in institution's immediate area

e. manpower situation nationally

Political

a. local political dynamics

b. political dynamics of state

c. national political dynamics

d. state regulatory legislation

e. national regulatory legislation

Educational/Competitive Organizations

a. K-12 schools in geographic area

b. other institutions of higher education in geographic area

c. other institutions of higher education in nation

d. other educational providers such as corporations in geographic area

e. other educational providers such as corporations nationally

Technological

a. progress towards the information society

b. changes in information technology

c. specialized manpower needs

d. computers, their use and training needs

e. development of technological networks between organizations

Social

a. the perceived value of education

b. values in nation

c. values in institution's immediate area

d. substance abuse

e. health issues

Table 2. Composition of Institution-Based Scanning Units

Formal Institution-Wide Scanning Unit Comprised Of:	Number of Occurrences															
	8	3	2	2	1	1	1	1	1	1	1	1	1	1	1	*1
faculty	x		x	x	x	x	x	x	x	x	x	x		x		
academic department/school heads	x			x		x		x		x						
academic deans	x		x	x						x	x					
operational department heads	x			x			x	x					x		x	
central administrative personnel	x	x	x	x	x	x		x	x	x			x			
support staff	x			x	x	x	x			x			x			x
other				x			x	x	x							

Formal College/Departmental Scanning Unit Comprised Of:	Number of Occurrences						
	4	2	1	1	1	1	*1
faculty	x	x	x	x	x		
academic department/school heads	x	x	x	x	x		
academic deans	x	x	x	x	x		
operational department heads		x	x			x	
support staff		x		x	x	x	
other				x			

Formal Central Administration Scanning Unit Comprised Of:	Number of Occurrences 8	4	3	2	1	1	*1
operational department heads			x	x			
central administrative personnel	x	x	x	x	x		
support staff		x	x				
other					x	x	

*respondent did not indicate participants in unit.

Frequency Distribution of Title and Area
of Planner Completing Questionnaire

	Number	Percentage
Title		
Vice President	16	15.24%
Vice Chancellor	5	4.76%
Vice Provost	2	1.90%
Associate Vice President	6	5.71%
Associate Vice Chancellor	3	2.86%
Director	36	34.29%
Assistant to President, Vice President, or Assistant Vice Chancellor	10	9.52%
No Title Given	23	21.91%
No Title or Area	4	3.81%
Total	105	100.00%
Area		
Planning	14	13.33%
Planning and Budget	11	10.48%
Planning and Other	11	10.48%
Planning and Institutional Research	9	8.57%
Institutional Research	12	11.43%
Budget	3	2.86%
Academic Affairs	6	5.71%
Facility Planning	4	3.81%
Administration	12	11.43%
No Area Given or Other	23	21.90%
Total	105	100.00%

Means and Standard Deviations for Importance of Scanning Structure's Contribution to Institution's Scanning Information

Structure	n	Mean	Standard Deviation
Institution-Wide Scanning Unit			
Research	13	5.2308	1.3009
Doctorate-Granting	12	5.5000	.9045
Total	25	5.3600	1.1136
Formal College/Departmental Scanning Unit			
Research	7	5.1429	1.2150
Doctorate-Granting	3	5.0000	.0000
Total	10	5.1000	.9944
Formal Central Administration Scanning Unit			
Research	12	5.5000	.7977
Doctorate-Granting	6	6.0000	.8944
Total	18	5.6667	.8402
Individuals Charged With Formal Scanning Responsibilities			
Research	11	5.0000	1.4832
Doctorate-Granting	4	4.7500	2.0616
Total	15	4.9333	1.5796
Other Structure			
Research	3	5.0000	2.0000
Doctorate-Granting	1	7.0000	.0000
Total	4	5.5000	1.9149
United Way of America Human Care Network			
Research	5	3.0000	1.4142
Doctorate-Granting	4	2.5000	1.7321
Total	9	2.7778	1.4814

American Council of Life Insurance			
Research	2	2.5000	2.1213
Doctorate-Granting	3	2.0000	1.7321
Total	5	2.2000	1.6432
Scanning Activities With Other Colleges/Universities			
Research	11	4.3636	1.1201
Doctorate-Granting	7	4.5714	.5345
Total	18	4.4444	.9218
Scanning of Local Businesses			
Research	5	4.8000	1.3038
Doctorate-Granting	4	4.5000	2.5166
Total	9	4.6667	1.8028
Scanning or National Businesses			
Research	1	4.0000	.0000
Doctorate-Granting	2	3.0000	2.8284
Total	3	3.3333	2.0817
Other			
Research	11	4.6364	1.4334
Doctorate-Granting	5	4.6000	.8944
Total	16	4.6250	1.2583

ENVIRONMENTAL SCANNING ACTIVITIES AT PUBLIC RESEARCH AND DOCTORATE-GRANTING UNIVERSITIES

1. Title of person completing form:_____

2. Which of the Carnegie classifications listed below best describes your institution?

   ____a. Research Universities I -- These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree, and give high priority to research. They receive annually at least $33.5 million in federal support and award at least 50 Ph.D. degrees each year.

   ____b. Research Universities II -- These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree, and give high priority to research. They receive annually between $12.5 million and $33.5 million in federal support for research and development and award at least 50 Ph.D. degrees each year.

   ____c. Doctorate-Granting Universities I -- In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award at least 40 Ph.D. degrees annually in five or more academic disciplines.

   ____d. Doctorate-Granting Universities II -- In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award annually 20 or more Ph.D. degrees in at least one discipline or 10 or more Ph.D. degrees in three or more disciplines. (The Carnegie Foundation for the Advancement of Teaching, 1987, p. 7).

3 Environmental scanning is a process used to look at the institution's external environment to determine what issues, trends, and events may provide threats or opportunities for the university. The process can be compared with radar -- an early warning system which provides a 360° sweep of the environment to sense the new and unexpected which may bring about changes in current trend patterns. There are several ways in which this scanning activity is conducted.

   Some institutions of higher education have formed formal scanning committees or units. Members of these units, administrative personnel and/or faculty, are assigned sources to scan for information that is pertinent to their institution. Abstracts are later discussed in committee.

   Other university environmental scanning includes that done by individuals or central administrative personnel alone. Examples of this would include demographic scanning conducted by the admissions director or scanning for changes concerning trends in giving done by the development officer.

(Question 3 continued)

Please place a check in the USE column by the structure of scanning activity or activities (formal unit or individual) which supplies or supply you with external environmental scanning information for your planning activities.

Under the CIRCLE IMPORTANCE column, please indicate the importance of each employed structure's contribution to your institution's scanning information, on a scale of 1 (none) to 7 (great).

	USE	CIRCLE IMPORTANCE
____a no formal scanning is done (If you check this answer, please go to question 6.)	___	none great
____b. formal institution-wide scanning unit comprised of:	___	1 2 3 4 5 6 7
faculty ____		
academic department/school heads ____		
academic deans ____		
operational department heads ____		
central administrative personnel ____		
support staff ____		
other (please name) _____		none great
____c formal college/departmental scanning unit comprised of:	___	1 2 3 4 5 6 7
faculty ____		
academic department/school heads ____		
academic deans ____		
operational department heads ____		
support staff ____		
other (please name) _____		none great
____d. formal central administration scanning unit comprised of:	___	1 2 3 4 5 6 7
operational department heads ____		
central administrative personnel ____		
support staff ____		
other (please name) _____		

(Question 3. continued)

	USE	CIRCLE IMPORTANCE
		none great
____e. individuals, independent of a unit, charged with formal environmental scanning responsibilities	___	1 2 3 4 5 6 7
faculty member ____		
academic department/school head ____		
academic dean ____		
operational department head ____		
central administrator ____		
support staff member ____		
other (please name) _____		
____f. other structure (please name)		none great
_____	___	1 2 3 4 5 6 7

4. Which of the following describe the methods used in your formal, institution-based environmental scanning activities?

____a. scanning participants are assigned sources to scan for information that is pertinent to the institution. Abstracts are written and submitted to a planning committee for review.

____b. Consensus development techniques are used to obtain the opinions of institution personnel regarding issues, trends, and events that pose threats or opportunities to the university.

____c. Seminars are held involving face-to-face environmental scanning activities. At these seminars, environmental issues, trends and events are discussed in light of the impacts they may have on the institution.

____d. Other activities (please describe) _____

_____ _____

_____

5. To what extent is your institution's planning activities dependent upon scanning information obtained from the above (question 3.) institution-based environmental scanning activities?

no dependency		moderately dependent				extremely dependent
1	2	3	4	5	6	7

6 Some institutions have used information from outside environmental scanning structures developed and maintained by other organizations. These off-campus units provide information which is interpretive in nature, evaluating issues, trends, and events as threats and opportunities for the particular institution. If you are using any of the structures below, please place a check in the USE column by the scanning activity or activities which supplies or supply you with external environmental scanning information for your planning activities.

Under the CIRCLE IMPORTANCE column, please indicate the importance of each employed structure's contribution to your institution's scanning information, on a scale of 1 (none) to 7 (great).

	USE	CIRCLE IMPORTANCE
____a no external environmental scanning unit is used (If you check this answer, please go to question 8.)	___	
		none great
____b United Way of America Human Care Network	___	1 2 3 4 5 6 7
____c American Council of Life Insurance, TAP program	___	1 2 3 4 5 6 7
____d environmental scanning activities with other colleges/universities	___	1 2 3 4 5 6 7
____e scanning of local businesses (please name)		
_____	___	1 2 3 4 5 6 7
____f. scanning units of national businesses (please name)		
_____	___	1 2 3 4 5 6 7
____g other (please name) _____		
_____	___	1 2 3 4 5 6 7

7 To what extent is your institution's planning activities dependent upon scanning information obtained from the above (question 6.) off-campus environmental scanning activities?

no dependency		moderately dependent				extremely dependent
1	2	3	4	5	6	7

8 How many years has information from environmental scanning activities, as described in 3. and/or 6. above, been used for planning on your campus?

_____ years

_____ not applicable

9. To what extent is information obtained from environmental scanning used in the following planning activities?

	little			moderately			greatly
a. creative thinking	1	2	3	4	5	6	7
b. solving specific problems	1	2	3	4	5	6	7
c. identifying strategic issues	1	2	3	4	5	6	7
d. preparing strategic long-range plans	1	2	3	4	5	6	7
e. program development	1	2	3	4	5	6	7
f. other (please name)							
_____	1	2	3	4	5	6	7

10. Does your institution disseminate environmental scanning information to the following groups in the form of a regular newsletter or memo?

a. administrative personnel _____ yes _____ no

b. faculty _____ yes _____ no

c. staff _____ yes _____ no

11. Is environmental information entered into a computer data base?

_____ yes

_____ no (Please go to question 13.)

12. Do administrative, faculty, and staff personnel have access to this computer data base?

_____ yes

_____ no

13. Does your institution coordinate and disseminate environmental scanning information gathered by individual departments to other administrative, staff, and/or faculty personnel?

_____ yes

_____ no

14. Please circle the number below which most adequately indicates your level of satisfaction with your current environmental scanning activities.

no satisfaction		moderate satisfaction			extreme satisfaction	
1	2	3	4	5	6	7

15. Listed below are representative sub-categories of six major areas in a taxonomy of environmental areas. Please circle the number, on a scale of 1 to 7, that corresponds to the importance that scanning each sub-category for changes in issues, trends, and events has for planning activities at your institution.

	not critical			moderately critical			extremely critical
Demographic							
a. demographics in institution's geographic area	1	2	3	4	5	6	7
b. socioeconomic composition of geographic area	1	2	3	4	5	6	7
c. characteristics of college-going population in geographic area	1	2	3	4	5	6	7
d. ethnic and racial make-up nationally	1	2	3	4	5	6	7
e. characteristics of adult population nationally	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7
Economic							
a. economic condition of institution's geographic area	1	2	3	4	5	6	7
b. economic condition nationally	1	2	3	4	5	6	7
c. revenues of local, state and federal governments	1	2	3	4	5	6	7
d. manpower situation in institution's immediate area	1	2	3	4	5	6	7
e. manpower situation nationally	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7

	not critical			moderately critical			extremely critical
Political							
a. local political dynamics	1	2	3	4	5	6	7
b. political dynamics of state	1	2	3	4	5	6	7
c. national political dynamics	1	2	3	4	5	6	7
d. state regulatory legislation	1	2	3	4	5	6	7
e. national regulatory legislation	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7
Educational/Competitive Organizations							
a. K-12 schools in geographic area	1	2	3	4	5	6	7
b. other institutions of higher education in geographic area	1	2	3	4	5	6	7
c. other institutions of higher education in nation	1	2	3	4	5	6	7
d. other educational providers such as corporations in geographic area	1	2	3	4	5	6	7
e. other educational providers such as corporations nationally	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7
Technological							
a. progress towards the information society	1	2	3	4	5	6	7
b. changes in information technology	1	2	3	4	5	6	7
c. specialized manpower needs	1	2	3	4	5	6	7
d. computers, their use and training needs	1	2	3	4	5	6	7
e. development of technological networks between organizations	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7

Social	not critical			moderately critical			extremely critical
a. the perceived value of education	1	2	3	4	5	6	7
b. values in nation	1	2	3	4	5	6	7
c. values in institution's immediate area	1	2	3	4	5	6	7
d. substance abuse	1	2	3	4	5	6	7
e. health issues	1	2	3	4	5	6	7
f. other (please name) _____	1	2	3	4	5	6	7

16. At your institution, approximately how many total hours are spent by personnel in formal environmental scanning activities each week?

_____ hours

17. Of that amount of time, what percentage is spent scanning each of the categories below:

	%
Demographic	_____
Economic	_____
Political	_____
Educational/Competitive Organizations	_____
Technological	_____
Social and Cultural	_____
Total:	100%

CODE: _____

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