

Using External Environmental Scanning and Forecasting to Improve Strategic Planning

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The effectiveness of community colleges is increasingly dependent on their understanding of the external environment and their capacity to forecast and respond to the changing external landscape. As a result, they need to establish a system to continuously monitor changes in that environment and to identify and weigh the implications of changes on the communities they serve and on the colleges as well. This can be accomplished in part by developing and implementing an external environmental scanning and forecasting activity to identify trends in the external environment and use external trends to develop a strategic plan. This article will explain external environmental scanning and forecasting and discuss its essential role in developing a strategic plan that anticipates and responds to forces of change affecting both community colleges and the communities they serve. Evidence of success includes two case studies of community colleges which used external environmental scanning and forecasting to identify core trends in their respective communities and developed strategic plans to address these forces of change.

The need for strategic planning is often accelerated by the complexity, frequency, and implications of change that originate in the turbulent external environment faced by colleges and the communities they serve. Community colleges in particular are impacted by changes outside the campus and are open and vulnerable to changes from the outside environment in at least two respects. First, the communities and the students served by community colleges reflect the speed, complexity, and uneasiness associated with change, which are manifested by students enrolling in the college for improved and/or new knowledge, skills, and behaviors. Second, the effectiveness of community colleges in matching their program offerings for a skilled workforce and the enhanced quality of life that an educated populace brings to a community is coupled with community expectations that community colleges are positive agents of socialization and change. To function

effectively, community colleges must therefore use external environmental scanning and forecasting techniques to anticipate and respond to change in the external environment.

The purpose of this paper is to provide an introduction to external environmental scanning and forecasting as a basic pre-requisite for successful organizational change and to describe its role in improving a college's strategic planning process and the resulting plan. And while external environmental scanning and forecasting continues to be an important tool for steering the institution on an ongoing basis, this paper looks only at those tools in the context of creating or revising a strategic plan. To illustrate the effectiveness of external environmental scanning and forecasting in shaping a strategic plan, the results of this activity by two colleges are presented and compared to the new vision, mission, and strategic goals they developed.

An Introduction to External Environmental Scanning and Forecasting

The preferred technique used by many organizations to monitor the external environment is to conduct external environmental scanning and forecasting. Brown and Weiner (cited in Morrison & Held, 1989) defined environmental scanning as a “kind of radar to scan the world systematically and signal the new, the unexpected, the major, and the minor.” Coates (1986) maintained that it includes:

- Detecting scientific, technical, economic, social, and political interactions and other elements important to the organization.
- Defining the potential threats or opportunities and the potential changes for the organization caused by those events.
- Promoting a futures orientation in management and staff.
- Alerting management and staff to trends that are converging, diverging, speeding up, slowing down, or interacting.

In short, external environmental scanning and forecasting is “trend spotting.” When used to construct an institution’s strategic plan, it improves the likelihood that the organization will be able to define its preferred future as opposed to reacting to an imposed future. While it is impossible to predict the future with certainty, external environmental scanning and forecasting can, and does, reduce some uncertainty in organizational planning and allows an organization to reduce its vulnerability to undetected change. By providing an organization with an “advanced warning system” for changes, it also provides an opportunity to give an institution a competitive edge. A well written strategic plan, developed by extensively engaged college faculty, staff, and administrators in the external environmental scanning and forecasting process, permits employees throughout the institution to act and react quickly to changing external conditions because they have participated in and understand the external context underlying the strategic plan. A well written plan also can improve the ability of the college to better articulate to its communities how it functions as an

agent of economic and social change and is responsive to the ever changing needs of students and communities. For these benefits alone, there is merit in establishing this activity and using its results to improve community college planning and overall effectiveness.

Types of Changes in the External Environment

External environmental scanners and forecasters distinguish at least four types of changes in the external environment. The first, and arguably the most important, is a *trend*. A trend (Morrison & Held, 1989) is “a statement of a general direction of change—usually gradual, long-term change in the forces shaping the future of an organization, region, nation or society in general.” In the most basic sense, a trend statement indicates a behavior or change in the external environment and its likely future direction. Trends are often rooted in a society’s structure and may or may not be linear in direction. Some trends may be international in dimension while others can be national, regional, or local. Indeed, one of the more important aspects of external environmental scanning and forecasting is determining whether or not, and the extent to which, international and national trends may affect a given jurisdiction or organization.

For planning purposes it is equally important to identify indigenous trends that may go undetected by scanning at broader levels of focus. For example, while demographers state that the elderly population in the US will increase in the future and will largely be composed of non-Hispanic whites, this trend is much more visible and pronounced in many parts of the rural Midwest. And, while hostility between federal and local government levels is not especially widespread in the US, an external environmental scan (Lapin, 2000) reported that in northeast Nevada the local political culture is one of hostility between county government and the federal agency that controls public lands.

Morrison and Held (1989) identified three other changes, all of which are less relevant to include in a strategic plan covering three to five years or longer.

However, these change types should be included in the regular external environmental scanning and forecasting processes. Briefly, the three other change types are:

- *an event*, which is a short-term change, a one-time phenomenon in the external environment.
- *an emerging issue*, defined as a potential controversy that arises out of a trend or event which may require some form of response.
- “*wild cards*” of change that Rockfellow(1994) further defined as an event having a low probability of occurrence but an inordinately high impact if it does occur.

In contrast, trends have some “shelf-life” or permanence to the extent that they will be present over some period of years and have consequences for a community’s or an institution’s future. Therefore, external trends should be a driving force in shaping an institution’s strategic plan. Once a college has identified a set of trends in its external environment and a set of implications for each trend, then it has established critical and necessary information that will allow it to develop or improve its strategic plan.

External Environmental Scanning and Strategic Planning

While the term strategic planning is well known, the literature on this topic, especially in non-profit organizations, is neither extensive nor well developed. Rowley (1997) stated that in regard to strategic planning in higher education, George Keller’s 1983 book, *Academic Strategy*, was among the first to identify the need for strategic planning in colleges and universities, although he did not provide a schema for conducting it. Watkins (1999) stated that Keller maintained that a responsive institution must:

1. pay attention to the world outside its campus and collect better data on trends;
2. think more competitively about its strategic advantage as an educational institution and determine why students should invest their future there;
3. focus on the whole institution through collective thinking;

4. plan from the top down and keep a balanced perspective on the need for appropriate faculty and staff participation and advisory input;
5. legitimize the planning process by linking it with meaningful budget adjustments;
6. practice entrepreneurial/risk-taking tendencies;
7. convert the planning process into strategic decision making; and
8. be mindful of the future by thinking of a number of years ahead.

These points emphasize several important themes in strategic planning, especially the importance of researching the external environment, developing a strategic plan from the outside in, involving stakeholders in developing a plan, and linking the strategic plan to budget development and strategic decision making.

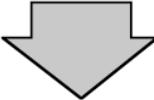
Definition of Strategic Planning and Differentiation from other Types of Planning

Norris and Poulton (1991) provided a clear, current and accepted definition of strategic planning as a systematic and on-going activity which an organization uses to anticipate and respond to major decisions facing it during a three- to five-year period beyond the present. Strategic planning is:

- externally directed;
- focuses on “what” the organization should do;
- deals with “macro” issues;
- spans organizational boundaries;
- is a continuing process dictated by changes in the external environment that occur on an irregular timeframe;
- deals with relatively greater levels of uncertainty; and
- values expert judgment.

The most common approach to strategic planning (Glaister & Falshaw, 1999) incorporates an external environmental analysis to identify the opportunities and threats facing the organization, and an internal analysis to identify the organization’s strengths and weaknesses. Cope (1987) offered the

Figure 1: Case Study - Virginia Western Community College

External Scan - Core Environmental Trends	
<ul style="list-style-type: none"> • There has been little population growth in the Roanoke region for the last several decades and this trend is likely to continue. • The population in the Roanoke region is aging. The younger, traditional college-age populations (those who have completed or had some college education) appear to be leaving. • It is expected that more students will attend two-year or community colleges because of increased selection criteria at four-year colleges and universities. • Strong service sector employment, especially in health care, will continue to be the major contributor to employment in the area.. • Employment growth is expected in the information technology sector. • Government funding for higher education will not increase in the near future. 	
Internal Scan - SWOT Analysis	
<p><i>Strengths</i></p> <ul style="list-style-type: none"> • Excellent faculty and staff with strong qualifications • Energetic and innovative administration • Affordable and accessible • Quality programs • Physical facilities in an ideal location • Strong reputation 	<p><i>Weaknesses</i></p> <ul style="list-style-type: none"> • Funding • Communication • Teamwork
<p><i>Opportunities:</i></p> <ul style="list-style-type: none"> • Population aging and decreasing • State funding • More competition 	<p><i>Threats:</i></p> <ul style="list-style-type: none"> • Population aging and decreasing • State funding • Competition from other institutions
	
<p>Vision: As the region's main provider of quality education at an affordable price, Virginia Western Community College will deliver diverse educational and workforce development programs that will meet citizen's needs, private and corporate, to expand and grow the local economy and quality of life.</p>	
<p>Mission: The mission of Virginia Western Community College is to provide comprehensive higher education and workforce training programs and services of superior quality that are affordable and accessible and that meet individual, business and community needs in the Roanoke Valley and surrounding areas.</p>	
<p>Goals:</p> <ol style="list-style-type: none"> 1. Partner with business, industry and local government to create more opportunities for workforce and economic development. 2. Continue to provide quality associate degrees and certificate programs for transfer, employment and lifelong learning. 3. Strengthen internal communications, teamwork, leadership and professional development to provide the highest level of customer service. 4. Increase accessibility and convenience through expanding off-campus and distance learning offerings. 5. Provide additional, better trained and diverse faculty and staff in order to meet the expanding and changing needs of the local and global community. 6. Expand and update educational programs to address the career opportunities and technological changes in service sectors such as information technology, healthcare and related fields. 7. Expand efforts to provide adequate funding through grants, private fundraising and expand public support. 8. Improve student retention through enhanced financial aid, career services, student activities, counseling and quality instruction. 9. Promote productive and mutually beneficial relationships with local governments, local school divisions and transfer institutions. 	

following definition of strategic planning as it applies to higher education:

Strategic planning is an open systems approach to steering an enterprise over time through uncertain environmental waters. It is a pro-active problem solving behavior directed at conditions in the environment and a means to find a favorable competitive position in the continual competition for resources. Its primary purpose is to achieve success with mission while linking the institution's future to anticipated changes in the environment in such a way that the acquisition of resources (money, personnel, staff, students, good will, etc.) is faster than the depletion of resources (p. 3).

Rowley, Lujan and Dolence (1997) stated the central tenet of strategic planning is to align the organization with its environment. Strategic planning differs from other types of planning. As described by Cope (1987), strategic planning concentrates on the external environment, is oriented towards change, is proactive, emphasizes doing the right thing, values opinions, intuition, and the qualitative, and considers planning to be an "outside-in approach." Other planning concentrates on the enterprise/organization, emphasizes stability, is reactive, emphasizes doing things right, values facts and the quantitative, and considers planning to be an "inside-out" approach.

Rodeheaver (1998) summarized the conceptual differences by stating that strategic planning answers the question: What should we do? And operational and long-range planning answers the question: How and when do we do it? More specifically, long-range activities are continuous attempts to translate the strategic plan into action within the organization. Operational planning involves resource allocation within units of the organization and is often determined by budget cycles.

A strategic plan consists of at least three components. The first is a *vision*, defined as an ideal, credible, attractive, and future image for an organization; second, a *mission*, defined as a general statement of the fundamental purpose of an organization and the foundation for developing the organization's goals and objectives; and third, *goals*, defined as broad statements that describes ultimate ends and achievements for an organization. Examples of strategic plans are found in the following case studies.

Applying External Environmental Scanning and Forecasting to Developing a Strategic Plan: Two Case Studies

Virginia Western Community College

Virginia Western Community College (VWCC) located in Roanoke, Virginia, serves a metropolitan area of approximately 250,000 people in southwestern Virginia. In early 2001, VWCC embarked on an external environmental scanning and forecasting activity that would serve as the foundation for subsequent strategic planning. After a series of workshops on the topic, college faculty, staff, and administrators decided to concentrate external environmental scanning in the change areas of demographics, economy, labor force, politics and social values, and lifestyles. In the summer of that year, four scan teams developed 25 external trends across these taxonomy areas. Each trend was accompanied by a rationale and supporting documentation for its existence. Residents of the Roanoke area were asked to consider the trends and offer implications for the Roanoke Valley in the next three to five years. These implications were captured and shared with college planners who in turn used them to suggest possible implications for the college as well. In December, a strategic planning workshop was held. College planners considered all trends and on the basis of the quality and quantity of implications, selected six core external environmental trends to guide strategic planning. During the December workshop, the college conducted a Strengths, Weaknesses, Opportunities and Threats (SWOT) assessment. A SWOT assessment is important to conduct and is particularly useful in developing a mission statement and set of strategic goals that are reasonable and achievable in light of the core SWOT factors selected. The six core external environmental trends and the results of the SWOT assessment are shown in Figure 1.

In the strategic planning workshop four teams of college planners developed and submitted their individual versions of a strategic plan (four versions of a vision and mission statement and four sets of strategic goals) based upon the core trends and core

SWOT assessment. Each team selected a representative who would join with other representatives to constitute an editorial committee to recommend a strategic plan. For practical purposes such as coordinating meeting times and quickly recommending a final version of the strategic plan, the editorial team was limited to only four members, each representing their respective workshop team. As Figure 1 illustrates, the final strategic plan included vision and mission statements and nine strategic goals (Lapin, 2001). A number of the strategic goals responded to one or more core external environmental trends. For example, core trends identified future occupational growth in the fields of health care and information technology in the Roanoke Valley. Strategic Goal 6 was a response to this core trend. Another core trend indicated that government funding would not increase in the near future. Strategic Goal 7 was a response to this core trend.

Great Basin College

The process of external environmental scanning and its use in developing a strategic plan is not limited to colleges. Indeed, the process and the resulting strategic plan can be used in virtually any organization or locale requiring a strategic plan. Such an application is illustrated in the case of Great Basin College (GBC) and the county it serves, Elko County, Nevada.

Located in northeastern Nevada, bordering Utah on the east and Idaho on the north, Elko County is a vast 17,179 square miles in area with a rural population totaling only 45,291, according to the 2000 Census. Outside of three or four small towns it is a sparsely populated county with a rich history of mining and ranching. The county is served by one publicly funded institution of postsecondary education, Great Basin College. It is a comprehensive community college offering programs and services throughout Elko County.

In 1999, Team Elko, a group of Elko County residents who cared about the future of Elko County, asked Great Basin College to develop a strategic plan for Elko County. The first step was to hold a series of three workshops for the college faculty, staff, and administrators, and friends and supporters of the college. Workshop One provided an introduction to ex-

ternal environmental scanning and forecasting and its use in a strategic plan. Workshop Two involved a simulated scan team exercise, and Workshop Three centered around organizing and operating an external environmental scanning and forecasting activity for Great Basin College. College staff developed a list of scanning areas that was customized to reflect environmental conditions for both the college and the surrounding county. This list included demographics, labor force, technology, health care, social values and lifestyles, agriculture, politics, economics, education, gaming, and mining and land usage. In northeastern Nevada, health care was a significant area of expected change because of accessibility problems common to residents of rural Nevada and a concern for the poor health status of many Nevada residents, while gaming and agriculture represented major industries. Mining and land usage recognized the important role that gold and silver mining continues to play in the local economy, as well as the controversial issue of land usage policies and practices associated with federal, state, and local interests. After extensive external environmental scanning, a total of 37 individual trend statements covering these change areas were developed. Each trend statement was followed by a summary rationale which included citations of sources and research that served as the bases for each respective trend. In September, 2000, Elko County leaders came to the college and in small groups reviewed all 37 trend statements and identified what they believed would be potential implications of each respective trend to the future of Elko County in the next three to five years. College officials captured their responses and added these implications to the list of trends. Following this exercise, GBC scanners and planners were asked to identify what the implications of the trends for the county meant for the college's programs, services, funding, technology, and advancement. In this way, implications offered by the college representatives logically followed from those offered by the community leaders. This information was included in an updated list of 37 trends that not only had appropriate rationale behind their development, but included two sets of implications: one set offered by representatives from the community; and a second set of implications offered by GBC representatives.

Figure 2: Case Study - Elko County-Great Basin College

External Scan - Core Environmental Trends	
<ul style="list-style-type: none"> • The improvement of Elko County's economy and labor force will be closely linked to success in economic diversification. • The local political culture currently is one of hostility between county government and the federal agency's control of public lands. • The price of gold is not expected to change significantly in the next year or two, and no sound predication for the future price of gold can be offered. • Wireless technology systems will greatly assist connectivity demands in northeast Nevada in government, business and education in the next 3-5 years. • The significant population growth experienced in Southern Nevada will require more of the state's total tax dollars and resources to be allocated to Clark County due to growth in that area. • It is projected that the general population growth in Elko County from 2000-2005 will increase by 16%. • Employment growth in every segment of health services is projected to grow faster than the average for all industries in Nevada through the year 2006. 	
Internal Scan - SWOT Analysis	
<p>Strengths:</p> <ul style="list-style-type: none"> • People-motivated, involved, ready • Location-access • Education—system and opportunities • Quality of life –medical, low crime, clean air 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Lack of economic diversification • Lack of infrastructure that positions for growth—pipeline, energy, telecommunications • Dependency on mining • Remote location • Conflict, influence (lack of) and lack of cooperation among local, state and federal governments
<p>Opportunities:</p> <ul style="list-style-type: none"> • Economic diversification-hospital expansion and medical services, recreation and tourism, educational opportunities • Infrastructure-I-80, power plant, fiber optics • Lifestyle-hub of northeast Nevada, recreation and tourism, heritage Olympics 	<p>Threats:</p> <ul style="list-style-type: none"> • Control and use of land-increased interest in environmental situation • Threats from southern Nevada—political power and representation, tax dollars, economic climate and prosperity • Slowdown in mining—price of gold, restrictions, consolidations, depletion
	
<p>Vision: Elko County embodies a personal quality of life, combining diversity and cooperation that offers a safe, spacious environment, rich heritage and traditions, unique natural resources and abundant economic and educational opportunities. <i>Our people make Elko County the finest rural community in America.</i></p>	
<p>Mission: Elko County's mission is to expand economic development, recreation and educational opportunities, while promoting our community's heritage and preserving our quality of life.</p>	
<p>Goals: The following goals are a must to survive and the keys to success in the next five years:</p> <ol style="list-style-type: none"> 1. Achieve economic diversification, especially through building an energy pipeline and emphasizing telecommunications. 2. Promote tourism 3. Expand Great Basin College 4. Maintain and Improve the quality of life in Elko County, with an emphasis on fostering a cooperative political environment, expanding recreational opportunities, and promoting Northeast Nevada's rich cultural heritage, art and tradition. 	

In December, 2000, a strategic planning workshop was held involving members of Team Elko and representatives from the college. Participants reviewed the implications associated with each trend and reached consensus on seven core external environmental trends to build a strategic plan. A subsequent SWOT analysis also informed the strategic plan (Figure 2).

During the workshop, four teams of college and community planners developed and submitted their respective strategic plans (four versions of a vision and mission statement and four sets of strategic goals) based on the core trends and core SWOT assessment. Each team selected a representative and the four representatives constituted an editorial team which recommended a final strategic plan (Figure 2). A number of the strategic goals responded to one or more core external environmental trends. For example, core trends identified the importance of economic diversification and the uncertain price of gold and gold mining in northeast Nevada. Strategic Goal 1 was a response to these core trends. Another core trend indicated employment growth in health services in Nevada through 2006. Strategic Goal 3 reflected support for Great Basic College's ability to provide postsecondary education in health service programs (Lapin, 2000).

Benefits of the Strategic Planning Process

Rigorous and formal evaluation of this approach to strategic planning is not presently available. However, informal evaluation based on conversations with college leaders and participants and written feedback from surveys indicates the following primary benefits of this approach:

- Because the process is highly participatory it attracts more support and legitimacy from all areas of the organization.
- Leaders and participants are satisfied that external environmental scanning and forecasting enabled them to develop a better strategic plan and provided them with a "road map" for future strategic planning.
- Leaders and participants believe the strategic plan will improve the basis for decision making.

- Colleges benefit themselves and the communities they serve by concentrating their planning from the "outside-in" rather than the "inside-out."
- Colleges involve their communities in their planning process and provide valuable information, in the form of trends, to others in the community interested in planning.
- Colleges become more active partners in larger community and economic development efforts.
- Colleges are better able to develop and implement operational plans that reflect and carry out their strategic plan.
- Colleges generally receive recognition and praise for their planning process and their strategic plan from accrediting agencies.

Summary

A review of appropriate planning research, coupled with years of practice, reinforced the importance of developing a strategic plan that researches changes in the external environment and identified the implications of changes for an institution's future in the period three to five years beyond the present. Community colleges focused on anticipating and responding to the communities they serve recognized the need for organizational change and took steps to implement appropriate change. The first step in successful organizational change was external environmental scanning and forecasting which produced a set of key external trends that provided a basis for solid directions and results in both strategic planning and institutional effectiveness. Colleges, such as those cited in this paper, which implement an external environmental scanning and forecasting activity and link it to developing an outside-in strategic plan, can assume a leadership role to build better communities and colleges for tomorrow.

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