This discussion paper examines major issues that institutions of higher education must face in their long-range planning light of such factors as changes in economic conditions, major demographic shifts, emergence of multimedia/distance education, increased acknowledgement of diversity, and the transition to information age. The key to dealing successfully with lower revenues, while maintaining quality education, lies in rethinking work already being done on current social, technical, political, economic, and educational trends. The challenge for the next decade is addressing the issue of how students learn and their skill development. Higher education must align itself with curriculum reforms already taking place in K-12, such as the California Curriculum Frameworks, and changes in demographics and multiculturalism. By the year 2000, workers will need to devote at least 20 percent of the working day to learning; workers and institutions of higher education must establish collaborative communities to handle these future challenges now. For higher education, survival in the future is the motivating force for restructuring the vehicle of achieving future success. (Contains 16 references.) (Author/NAV)
CONSIDERATIONS FOR THE DEVELOPMENT OF A
HIGHER EDUCATION AGENDA
FOR THE '90s AND BEYOND

An article
written by
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This article is designed to elicit discussion and dialogue. It is meant to be provocative, not definitive. It is neither a comprehensive review of the literature and research nor an attempt to demonstrate established principles of practice. It merely sets forth a set of considerations for discussion to promote the process of developing a long range vision.

Today, colleges and universities face their most significant challenge in more than fifty years. The analysis of this challenge has coalesced in the last decade, with a focus on: changes in economic conditions, major demographic shifts, emergence of multimedia/distance education, increased acknowledgment of diversity in the learning styles of students, continual decrease in funding, and most importantly, the transition from the Industrial Age to the Information Age.

Colleges and universities have the capability to survive and succeed in this new environment, but only with significant, even radical changes in how they organize their administrative structures, teaching strategies and their commitment to the advancement of society. If colleges and universities are to prosper, institutional self-analysis needs to take place, yielding to restructured administrative, organizational, governance and instructional strategies, as well as a renewed commitment to the good of society.

A recent report by RAND (Carroll, McCarthy & Wade, 1994) asserts, that California faces a budget crisis - not a transitory problem that likely economic growth or the usual policy changes can address - but a fundamental and long-term change in the options we can choose from, creating a critical moment in the state's history, one which can only be addressed by a focused restructuring of internal efficiency.

Research in organizational productivity shows that in the next decade the key to dealing successfully with lower revenues, while maintaining quality education, lies in rethinking the nature of the work being done in light of current social, technical, political, economic and education trends. Transformation, however, is not a linear process. Reform activities in education must accomplish at least four simultaneous goals: (1) the reengineering of organizational processes to achieve higher productivity and quality, (2) the alignment of educational systems with the Information Age, (3) the creation of more flexible educational delivery systems, and (4) the redefinition of roles and responsibilities.
within the new structure. (Breneman, 1995; Carroll et al., 1994; Guskin, 1995; Hammer & Champy, 1993; Newman, 1993).

Aligning with the Information Age - The Need to Restructure

As organizational productivity is enhanced, educational excellence becomes the focus of contemporary reform efforts. The transition from the Industrial Age to the Information Age offers us enormous opportunities to create unique and innovative learning strategies. Information Age learners need to develop the capacity to search, select and synthesize vast amounts of information to create knowledge. Futurists agree that in the Information Age we will depart from provider-driven educational systems to learner-centered systems (Dolence & Norris, 1995).

The classroom will not disappear, nor will the campus fade into oblivion. Rather, American higher education in the 21st century will provide a spectrum of choices for learners, ranging from the truly traditional to the totally transformed. These choices will be exercised by individual learners, faculty, researchers, and practitioners in their daily work and as they chart the pathways for their learning careers. Individual learners are an inexorable force driving learning in the Information Age. But organizational actions and strategies can either facilitate or limit the choices available to learners." (Dolence & Norris, 1995, p.14)

New electronic technologies, global information through the “super highways” of the Internet, affordable and extraordinarily powerful computers, and breakthroughs in interactive and simulation softwares are now available and ready for use. While the initial cost of developing even more sophisticated interactive technologies is high, the size of the higher education market will attract enterprising software developers and will lead to reasonable costs. The growth in software choices probably will be exponential (Guskin, 1995).

Advances are just beginning to occur in software that simulates science laboratories. The use of this software can reduce significantly the expense of costly laboratory materials and of maintaining extremely expensive laboratories. While these simulated laboratories are in the early stages of development, it is likely that as colleges and universities seek to cut costs, the market for such software will significantly increase. Just as flight simulators have long been used to train pilots before they climb into actual airplanes, authorities in a variety of fields say virtual reality “environments” have a bright future as a training tool for students and as way to give doctors and engineers a “dry run” through risky or costly procedures (Guskin, 1995).

Almost all academic disciplines are bending under the weight of the ever increasing access to and need of information. To deal with the information explosion, all academic and vocational disciplines continue to evolve and
The tools of network usage are revolutionizing discovery research and the synthesis of information in academic and vocational disciplines worldwide. A symptom of the information explosion is the inevitable, increasing importance of a learner’s capacity to continually synthesize vast amounts of information. Learners need to develop the capacity to search, select and synthesize vast amounts of information to create knowledge. Given the time cycle for information change, this synthesis must be a continuous process. This skill set is critical to success in Information Age organizations, and must become a fundamental skill set of learning environments. Information Age learners need to be genuine “knowledge navigators” who develop the capacity to negotiate a pathway through an overwhelming universe of information on their way to understanding. (Dolence & Norris, 1995, p. 26).

The potential financial savings and the power of these tools for student learning, present an unprecedented challenge for faculty and administrators. Those colleges whose faculty, administrators and staff will transform their institutional thinking from an “Industrial” model to an “Information/Learning” model will undoubtedly succeed into the 21st century.

**Promoting Student Learning**

The public perception of the effectiveness of higher education tells us that we can no longer avoid demonstrating to the public at large, to employers, to state and federal governments, to parents, to accrediting institutions and to students themselves, that they are getting a good return on their own and society’s educational investment. In community colleges it is clear that stronger and stronger pressures are being imposed to demonstrate that appropriate levels of student learning result from the education we offer. The challenge for the next decade is for community colleges and university faculties and administrators to address the issues of how students learn. Attention must be focused on the implications of research on student learning styles, multiple intelligences, and the developmental issues based on the age, gender, race, nationality or life experiences of the students being taught. Focusing on student learning turns our thinking about the future of our colleges and universities upside down: from faculty productivity to student productivity, from faculty disciplinary interests to what students need to learn, from faculty teaching styles to student learning styles, from classroom teaching to student learning (Astin, 1993; Barr & Tagg, 1995; Guskin, 1995).

Current research indicates that the primary learning environment for undergraduate students, the lecture-discussion format, may need to be addressed in terms of the elements of good instructional practice, the optimal
settings for student learning and the advent of the Information Age. This is one of the principal challenges of the '90s and beyond. Colleges and universities are going to have to focus not so much on how faculty teach but on how students learn, thus engaging in an active educational agenda to enhance such learning.

Educational research (Astin, 1993; Chickering & Gamson, 1991; Guskin, 1995; Newman, 1993; Norman, 1993; Tayack, 1974), indicates that student learning at the undergraduate level can be defined by three learning strategies: (1) accumulation of information and knowledge, (2) skill development and (3) conceptual development. These strategies will have to be address anew as we enter the new millennium.

**Accumulation of information and knowledge**

The common format for addressing this learning strategy in colleges and universities is through lecture/discussion, and through the use of books for maximizing the presentation. Sometimes visual aids, such as films, videos and the like are used to supplement the lecture.

However, the advent of the Information Age - with sophisticated interactive softwares for college-level subject matter, real-life simulation technologies, and the information superhighway - will inevitably provide alternative formats in the classrooms. The power of these technologies is enormous, especially for student learning.

Fundamental course review will have to take place. Students could learn a particular subject in a series of "learning modules" with one module focused on electronic sources, another on intensive interaction with a faculty member, a third on intensive lecture-discussion, a fourth in real-life experiences or simulations and another in a peer-study group (Guskin, 1995; Newman, 1993). The possibilities are endless.

Innovative teaching strategies may necessitate creative evaluation procedures of student learning, which could include separate assessments of the learning achieved in each of these "modules" integrated into a total assessment of the overall learning demonstrated.

**Skill Development**

In addressing skills development for the future it is important to consider that students entering college in the next decade will be attuned to working with computer-generated-environments whether from playing games, "surfing" the Internet or working with interactive television systems. The use of interactive technologies and "simulated" laboratories and classrooms for skills development should be a basic element of curricular reform. New faculty support roles as facilitators, knowledge navigators, and learner/service intermediaries, will become increasingly important (Barr & Tagg, 1995; Dolence & Norris, 1995; Guskin, 1995).
**Conceptual Development**

Most educators consider conceptual learning the cornerstone of a good undergraduate education, requiring a considerable amount of reflection on the part of students, and often reassessment of existing beliefs and assumptions. As students advance through their undergraduate education they are expected to form conceptual abilities. However, experts agree that, in many college and university classrooms around the nation, current teaching practices are not consistent with a reflective mode of learning and students are not being motivated to develop conceptual frameworks (Astin, 1993; Bok, 1992; Guskin, 1995; Norman, 1993). Conceptual learning takes place when students are fully motivated to go beyond their current assumptions.

It is commonly accepted that future generations of students may not be able to maintain the level of interest and attention required for motivated learning. Yet we know that students become highly motivated and learn through interactive games, television and films. Norman (1993) writes about game makers and entertainers, observing that they obviously know how to capture interest sufficiently well whereby real learning takes place, albeit learning of irrelevant subjects. He suggests that perhaps we can merge these skills. The trick is to marry the entertainment world’s skills of perception and of capturing the user’s engagement with the educator’s skills of reflective, in depth analysis.

Research demonstrates that powerful learning environments can be created by faculty through the redesign of curriculum and the creation of “learning laboratories.” These modalities use simulated environments to motivate and challenge students to reflect on their beliefs and actions (such as simulating school and city decision-making settings) or in teaching through real life case studies which stimulate problem-solving activities. Faculty, serving as mentor/group leaders can provide students with feedback and focus that challenges conceptual thinking while enabling students to build self confidence.

Alexander Astin (1993) noted that faculty spend little time involved in activities unique to faculty and that have major impact on student learning, namely direct individual faculty/student interaction, intense small group discussions, mentoring and advising, and encouraging students to be involved in activities that are important for student learning but do not involve faculty - peer-group, team-oriented settings, peer tutoring and coaching, and experiential learning outside the institution.

**Aligning Higher Education with the K-12 Reform Initiatives**

Many reform initiatives have already taken a firm hold in the K-12 system where the new generation of California Curriculum Frameworks now focuses on student understanding, student engagement, and expected student learning results. The Frameworks have several enhancing concepts and instructional strategies in common. These include critical thinking and conceptual understanding; problem solving based on real-life problem; meaning-centered rather than memorization-oriented learning opportunities; active learning and
activity-based instruction; contextualized, learning which makes connections to students experiences; collaborative learning in groups; and interdisciplinary learning (Intersegmental Coordinating Council 1995).

The fundamental goal of the K-12 reform initiatives is to shift the emphasis in K-12 education from teacher-centered focus to student-centered experiential focus.

The number of students moving into higher education who have experienced the full impact of reforms in K-12 is very small so far. But what is now a small stream will likely become a widening river. What will students encounter when they enter our post-secondary institutions? Will higher education respond quickly enough to provide them with smooth-flowing, coherent educational experience? What kinds of changes are we willing to make to ensure that students experience a seamless transition into higher education? (Intersegmental Coordinating Council, 1995, p.8)

Responding to Changing Demographics and Multiculturalism

The 1990's and beyond will witness the emergence of a new, completely diverse nation. Between 1980 and 1990, the U.S. population increased by 10 percent, the second largest increase in the 200-year history of this nation. Just three states - California, Florida and Texas - accounted for more than half of the growth. These states also have the largest number of Latino immigrants and the largest non-white populations overall. During the same decade, immigration accounted for approximately one-half of the country's Latino population growth and nearly three-fourths of its Asian population growth. Immigration also contributed to the African American population growth, but to a lesser degree (Outtz, 1995).

In California, the migration patterns present a daunting challenge. More than one in ten Americans resides in California (Dorch, 1995). Recent migration patterns indicate that, as Californians are moving to other parts of the country, immigrants from foreign countries continue to pour into California. Nearly 30% of students new to the nation's schools are arriving in California's classrooms; by 2001, California public school enrollment will top seven million students. Almost one hundred languages currently are represented in California schools (Intersegmental Coordinating Council, 1995, p. 3)

All educational institutions, are having to not only accommodate the substantial diversity of experiences, the wide range of languages, cultures, learning styles, talents, and intelligence that multicultural students bring with
them, but our institutional thinking and our institutional policies regarding access and equity (Outtz, 1995 p.65)

In the next ten years, more than half of all new entrants into the American work force will be minorities. Another thirty five percent will be women and new immigrants.

Higher education is being called upon to prepare future workers in order to ensure that this nation's economy remains strong. The U.S. Department of Labor estimates that half of the new jobs created over the next 20 years will require some education beyond high school, and almost one-third will be filled by college graduates. In many ways, change in accordance with demographic and economic realities will prove to be a matter of survival for institutions of higher education. (Outtz, 1995, p. 69)

Research is now beginning to show that successful programs targeting at-risk students have an important characteristic in common; they are not driven by a deficit model that focuses on either the real or the imagined weaknesses of students, society, or the community. Instead, racial, ethnic, linguistic, and other differences are seen as assets on which to capitalize rather than as problems requiring fixing (Dilworth & Robinson, 1995). These models need to be embraced by all educational disciplines as well as all services for students in our colleges if we are to indeed create a culturally democratic environment in our colleges.

Adapting to the Global Economy through Workforce Preparation

Futurists estimate that in the year 2000 there will be 141 million workers in the U.S. They also estimate that around the turn of the century each individual in the workforce will need to accumulate learning equivalent to what is currently associated with 30 credit hours of instruction per year. This amount of training will be needed for every member of the Information Age workforce to remain competitive and productive; and it could add up to over 20 million FTE learners from the workforce (Harvard Business Review 1991).

Information Age workers will need to spend at least 20 percent of their day engaged in learning, so the most facile learning mechanisms will be required for America to remain competitive in the global market.

The new wave of federal workforce preparation legislation has been described as marking “the end of the New Deal.” In the future, federal funds for training programs will not only be substantially reduced, but will also come with fewer categorical prescriptions. An unprecedented diversity of clients/students will be served through the comprehensive “One Stop Career Centers” which will necessitate strong collaboration by colleges with the Employment Development Department and a multitude of other agencies. Customer satisfaction - referring
to both clients/students and employers - will be the hallmark of successful training programs.

... It is the beginning of a new wave of reform that will represent the most significant challenge yet to educators at all levels, K-12 and postsecondary. This movement is rooted in the urgency of retrofitting public education to better support America's stance in an increasingly competitive, rapidly changing global economy. (Cortina, 1995, p.6)

Community Colleges have the potential to become a major force in the economic development of California by increasing the success rates of small businesses, strengthening the labor force in the area, and becoming a partner with others as a major element in a company's evaluation of this community's attractiveness.

In the abundant research and commentary on educational responsiveness to the global economy, it is clear that rigorous curricular review needs to be undertaken in order for colleges and universities to meet the needs of the present and future labor force. One priority must be the inclusion of SCANS (Secretary of Labor Commission on Achieving Necessary Skills) competencies and skills in the workforce preparation curriculum. SCANS represents a concise and precise identification of foundational skills for the employees of today and tomorrow as identified by employers of all sizes and scope in this nation. The integration of these competencies into the curriculum and teaching strategies will strengthen the skills of all future adults as they function in society and the workplace.

In addition, in the working environment of California, there is a need to better communicate with foreign trading partners as the local economy becomes more dependent on international trade. Our own culture is changing under the impact of immigration and the demands of international markets. Greater focus needs to be placed on reciprocal international education programs. Community Colleges are the ideal venue for foreign students and professionals to become acquainted with American culture, language, business styles, etc., while our students study the cultures of our global trading partners. If greater focus is placed on global/international curriculum, the potential for increased income as a result of partnerships with other countries can boost the colleges economic standing.

**Establishing Collaborative Communities - Colleges and the Common Good**

Some of the recent research and practice in educational reform evolve around the notion that if restructuring is going to take place, it needs to do so at the level of conviction and not just as an external organizational face lift. Therefore, a logical first approach to restructuring is to look at the basic and root metaphors that shape our thinking about educational institutions, metaphors that
shape the way we understand instruction, leadership and management within them (Sergiovanni, 1993). Sergiovanni describes that in education the metaphor of choice is "organization." Educational institutions are understood as formal organizations, and what occurs within them is understood as organizational behavior. He illustrates how the phrase "to organize" provides a clear picture as to how the organization metaphor forces us to think about educational institutions. To organize means to arrange things into a coherent whole. Therefore, as organizations, public educational institutions develop explicit teaching and management structures and procedures that give a convincing account to the public that everything is in place to accomplish the stated purposes.

The "organization" metaphor however, is now being blamed for the failures of previous attempts of academic reform. It is clear that reengineering organizational structures without focusing on the substantive purpose for change, and the level of commitment of those involved, will create only temporary benefits (Newman 1992). Experts agree that metaphors have a tendency of creating realities; and since different metaphors create different realities truth is always relative to its generative metaphor.

So, if the "organization" metaphor needs to be changed, what should the metaphor of choice be? It should be one where communal commitment and conviction are the driving forces for change (Sergiovanni 1993). Therefore, going back to the Aristotelian concept that human beings by nature need to form communal bonds for the exchange of ideas and focus on the common good, researchers studied groupings of individuals who successfully worked together with that common goal (Hough, 1992). A predominant model based on collaborative communities of individuals working towards a common goal was found to be most applicable to public education (Sergiovanni 1993). Therefore, changing the metaphor for educational institutions from "organization" to "community" would be a powerful first step in changing our thinking on how our institutions should be organized and administered, as well as what should take place within them.

In communities, for example, the connection of people to purposes and the connections among people are not based on contracts but commitments. Communities are socially organized around relationships and the felt interdependencies that nurture them. Instead of being tied together and tied to purposes by bartering arrangements this social structure bonds people together in special ways and binds them to concepts, images and values that comprise a shared idea structure. This bonding and binding are the defining characteristics of schools as communities. Communities are defined by their centers of values, sentiments and beliefs that provide

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the needed conditions for creating a sense of "we"
from a collection of "I's." (Sergiovanni, 1993, p.12)

In organizations the relationships within are formed for us and others by external forces and are codified into systems of hierarchies, roles and role expectations. Communities rely more on common purpose, values, professional socialization, collegiality and natural interdependence. Collegiality in organizations is a group arrangement that forces people to work together, whereas in communities collegiality comes from within, from a connection between people based on reciprocity, mutual responsibilities and other basic emotional or intellectual ties (Sergiovanni 1993).

What are the shared values, commitments, intellectual ties, and mutual responsibilities that would enable our colleges to become a community of mind? How will these values and commitments become practical principles that can guide the lives "community" members want to lead within our institutions? What are the patterns of mutual obligations and duties that emerge in our institutions as community is achieved? The motives that bring people together are the key in determining whether community will be authentically achieved. For higher education survival is the motive, and restructuring the vehicle for achieving success.

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*Sergiovanni defines bartering as follows: "Administrators and teachers, and teachers and students strike bargains within which administrators give to the teachers and teachers give to students something they want in exchange for compliance. As a result everyone becomes connected to their work for calculated reasons. Students behave and study as long as they get their rewards. Teachers respond for the same reasons. And when rewards are no longer available or no longer desired, administrators, teachers and students give less in return."*
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