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ABSTRACT

Ways that states can promote change in undergraduate education in state institutions are discussed. The total undergraduate experience, not simply the curriculum, is of concern. Attention is directed to eight challenges in undergraduate education: (1) to prepare students for opportunities offered by a changing work force and society; (2) to improve students' preparation for college; (3) to improve overall rates of college attendance and completion; (4) to meet the educational needs of a diverse student population; (5) to build greater student involvement in the undergraduate experience; (6) to improve assessment of student and institutional performance; (7) to motivate faculty and reward them for improving undergraduate education; and (8) to carry out more sharply defined institutional missions. A total of 22 recommendations are offered that concern the following broad strategies: place the challenges facing undergraduate education on the public agenda; incorporate the improvement of undergraduate study into state strategies for educational excellence; enable colleges to improve undergraduate study; allocate resources to colleges to create a positive environment for change; and encourage the use of multiple methods of assessment to improve student and institutional performance. (SW)

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TRANSFORMING THE STATE ROLE IN UNDERGRADUATE EDUCATION: TIME FOR A DIFFERENT VIEW

No. PS-86-3

The Report of the Working Party on Effective State Action To Improve Undergraduate Education

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The Education Commission of the States is a nonprofit, nationwide interstate compact formed in 1965. The primary purpose of the commission is to help governors, state legislators, state education officials and others develop policies to improve the quality of education at all levels. Forty-eight states, the District of Columbia, American Samoa, Puerto Rico and the Virgin Islands are members. The ECS central offices are at 1860 Lincoln Street, Suite 300, Denver, Colorado 80295. The Washington Office is in the Hall of the States, 444 North Capitol Street, N.W., Suite 248, Washington, D.C. 20001.

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FOREWORD

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Work on this report began with basic questions and a search for thoughtful people to help answer them. As governor, I have often asked leaders in higher education what they should be doing that they aren't yet doing and what I should do to help. These questions flow from a belief that we cannot legislate excellence in higher education, but that political and education leaders can together create a climate that nurtures excellence. These questions can elicit powerful ideas and action, if one asks experienced people who are willing to take risks.

The commissioners of the Education Commission of the States want to know what constitutes effective state action to improve undergraduate education. That is why we began this project nearly a year ago. We recognize that undergraduate education is just as important as the public school to the strength and quality of our society. We intend to think more deeply about the problems we face, and about solutions. Many of the current approaches — state regulation, assessment measures, budget and financial systems — may inhibit rather than inspire the creativity we need from colleges and universities. We cannot expect undergraduate education to respond to that need if it is left totally alone, nor can we expect excellence to come from a centrally driven reform effort. The Education Commission of the States has joined in a search for the most productive mix of state action and institutional action. It is a search that can be joined in every state to the lasting benefit of the people.

I want to thank the members of the ECS working party, and the many ECS commissioners and others who contributed their time and best thoughts to this effort.



Thomas H. Kean
Governor of New Jersey
1985–86 Chairman,
Education Commission of the States

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Peter Ewell wrote **Levers for Change: The Role of State Government in Improving the Quality of Postsecondary Education**, an ECS publication prepared to inform this project, and commented sagely on several drafts.

James Mingle both commented sagely and served as an informal member of the project team.

We gratefully acknowledge the project team, whose hard work greatly augmented the efforts of the working party. Frank Newman, ECS president, provided strong staff leadership. Richard P. Mills, special assistant to Governor Kean, served as an effective liaison between ECS staff and the governor's office. Aims C. McGuinness Jr., ECS assistant executive director for higher education, directed the project from its inception until March 1986. Carol M. Boyer, ECS senior policy analyst for higher education, wrote **Five Reports: Summary of the Recommendations of Recent Commission Reports on Improving Undergraduate Education**, an ECS publication prepared to inform this project. After she became project director in March 1986, she helped us organize our thinking, then coordinated and wrote the final report.

Finally, we thank Rexford Brown, ECS director of communications, and Joslyn Green, ECS senior writer/editor, for their editorial advice.

INTRODUCTION

It is time to talk about how to prepare today's undergraduates to be tomorrow's citizens and leaders. It is time to consider how changes in demography, in public attitudes, in knowledge and in demands for human resources affect state systems of higher education. It is time to examine the balance between educational aspirations and the present capacity of states to meet educational needs. And it is time to recognize that successful economic development, international competition, school reform and teacher preparation all depend on excellence in undergraduate education.

It is time, therefore, to raise the level of public debate about the condition of undergraduate education in the nation's colleges and universities.

Throughout this report, we use the term "undergraduate education" to refer to the total undergraduate experience, not simply the curriculum. By undergraduate education we mean the full range of students' educational opportunities and learning activities. Where we refer to "colleges and universities," we mean public community colleges, four-year colleges and universities. We recognize that independent institutions are an important public asset and deserve supportive public policies. We have chosen, however, to limit our attention to undergraduate education in public institutions.

We have chosen not to address other traditional functions of American higher education such as graduate education, research and public service, important as they may be. We do not address the present condition of the physical plant and equipment in colleges and universities, even though we concur with the National Institute of Education (NIE) Study Group (NIE report, 1984) that conditions are "rapidly deteriorating" and we recognize the important role of the states in ensuring that the physical plant and equipment are adequate for student learning. Nor do we address faculty salaries, even though we recognize that in spite of recent gains the purchasing power of faculty salaries is still lower than it was in the late 1960s and early 1970s, and faculty members still earn less than people in private-sector jobs requiring comparable skills (Hansen, 1984; Evangelauf, 2 April 1986) — a situation that clearly calls for further action by state and institutional leaders.

We have chosen instead to explore how current resources can be used to improve undergraduate education. What follows, then, is our report about how states and state leaders can create a positive environment for institutional change. It is written both for state leaders and for institutional leaders. We hope it will contribute significantly to national discussions and to state action.

We first set the context for continued national discussion of undergraduate education and explain why we think that states and state leaders can provide a creative external force for major change in institutions. We then describe eight challenges in undergraduate education — challenges that we believe derive from an overall mismatch between educational needs and current practice. Finally, and perhaps most important, we suggest that a transformation of the state role is necessary to meet these challenges, and we present our recommendations to state leaders.

**OPPORTUNITY FOR A
TURNING POINT**

As state leaders recognize that undergraduate education is inextricably linked to social, economic and cultural well-being, they are becoming increasingly outspoken about matters once left to colleges and universities. They are asking fundamental questions about students' preparation for college, about rates of college participation, about graduates' preparation for a changing society, about the preparation of teachers. They are calling for tangible evidence that college does make a difference.

The eagerness of state leaders to move with vigor on these issues comes at a time when policy leadership in education, health, social welfare and other major domestic areas is shifting from the federal government to the states. It comes at a time when powerful new forces are reshaping American society. More than the health of the American economy is at stake. At stake is the nation's ability to maintain its leadership in a competitive world.

For all these reasons, undergraduate education must once again respond to changing demands.

This would not be the first time that external forces have reshaped undergraduate education. Indeed, since the end of World War II, many of the most important changes in the nation's colleges and universities have come in response to such forces. Thousands of returning servicemen gained access to higher education through the G.I. Bill, which swelled enrollments and presented higher education with a new type of student. The launching of Sputnik challenged the nation's technological supremacy and brought improvements in the science and mathematics curriculum. The "baby boom" drove up enrollments in the 1960s and 1970s. The civil rights movement brought new commitment to access, equal educational opportunity and affirmative action. Student activism of the late 1960s made faculty more responsive to the needs of students. In each of these instances, changing societal conditions presented higher education with challenges — and with opportunities to bring about major institutional changes that otherwise might not have been possible.

This also would not be the first time that the condition of undergraduate education has been on the public agenda. After World War II, a number of national reports (e.g., Truman Commission, Eisenhower Commission, Carnegie Commission, Newman Reports, Carnegie Council on Policy Studies in Higher Education, American Council on Education's National Commission on Higher Education Issues) called for the reform of undergraduate education. Joining these reports since October 1984 have been numerous other reports, written primarily by and for the academic community.*

*Four reports continue to dominate national discussions — **Involvement in Learning: Realizing the Potential of American Higher Education** by the National Institute of Education Study Group on the Conditions of Excellence in American Higher Education (NIE report, 1984); **To Reclaim a Legacy** by then-chairman of the National Endowment for the Humanities William Bennett (NEH report, 1984); **Integrity in the College Curriculum: A Report to the Academic Community** by a select panel of the Association of American Colleges (AAC report, 1985); and **Higher Education and the American Resurgence** by Frank Newman (1985).

The issues raised by the latest reports are not new, nor is there yet consensus on what improvements should be made (Boyer, 1985). Perhaps that is inevitable: the possibilities for improving undergraduate education will continue to shift as the conditions of higher education and society continue to change.

Clearly, though, we now have another important opportunity for a turning point—an opportunity that we cannot afford to let pass. There is little question that major economic, political and demographic changes now challenge the nation's colleges and universities. There is little question that economic development, international competition, school reform and teacher preparation all depend on excellence in undergraduate education.

The real question is whether external forces will unintentionally create an environment that cripples the capacity of colleges and universities to change—or whether those forces will enable colleges and universities to improve undergraduate education.

The nation's colleges and universities now face unprecedented challenges that derive from an overall mismatch between the educational needs of the nation and current practice in undergraduate education. This mismatch is not solely the concern of the higher education community, nor should it be. It is, in fact, too broad for a single institution to address, or a single system, or even a single state. Nonetheless, each state is responsible for maintaining its system of higher education and therefore should address the issues raised by each of the challenges described below.

Challenge #1

To prepare students for the wide range of opportunities offered by a changing work force and society.

Students' educational and career aspirations are no longer consistent with what is increasingly considered necessary preparation for graduate or professional studies, work and lifelong learning. Nor are most undergraduate programs preparing students for citizenship and social responsibility in a world made extraordinarily complex by issues such as nuclear proliferation, genetic engineering and urban renewal. These issues cannot be left entirely to specialists; they require the informed judgment of educated citizens.

Specialization has long been a hallmark of our society, its contributions to economic development irrefutable. But specialization in undergraduate education has become a source of weakness; where it has made the undergraduate experience little more than vocational preparation, the result has been a disservice to students and to the nation. As the President's Commission on Higher Education stated in its landmark report:

The failure to provide any core of unity in the essential diversity of higher education is a cause for grave concern. A society whose members lack a body of common experience and common knowledge is a society without a fundamental culture; it tends to disintegrate into a mere aggregation of individuals. Some community of values, ideas and attitudes is essential as a cohesive force in this age of minute division of labor and intense conflict of special interests (Truman Commission, 1947).

Despite dramatic changes in society over the last 40 years, the situation just described has changed very little.

Today's students are changing their educational and career aspirations, in response at least in part to signals that the workplace values specialized knowledge and technical skills. Meanwhile, employers are now telling us that the workplace needs strong critical thinking and interpersonal skills as well as technical skills.

Since the mid-1970s, engineering and computer science have enjoyed significant gains in student interest, and business has reached an all-time high in popularity among first-time, full-time freshmen. During that same decade, the interest of these students in teacher education and in fields traditionally

associated with a liberal arts education has declined sharply and steadily (Astin, 1985).

Based on data from a 1984 national survey (**Chronicle**, 5 February 1986), approximately three-fourths of all undergraduate students considered occupational training or detailed grasp of a special field as essential objectives of college attendance. More than 9 out of 10 undergraduates considered financial success either very important or fairly important as an overall goal. Such overwhelming interest in job-specific training and financial success is reflected in the undergraduate curriculum in a shift from liberal arts and general education to vocational and professional training (Cross and McCartan, 1984).

Many students pursue undergraduate education with a narrow objective: to prepare for immediate employment after college. Others do so to prepare for admission to graduate or professional school. According to a recent report on the general professional education of the physician:

Students' perceptions of the type of education and the record of achievement they need for admission shape their college programs. The result too often is premature specialization and failure to obtain a broad, rigorous education. College faculties, by not defining and requiring both breadth and depth for the education of their students, reinforce their students' tendencies toward narrow, premature specialization (AAMC report, 1984).

There are, however, signs of growing concern about issues that extend beyond economic self-interest, careerism and specialization. Such issues include building a sense of community; preparing for complexity and change; and reaching out for meaning, continuity and stability (Bellah et al., 1985). Educators and corporate leaders are once again calling on undergraduate education to build a sense of cultural heritage and social responsibility (Boyer and Kaplan, 1977; Jankowski, 1986; Newman, 1985). They also are demonstrating that public service and cooperative education can enhance students' citizenship as well as their understanding of the workplace and the broader community (National Commission for Cooperative Education, 1985; Newman, 1985).

What is considered necessary preparation for work also seems to be shifting. For example, employers interviewed in a recent study (**Jobs for Connecticut's Future**, 1986) reported general satisfaction with their workers' current levels of technical skills but expressed concern about the workers' critical thinking and interpersonal skills. More than one-third felt that workers lack interpersonal skills and agreed that these skills are key factors in hiring decisions and distinguish superior performance from average performance. Fully one-half of the employers reported that their workers are not appropriately motivated; two out of five anticipate that motivation will become even more important.

The challenge is not simply to prepare students for work or to improve undergraduate education because of its contribution to economic development. It is, instead, to restore the balance between specialized training, aimed at preparing students for a single career, and general education, aimed at ensuring a common cultural heritage and preparing students for life. To meet

this challenge will require articulating more clearly what constitutes preparation for work, helping students raise their aspirations and determining how undergraduate education should change.

Challenge #2

To improve students' preparation for college.

Too many students are entering college without the knowledge, skills and attitudes necessary for success in college. This gap will inevitably widen as the nation changes its expectations about what people should know.

As undergraduate enrollments have risen, the level of preparation of high school graduates for college has declined. Increasing numbers of college freshmen have serious deficiencies in the knowledge, skills and attitudes considered necessary for success. Although minorities may be overrepresented among freshmen with serious deficiencies in preparation, the problem of poor preparation cuts across all types of institutions and all student groups. There has been a tendency to explain away the remediation issue as a "minorities issue," but that clearly is not the case. It is the case, however, that remediation did not become an issue until serious underpreparation was recognized among middle-class white students.

At many institutions the need to maintain enrollments, coupled with changes in the student population, has meant more remedial programs, with larger enrollments. By 1983–84, 94% of all public colleges and universities offered remedial courses in mathematics, reading or writing. In most institutions, enrollment in remedial courses has increased more than 10% since 1978; in one-fifth of them, enrollment has increased by 30% or more (National Center for Education Statistics, 1985). In response to the growth of remedial programs, states are raising requirements for admission to college or imposing requirements for the first time. Nearly half the states currently set minimum admission standards. As of 1984–85, 16 states had either recently enacted or were considering more stringent standards. In every case, the policies imposed or strengthened a prescribed pattern of high school course work (Goertz and Johnson, 1985).

The recent surge of school reforms may well produce students who are better prepared for college. In time, then, expectations for learning could rise without excluding large numbers of underprepared students and without lessening commitment to access and equal opportunity. For now, however, the reality is that large numbers of students will graduate from high school inadequately prepared for college.

The concern here is that states are increasingly "paying twice" for education, once when students are in the public schools and again when they enroll in remedial programs in college. Should specific institutions such as community colleges be the main providers of remedial courses and support services for underprepared students? Should college credit be granted for remedial

courses? What role should four-year colleges and universities play in remedial education? Who should monitor the amount of remedial course work? How much extra should states pay for remedial education? Questions like these are especially important given the major role undergraduate education plays in raising educational attainment and improving teacher preparation. Moreover, because higher education "sets the tone for the whole of American education" (NIE report, 1984), all of education will suffer if somehow we fail to improve students' preparation for college.

Challenge #3

To improve overall rates of college participation and completion.

College participation and completion rates, especially for minorities, are declining at a time when educational attainment should be rising.

Some students may be well-served by going to college for two years or by stopping in and out of college. But the increasing number of students who are stopping in and out of college is alarming, and only half the students who start college ever graduate (NIE report, 1984).

An extensive review of the research by the College Board (Ramist, 1981) showed that completion rates at four-year colleges have remained relatively stable over time. Only 30% to 40% of students graduate within four years from the college they entered as freshmen.

Although more recent national data are not available, it appears that little progress has been made toward improving completion rates at four-year colleges. If anything, there is more stopping out for economic reasons than there was 10 years ago, and the retention of minority students is probably worse. Some institutions have recently tried to improve retention, but it is still too early to assess the effect of their efforts.

A recent Tennessee study revealed that Black students drop out of college at a higher rate than White students and progress through college at a slower rate (Tennessee Higher Education Commission, 1985). A California study of community colleges showed similarly low completion rates for minority students (California Postsecondary Education Commission, 1985). A Texas study found that the retention of Mexican-American students is no better today than it was about 10 years ago (Texas Coordinating Board of Colleges and Universities, 1985).

Attrition among community college students may be less severe than previously thought, however. A recent longitudinal study (City University of New York, 1984) showed that the completion rate for open-admissions students was 16% after 4 years, another 16% after 5 years and still another 11% after 11 years, yielding a total completion rate of 43%. These rates suggest remarkable persistence on the part of students who apparently manage to balance

college attendance and other responsibilities for as long as 11 years in their quest for a degree.

Regardless of the persistence of some students, however, these overall rates of college participation and completion are simply not good enough. It remains extremely important for institutions to help students raise their aspirations and acquire the knowledge, skills and attitudes they need to make the most of the wide range of opportunities offered by a rapidly changing society. The evidence presented here suggests that we should pay special attention to minority students.

Challenge #4

To meet the educational needs of an increasingly diverse student population.

Dramatic changes in student demography can no longer be accommodated by undergraduate programs initially designed for a more affluent, homogeneous student population.

The commitment of the nation to access and equal opportunity has brought extraordinary increases in the number and diversity of students. Since 1950, enrollment in colleges and universities has quadrupled, and the number of institutions has increased by almost 60%. Today we are a nation of almost 3,300 colleges and universities, including more than 600 two-year community colleges that have been established since 1960. All these institutions enroll more than 12 million students.

Only about two million of these students, however, attend college full-time, live on campus and are 18–22 years of age (Hodgkinson, 1985). Two out of every five undergraduates are now more than 25 years old, more than half of them are women, one of every six is a member of a minority group and more than two in five attend college part-time. One in three freshmen did not go directly to college after high school, and more than half the people who receive a bachelor's degree spend more than four years in college. More and more students now attend large institutions; the average enrollment in all colleges and universities has increased by 25% since 1970 (NIE report, 1984). Unfortunately, as the NIE Study Group points out:

[T]he greater the size of institutions, the more complex and bureaucratic they tend to become, the fewer the opportunities for each student to become intensely involved with intellectual life and the less personal the contact between faculty and students (NIE report, 1984).

Current and expected changes in demography complicate the picture. The pool of students 18–22 years old is shrinking and will continue to shrink. By 1992, half of all college students will be more than 25 years old, and 20% will be more than 35 (Hodgkinson, 1985).

The proportion of the population from historically underprepared groups (Blacks and Hispanics) can be expected to rise sharply in the years ahead. Today, we are a nation of 26.5 million Blacks and 14.6 million Hispanics. By 2020 we will be a nation of 44 million Blacks and 47 million Hispanics — even more if Hispanic immigration rates increase (Hodgkinson, 1985). Blacks and Hispanics will then account for 34% of the nation's population, increasing still further the complexity of meeting the needs of a diverse student population.

Dramatic changes in the role of women and the family have major implications for undergraduate education. More than 50% of all females (and almost 70% of all "working age" women) are now in the work force, a percentage that undoubtedly will increase (Hodgkinson, 1985). No longer limited primarily to careers in teaching and nursing, women are now free to explore opportunities in fields such as law, business, medicine, engineering and computer science. As noted earlier, more than half of all undergraduates are women, many of whom attend college part-time.

The challenge is to provide quality undergraduate experiences appropriate to the needs of an increasingly diverse student population while at the same time maintaining access and equal opportunity. The demographic changes just described have particularly important implications for undergraduate education, where programs initially designed for a more affluent, homogeneous student population still prevail. Typically these programs are confined to a single discipline or academic major where course design is driven by a quarter- or semester-based calendar and instructors rely on passive modes of classroom instruction.

Challenge #5

**To build greater student involvement
in the undergraduate experience.**

Current educational policies and practices do not ensure active student involvement in the undergraduate experience. Nor do they reflect what is known about effective teaching and learning.

We know that student achievement and satisfaction strongly relate to the time and effort that students devote to the undergraduate experience and to the intensity of that involvement (Astin, 1985; NIE report, 1984). We also know that frequent student-faculty interaction is the strongest determinant of students' satisfaction with college (Astin, 1985). And we know that many features of the teaching and learning environment can be altered in ways that produce deeper involvement and make students more responsible for learning. For these and other reasons, the NIE Study Group (NIE report, 1984) recommended greater use of active modes of teaching. Examples include student involvement in faculty research projects, internships, small-group discussions (especially in large classes), in-class presentations and debates, simulations, individual learning projects and supervised independent study.

Despite what is known about effective teaching and learning, colleges and universities "rarely seek and apply this knowledge in shaping their educational policies and practices" (NIE report, 1984). They rely instead on lectures, extensive note-taking and multiple-choice tests, which means most undergraduates are still "taught by methods that make them passive recipients of information rather than active participants in their own intellectual growth" (AAMC report, 1984).

Some institutions have even lowered standards for graduation and adjusted teaching to emphasize information transmission. A recent study of literacy in the open-access community college found, for example, that little reading and writing were assigned. "Teacher-dependent" students failed to develop the skills they need for independent, self-directed learning. Students and instructors routinely "negotiated what they expected of each other," which was generally "the transfer of preselected bits of information without requiring analysis, synthesis or original expression" (Richardson et al., 1983).

The educational significance of this challenge is clear: traditional approaches to teaching and learning need to be reexamined. Colleges and universities need to find ways to ensure greater involvement of all students in their undergraduate experience, including older students who commute to campus and have major outside responsibilities like jobs and families. These non-traditional students may even be an untapped resource for younger students, thanks to what they have learned from experience before returning to school.

Challenge #6

To improve assessment of student and institutional performance.

The need to use assessment to improve teaching and learning is not reflected in current policies and practices.

The term "assessment" is being used to refer to all sorts of activities, from testing basic skills of freshmen to certifying graduates' minimum competencies, from evaluating academic programs to judging whole institutions. Institutions conduct some forms of assessment; external program-review committees, accrediting bodies and state higher education agencies conduct some other forms. The terms "testing" and "assessment" often are used interchangeably, which further complicates an already complicated issue.

Since the mid-1970s, educators have used the term "assessment," broadly defined, to refer to a powerful set of tools for improving teaching and learning. Today, many also look to assessment as a means of judging what students know, whether students are adequately prepared for college and the extent to which students have been changed by their undergraduate experience ("value-added" assessment). We concur.

Unfortunately, many institutions lack the instruments and procedures necessary to assess student progress and outcomes. In short, there appears to be "more out there than most people know, and plenty enough for institutions to start with; but there are also major shortcomings and significant holes in the range of available materials" (Edgerton and Marchese, 1986).

In recent years, as the public has clamored for accountability, assessment has also become a major concern of state leaders. To date, they have been most concerned about enforcing minimum standards for student progress and using standardized tests as tangible evidence that undergraduate education does make a difference. States have, for example, established statewide programs for testing basic skills of freshmen, for determining whether students have mastered basic skills before they advance to upper-division courses and for measuring student outcomes (Boyer and McGuinness, 1986).

Standardized tests can play a useful part in institutional assessment. But testing is not synonymous with assessment, nor should it be. Other sources of data must enter the equation. As Gregory Anrig, president of the Educational Testing Service, stated recently:

Tests alone cannot evaluate institutions. Just as no test or combination of tests can capture the quality of a state legislature, or a church, or a museum, or a hospital, so too with a college or university. Informed human judgment, based on many sources of information, is essential (1986).

Standardized tests have some particularly serious drawbacks. In the words of Harvard President Derek Bok:

If they are easy to pass or if nothing much turns on the outcome, neither students nor faculty will pay attention and the exercise will be a waste of time. If the tests are hard and the results have significant consequences — determining whether students are allowed to graduate or how much money the university will receive from the legislature — the effects may actually be detrimental. Faculty and students will begin to direct their teaching and studying toward successful completion of the exams (1986).

Statewide program review, institutional and professional accreditation, and professional licensure and certification are all extra-institutional forms of assessment. Some voluntary program reviews also take place within institutions. With the possible exception of some forms of accreditation, however, the results are generally used to inform decisions about resource allocation and program continuation rather than program improvement (Conrad and Pratt, 1985).

The need to assess student and institutional performance in ways that improve teaching and learning is not reflected in current efforts to use assessment primarily for screening and accountability. As legitimate as the concerns of state leaders may be, they do not necessarily improve teaching and learning (Edgerton and Marchese, 1986). Moreover, institutional leaders are concerned that assessment results will be used to justify budgetary decisions or other state actions that interfere with institutional autonomy. They argue that assessment must be institution-specific and that undergraduate education involves more than can be measured by testing minimum competence and basic skills. Still, the burden is on them to provide evidence that they are, in fact, producing other outcomes.

Challenge #7

To motivate faculty and reward them for improving undergraduate education.

The current reward system and working environment do not support faculty involvement in undergraduate education or its improvement.

In recent years, a number of circumstances have sapped the vitality of college and university faculty members, both individually and collectively. Jack Schuster and Howard Bowen (1985) conclude that "in the 15 years since America's faculty experienced its most robust state of health, there have been alarming changes in working conditions and compensation that are eroding morale and jeopardizing the quality of higher education." In turn, college teaching is becoming less attractive to prospective faculty, compromising still further the quality of undergraduate education.

The proportion of faculty who teach part-time increased from 23% in 1966 to 41% in 1980 (NIE report, 1984). The use of part-time faculty can save money in the short term, provide a broader base of talent and increase flexibility in staffing. But it can also inhibit faculty collegiality, instructional continuity and curricular coherence. The situation is further complicated where institutions deploy graduate students to teach undergraduate courses.

There is a constant tension between teaching and research throughout higher education, not only in research universities. Institutions may demand productivity in the form of teaching, or of research, or both. They may require the one and reward the other, thereby sending double messages to faculty. Despite frequent assertions that undergraduate education is an important mission, it often occupies last place in the competition for faculty time and effort.

In short, the need to reward faculty for improving undergraduate education is not reflected in their current status and working environment. In fact, the current reward system appears to be at odds with that mission. Recognizing that improving faculty morale, collegiality, economic status and institutional commitment is extremely important, recent national reports on undergraduate education have urged colleges and universities to reward good teaching as well as good research and have set forth specific recommendations for doing so (AAC report, 1985; NEH report, 1984; NIE report, 1984; SREB report, 1985).

Challenge #8**To carry out more sharply defined institutional missions.**

The need to define institutional missions more sharply is not reflected in current policies and practices at both state and institutional levels.

Faced with declining resources and an increasingly diverse student population, colleges and universities are once again being pressed to sharpen their definitions of institutional mission. Despite their best intentions, however, both state and institutional leaders tend to promote uniformity rather than diversity and to use a single definition of institutional excellence rather than multiple definitions. For example, in governance as well as in finance, limited resources have been spread across and within institutions rather than targeted in ways that promote diversity.

The belief in "a hierarchy of institutions" that is said to exist within higher education (Astin, 1985) greatly influences conventional notions about educational excellence. The more prestigious institutions inevitably provide role models and set standards for all institutions. In response to internal as well as external pressures, lower ranked institutions strive to emulate the behavior and priorities of more highly ranked institutions. This means that excellence in undergraduate education is typically defined in terms of "institutional prestige" and "resources," and major research universities are widely upheld as the single model to which all institutions aspire.

These pressures for uniformity in a system of higher education long known for its diversity can shift academic values, institutional priorities and incentives for faculty away from undergraduate education. This is especially possible in community colleges and regional institutions whose primary mission is undergraduate education. The challenge, then, is not only to carry out more sharply defined missions, but also for four-year as well as two-year institutions to strive for excellence that reflects their distinctive undergraduate missions.

* * * * *

We believe that each of these challenges constitutes an opportunity for states and state leaders to create a positive environment for institutional change. With this in mind, we next suggest a transformation of the state role in undergraduate education, and we present our recommendations to state leaders.

**RECOMMENDATIONS TO
STATE LEADERS**

Some people in higher education view the prospect of new state involvement in undergraduate education as a mixed blessing: it could lead to more state funding, but it also could bring more state controls. Many higher education leaders argue that undergraduate education should be an internal concern of colleges and universities and that change must come from within.

We agree that lasting change must come from within. We realize that reform is under way. Nonetheless, we believe that the issues raised by the challenges we have described should be on the public policy agenda.

In their eagerness to address issues in undergraduate education, however, state leaders face a particularly vexing problem. When they turn to issues in other areas such as transportation or criminal justice or even elementary/secondary education, they have an array of policy tools for direct action. Yet when state leaders turn to higher education, they lack those tools and that precedent. What precedent there is may, in fact, not help shape the sorts of policies needed now. In the last 10 years, for example, there has been a slow but perceptible shift from concerns about financial accountability to concerns about academic accountability. With this shift has come new emphasis on reviewing academic programs, linking state budgetary procedures more directly to institutional mission and evaluating institutional performance.

A transformation of the state role is now necessary in order to address the new concerns and to meet the challenges and bring about much-needed improvement in undergraduate education. In the sections that follow, we present our recommendations to state leaders, recognizing that the recommendations themselves reflect subtle (and not so subtle) changes in state role. We present 22 specific recommendations under these broad strategies:

- **Place the challenges facing undergraduate education on the public agenda.**
- **Incorporate the improvement of undergraduate education into comprehensive state strategies for excellence in education.**
- **Enable colleges and universities to improve undergraduate education.**
- **Allocate resources to colleges and universities in ways that create a positive environment for change.**
- **Encourage the use of multiple methods of assessment to improve student and institutional performance.**

Place the challenges facing undergraduate education on the public agenda

State leaders can do a great deal to promote widespread discussion of the challenges and policy alternatives for dealing with them. Indeed, even to

understand the nature of the challenges and how they manifest themselves in each state requires strong leadership.

Recommendation 1: Improve public awareness of the importance of undergraduate education.

By the speeches they make and the language they use in policy and planning documents, state leaders can help the public understand how undergraduate education affects social, economic and cultural well-being. Successful economic development and international competition depend on excellence in undergraduate education. School reform and teacher preparation depend on excellence in undergraduate education. Even social responsibility and personal fulfillment depend on excellence in undergraduate education.

A governor, for example, may be able to do as much to promote improvement in undergraduate education in a state-of-the-state address as he or she can do through direct action.

Recommendation 2: Find out how challenges facing undergraduate education manifest themselves in the state.

The challenges described in this report exist throughout the nation. But to build support for reform, state leaders should collect and report evidence of challenges and how they relate to other critical issues already on the public agenda. Depending on the state context, some challenges and issues will be more important than others.

A special study group established by the state higher education board, a blue-ribbon commission or a special legislative interim committee can document challenges facing undergraduate education and set priorities.

Recommendation 3: Expect higher education boards and agencies to ask broad questions, provide direction and promote improvement in undergraduate education.

Since the capability of a board or agency depends heavily on the ability of its members, we recommend, with the Association of Governing Boards, that trustee selection and board appointments be made on the basis of individual abilities, knowledge of and commitment to the institution, and reputation for effective leadership (AGB reports, 1984, 1980). A special committee, for example, should be appointed to screen nominations carefully. The committee should examine biographical information, review supporting documents for each nomination, identify and interview finalists and prepare a statement about each person to be recommended for appointment.

We encourage boards to attract and select college presidents who are educators with a demonstrated commitment to undergraduate education and its improvement.

We encourage boards and agencies periodically to evaluate their own effectiveness. We also encourage them to give more attention to strategic

planning and policy leadership than to the details of regulation and internal management.

We think that board members might find statewide conferences a useful way to explore issues of undergraduate education and strategies for institutional renewal.

Recommendation 4: Sponsor statewide forums about undergraduate education.

Forums and informal discussions can help legislators, institutional leaders, faculty, students, parents, business leaders, community leaders, state higher education executive officers and other groups with a stake in higher education better understand each other's points of view.

These forums could be devoted to several challenges or limited to one specific challenge. They could also provide opportunities for college presidents and other institutional leaders to describe what their institutions are doing to improve undergraduate education. For example, by speaking out on the need to balance specialized training and general education, presidents can help improve public understanding of a major issue facing undergraduate education and the state.

Recommendation 5: Consult faculty on key issues.

We encourage state leaders to sponsor statewide "Talks With Faculty," like the "Talks With Teachers" some states have already held. The aim here should be to acknowledge the central role that faculty play in improving undergraduate education, seek their views regarding the issues and possible solutions, and involve them as early as possible in decision making and institutional change.

Recommendation 6: Find out what alumni and former students think about their undergraduate experiences.

Alumni and former students have an important yet often untapped perspective, one that can be extremely helpful in assessing the strengths and weaknesses of undergraduate education. How well, for example, did undergraduate education prepare them for their present careers? For citizenship and social responsibility?

Recommendation 7: Urge professional associations, accrediting bodies and employers to speak out on what constitutes necessary preparation for work.

Groups such as these can do much to help restore the balance between specialized training, aimed at preparing students for a single career, and general education, aimed at ensuring a common cultural heritage and preparing students for life. They can, for example, explain to students and their institutions that the workplace increasingly will need strong cognitive and interpersonal skills as well as technical skills.

Incorporate the improvement of undergraduate education into comprehensive state strategies for excellence in education

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A sustained commitment to reform of the public schools (kindergarten through 12th grade) is essential. But it is not enough. Expectations about what people should know are changing. These expectations apply to all people, not simply to those who go to college.

The improvement of undergraduate education should thus be an integral part of a comprehensive state strategy that coordinates collaborative action at all levels of education. State leaders should, for example, examine the recommendations of the Carnegie Forum's Task Force on Teaching as a Profession (Carnegie Forum report, 1986) in light of their potential impact on state policy and undergraduate education.

Recommendation 8: Inform students of new or revised standards for admission and give them the resources and time they need to meet those standards.

In recent years, many states have acted to ensure that students meet certain basic standards before they progress from one level of education to the next or enter a profession. Many other states now plan similar action. We recognize and support such efforts. At the same time, we urge states to balance standards with strategies for helping students meet higher expectations. We also urge states to provide the public schools with the resources and time they need to strengthen their programs.

Recommendation 9: Match requirements for remediation with support for remediation.

Raising educational attainment will require a continuing state commitment to remedial programs and programs that teach basic skills. These programs are necessary regardless of institutional mission or selectivity; a student in a major research university may be strong in mathematics but need remedial work in writing, for example. Failure to provide explicit funding for remedial programs will draw resources away from regular undergraduate programs, thereby weakening those programs.

Take, for example, a state that assigns primary responsibility for remediation to specific institutions such as community colleges. That state should then provide additional financial support to these institutions for that purpose and expect them to show results. (It also should give students who complete remedial courses an opportunity to transfer to regular undergraduate programs.)

Recommendation 10: Consider establishing "early assessment" programs

Early assessment programs are not designed to assess minimum competence. These programs typically assess the readiness of high school juniors for

college work in writing, science, mathematics and other areas in relation to their academic interests. In some cases, colleges inform students of their likely placement in college courses or programs, which lets students remedy deficiencies in their last year or two of high school.

Early assessment programs could also be used to identify high-risk students in middle school or earlier, then help them stay in school and, if appropriate, prepare for college work.

Recommendation 11: Encourage schools and colleges to provide educational alternatives for 16-year-old students.

Here we have in mind the recommendations made by the Carnegie Council on Policy Studies in Higher Education (1979). One alternative is to let students combine education, training for work, and work. Another is to set up programs that combine the last two years of high school with the first two years of postsecondary education, like the "2 plus 2" technical education programs recommended by the president of the American Association of Community and Junior Colleges (Parnell, 1985). A third alternative: early enrollment in a community college or other postsecondary institution. This option may be especially appropriate for helping underachieving students with academic potential gain self-confidence in an environment where other students are older and perhaps more serious about school. Still another possibility would be to let students stop out for a period of community service, with the assurance that they can return to a community college or other appropriate institution to complete high school graduation requirements.

Recommendation 12: Strengthen programs for assessing the educational needs of new and returning students.

The aim here should be to develop more effective ways of assessing the educational needs of all students, including older students who commute to campus and have major outside responsibilities like jobs and families. Providing these nontraditional students with necessary guidance and counseling is an area that requires special attention.

An example of a promising program for assessing the basic skills of freshmen is the New Jersey Test of Basic Skills. Designed jointly by secondary and higher education, the test is used to determine whether students are prepared for college work and to place them in remedial programs if necessary. High schools receive test results for use in improving their college-preparatory programs.

Enable colleges and universities to improve undergraduate education

State leaders can improve public awareness of the importance of undergraduate education, provide resources and create a positive environment

for change. But lasting improvement in undergraduate education must come from within colleges and universities.

Recommendation 13: Delegate responsibility to institutional leaders, enable them to improve undergraduate education, and encourage creativity and risk taking.

Improving undergraduate education is the responsibility of college and university faculty. Institutional leaders can do a great deal to bring about such improvement. We therefore encourage state leaders to delegate responsibility for improving undergraduate education to institutional leaders and to expect them to show results. Without proper encouragement from the state, however, institutional leaders may be too concerned about the possibility of funding cuts or other negative consequences to take risks.

Recommendation 14: Evaluate all state policies on higher education for their potential impact on undergraduate education.

Rather than examine each state policy individually, state leaders should look at how **all** state policies affect undergraduate education. Do they, for example, complement each other or send mixed signals to institutional leaders? Motivate faculty and administrators? Build a positive climate for institutional change?

How states review programs, appoint presidents and allocate resources, for example, all affect the capacity of boards of trustees and presidents to lead their institutions.

Recommendation 15: Encourage institutions to strive for excellence that reflects their distinctive mission in undergraduate education.

We believe that state leaders should call upon institutions to explore alternative models of institutional excellence. Each institution should, for example, decide how the teaching of undergraduates fits its mission and the needs of its students. Each institution also should review its mission periodically — preferably as part of monitoring its overall effectiveness in undergraduate education.

We also believe that, without evidence of some compelling societal need, states should not encourage institutions whose primary mission is undergraduate education to move toward greater and greater emphasis on research and graduate education. The tendency for institutions to strive for the sort of excellence major research universities exemplify can shift academic values, institutional priorities and incentives for faculty away from undergraduate education.

Using regulation to determine the relative importance of the teaching, research and public service missions in colleges and universities is not enough. State policies for finance and governance should support undergraduate education as the primary mission not just in two-year institutions but in some four-year institutions as well.

Recommendation 16: Provide incentives to institutions for encouraging faculty to improve undergraduate education.

We recommend that institutions consider these sorts of options.

Modify faculty reward systems in ways that recognize excellence in teaching as well as excellence in research.

Reward faculty scholarship that contributes directly to the improvement of undergraduate teaching.

Modify professional development programs in ways that enable faculty to fulfill their "corporate responsibility" to the undergraduate curriculum as a whole (AAC report, 1985) and to meet the changing needs of students. Examples: grants to faculty for teaching improvement and instructional development, seminars on effective teaching, exchanges of faculty between two- and four-year institutions, leaves of absence for reasons related to teaching rather than research, internships in business and government, and programs to retrain faculty for reassignment.

Develop ways of training faculty to work with underprepared students.

Allocate resources to colleges and universities in ways that create a positive environment for change

Control of resources is perhaps the most powerful tool states can use to affect the quality of undergraduate education. Our sense is that many states may not be fully aware of the effects of their funding policies. We therefore recommend that states thoroughly review their current funding policies before they consider alternatives.

We also make these more specific recommendations.

Recommendation 17: Find out how current funding policies affect the quality of undergraduate education.

A thorough review should provide answers to a series of questions, including: What is the state's financial investment in undergraduate education, through institutional subsidy and student aid? How does this investment relate to defined needs? How do tuition and student-aid policies relate to state goals for participation in undergraduate programs? Does the state's funding formula allocate more funds for upper-division students than for first- and second-year students? Does it provide incentives for institutions to improve undergraduate education?

Recommendation 18: Rely more on incentives and less on regulation to promote improvement.

We recognize that regulation can be an effective tool for encouraging institutional improvement and controlling program duplication. State-initiated program review, for example, can encourage institutions to improve undergraduate education. We do believe, however, that states can elicit far more positive, lasting institutional change through incentives like targeted supplemental funding. We also believe that states should not shift totally to a performance-based system of resource allocation; retaining some tie between enrollment and base budgets will encourage institutions to respond to changes in student demand.

One type of supplemental funding is a competitive grant program, for which the federal Fund for the Improvement of Postsecondary Education offers a model. A state that decides to set up this type of program could solicit proposals in broad categories (e.g., to use assessment to improve student and institutional performance) or encourage institutions to submit proposals that address state priorities (e.g., to carry out more sharply defined institutional missions). The state should establish the criteria for awarding funds; the selection process; the number, size and duration of awards; the extent to which recipients can build grants into their base budgets; strategies for handling institutions that do not receive awards; and provisions for evaluating projects and the overall program.

Another type of supplemental funding is an incentive grant program, which encourages specific changes in institutional behavior. An example would be an incentive grant of, say, 2% of the base budget to institutions that develop a promising strategy for improving undergraduate education. Institutions could use such funds to articulate goals for undergraduate education, determine how those goals can be reached and measure accomplishment. The impact of incentive grants depends on the reasonableness of what institutions must do to qualify for funding, how much the activities funded actually contribute to improvement, the time allowed for planning and implementation, and how strongly faculty and institutional leaders support the effort.

Recommendation 19: Give institutions (and/or campuses) financial/management flexibility and eliminate negative incentives for improvement.

Here we recommend that state leaders reverse the trend of the previous decade. We urge them to exempt higher education institutions from detailed budgetary and procedural controls applied to other state agencies, reduce the number of line items in the budget for higher education and delegate financial/management responsibility to the institutions. We also urge state leaders not to consider negative incentives such as requiring institutions to implement a state-mandated system to measure and report student outcomes by a certain year or lose a designated percentage of their base funding.

Recommendation 20: Curb the expansion of student indebtedness.

This recommendation is especially important given the challenges of improving overall college participation rates and preparing students for work as well as citizenship in a changing society. At private and public colleges alike, for example, middle- and low-income students now face \$10,000 in

potential indebtedness for a four-year degree (Marchese, 1986). To avoid such debt, some students (especially minorities) may choose not to attend college at all. For those who do enroll, some may choose to attend an institution where tuition is lower, work longer hours and pursue majors that promise higher-paying jobs in order to help manage debt. Some also may choose to postpone graduate studies (or stretch them out over time). We are especially concerned about these and other adverse effects of student indebtedness—and about any substantial increases in such indebtedness.

Encourage the use of multiple methods of assessment to improve student and institutional performance

Assessment, broadly defined, can be a powerful set of tools for improving student and institutional performance. It can give students constructive information about their performance that then guides their development. It can also help shape the development of programs, institutions and systems of higher education.

Recommendation 21: Monitor the effectiveness of the state's system of higher education in meeting state goals for undergraduate education; report results periodically.

We believe that the effectiveness of a system of higher education is greater than the sum of the effectiveness of institutions in that system. Questions about system effectiveness should therefore be broader than those asked about the effectiveness of a single institution. The routine operations of colleges should be part of institutional monitoring, not statewide monitoring.

We therefore believe that each state should develop "indicators of effectiveness" for its system of higher education. These indicators would provide a useful signal to institutions regarding state goals for undergraduate education. They would also provide institutions with useful data for comparing their own effectiveness to that of their peers. System indicators should include (but not be limited to) student demography, program diversity, adequacy of instructional and learning resources, students' preparation for college work, participation and completion rates, student satisfaction and placement, alumni and employer satisfaction, work-force development and overall educational attainment.

We urge states not to develop a single assessment instrument to be implemented uniformly at all institutions, or even across institutions with similar missions. Recognizing as we do, however, the importance of measuring educational attainment, we urge state and institutional leaders to explore the feasibility of a program similar to the National Assessment of Educational Progress (NAEP) for use at the national, regional and state levels. (Using sophisticated statistical sampling techniques, NAEP is designed to measure changes in the educational status of young Americans over time.)

Recommendation 22: Encourage each institution to develop its own "indicators of effectiveness" in undergraduate education; report results periodically.

We believe that states should encourage each institution to develop, with full faculty participation, its own indicators of effectiveness. These indicators need not be totally congruent with state goals for undergraduate education. Rather, they should reflect the institution's distinctive undergraduate mission. Like indicators of system effectiveness, however, they should also provide for some comparability across institutions with similar missions.

Institutional indicators should be based on existing information whenever possible. They should include (but not be limited to) student participation and completion rates, measures of student-faculty interaction, faculty contributions to the improvement of undergraduate education, student performance within and among majors, writing samples, senior projects, student satisfaction and placement, alumni and employer satisfaction, and faculty development.

The purpose of measuring progress through these sorts of indicators should be to help the institution improve teaching and learning. Regional and specialized accreditation, along with institutional accreditation and periodic review of any programs not covered by accreditation, can be an integral part of institutional assessment. Although the accrediting community itself acknowledges that at times it has been more concerned with process and resources than with results and learning outcomes, accreditation seems to be moving from "largely quantitative and prescriptive approaches to more qualitative standards and increased emphasis on peer judgment" (COPA report, 1986). We encourage accrediting bodies to continue moving in this direction and to place even greater emphasis on evaluation of student and institutional outcomes.

To build public confidence, state leaders should encourage institutions to report periodically on how well they are meeting their goals in undergraduate education.

A final word of caution. We feel that all methods of assessment — of systems, of institutions, of programs, or of students — should be guided by these principles.

Distinguish between assessment and testing. Test results can be a useful part of assessment, but they should not be the primary basis for judging effectiveness in undergraduate education. For example, the standardized tests of basic skills that several states have used to assess system effectiveness were not designed for that purpose, and using test results to drive changes in undergraduate education could have exceptionally negative consequences. Qualitative data must be considered as well as quantitative data.

Use more than standardized tests of basic skills to measure the outcomes of undergraduate education. To evaluate undergraduate education solely on the basis of minimum competence contradicts its very purposes. The outcomes must include knowledge, skills and attitudes that go far beyond basic skills.

We recognize the efforts of several states to implement statewide tests of basic skills at major points of transition from one level of education to the next. But these tests should not be used to evaluate the extent to which students have been changed by their undergraduate experience.

Use assessment to improve teaching and learning. Assessment for screening and accountability should not be confused with assessment as a means of improving teaching and learning. To document performance is not to improve performance. Assessment should not be an end in itself. Rather, it should be an integral part of an institution's strategy to improve teaching and learning and of the state's strategy to monitor the effectiveness of its system of higher education.

ONWARD

Throughout this report we have assumed that successful economic development, international competition, school reform and teacher preparation all depend on excellence in undergraduate education. In a very real sense, then, the future of our nation depends on the quality of undergraduate education — not just in the longer term but in the years immediately ahead. We therefore believe that the most urgent priority for state leaders should be to raise the level of public debate about the challenges facing undergraduate education, about policy alternatives for meeting them and about commitment to action. In the past our attention has frequently been diverted, our energies misdirected. If undergraduate education is to respond to the ever-changing needs of contemporary society, it must be reinvigorated for our times. Its purpose must be reformulated. Only then can the undergraduate experience be made stronger — different, no doubt, but stronger. Let us move onward, then, committed to genuine innovation. Nothing less will do the job.

**WORKING PARTY ON
EFFECTIVE STATE ACTION
TO IMPROVE
UNDERGRADUATE EDUCATION**

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John H. Casteen III, president, University of Connecticut
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The Honorable Wilhemina Delco, Texas state representative
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