

UNIVERSITY OF CALIFORNIA

A Perspective on Developing a New Master Plan

Forty years ago, California faced a difficult dilemma as the first “tidal wave” of students known as the “Baby Boom” approached college age and the state lacked the space or coordination to handle them at its public postsecondary institutions. Leaders of the time formulated the Master Plan for Higher Education in response to that impending crisis. The Master Plan committed the state to providing universal access to postsecondary instruction for all that could benefit from it.

Education once again commands the urgent attention of Californians. This time the focus is K-12 and the crisis is not imminent—it is here. Numerous indicators tell the story of a public school system with failures primarily in urban and rural communities that far outweigh pockets of success in affluent metropolitan suburbs. The challenge now is to provide all students with the educational opportunities that were taken for granted in prior generations. The future strength of California—its economic, social, cultural, and intellectual vitality—rests on restoring preeminence to the state’s elementary and secondary school programs. At the same time the state needs to preserve its excellence in higher education as it faces the challenge of enrolling unprecedented numbers of new students over the next decade.

The University of California recognizes the reciprocal links that bind together its future with the quality of public elementary and secondary education in the state. To craft a new educational framework, UC believes policymakers should look at both the essential elements of the original Master Plan as well as current imperatives for reform. Charting the course that will best enable all members of our society to succeed in school, college, and work is daunting. California faces overwhelming growth in the size and diversity of its school age population, inadequate numbers of appropriately trained teachers to staff classrooms, insufficient funds to update old schools or build new facilities, and no clear lines of authority over K-12 curricula, standards, or evaluation. Given these circumstances, how can the state plan to provide a high quality education for all residents?

To address this challenge, the state convened the Joint Committee to Develop a Master Plan for Education, Kindergarten through University more than two years ago. The Joint Committee appointed working groups with a broad range of experts from myriad educational interests to examine issues in seven areas: governance, student learning, school readiness, professional personnel development, finance and facilities, emerging modes of delivery/certification/planning, and workforce preparation. The work groups submitted reports to the Legislature in February and March 2002. The Joint Committee will develop the new Master Plan beginning in April with a goal of completing deliberations before the end of the legislative session in the fall of 2002.

The University values highly efforts of the Joint Committee to initiate change across the educational continuum. To assist committee deliberations, UC offers here its perspective developing a new Master Plan to serve students from kindergarten through college. Specifically,

- (1) Policymakers should use the successful attributes of the original Master Plan for Higher Education as templates for the new K-16 framework.
- (2) Operating within this framework, the University of California intends to continue to expand its efforts to partner with elementary and secondary entities for educational improvement.
- (3) The new Master Plan should preserve the strengths of California higher education built over the last four decades as well as accommodate changing demands on public postsecondary institutions.

LESSONS FROM THE ORIGINAL MASTER PLAN

While successes of the existing Master Plan should not be the focus of current discussions, authors of the new framework can draw lessons from it. The enduring strength of California's Master Plan for Higher Education derives from its clarity of purpose. It defined state goals for higher education, assigned responsibility for achieving those goals, provided the necessary authority and resources, and by linking those goals to very visible and understandable commitments to the public, had a built-in mechanism of accountability.

The overarching state goal was "to provide educational opportunity and success to the broadest possible range of citizens" at the postsecondary level. At the time, children of the postwar "baby boom" were reaching college age and vast increases in college enrollment were projected. Rather than devising ways to limit access to higher education, the Master Plan committed California to one of most extensive promises any state government has ever made to its citizens. The state chose to open up higher education to all Californians who wished to attend.

Equally important was delineation of a clear strategy to achieve this goal. The Master Plan differentiated the missions of each segment as a mechanism to contain costs and provide broad access to higher education. By distinguishing functions and admissions pools, the state reduced duplication of expensive programs and limited the number of high-cost institutions. High-cost graduate programs were limited in a way that both saved the state money and ensured their high quality. The state assumed responsibility for the costs of instruction and adopted a realistic policy for imposition of other fees. Student financial aid was expanded. All students could receive an education that was affordable.

In addition, the Master Plan ensured accountability for access by establishing a three-way compact between the state, its institutions of higher education, and its citizens. California's

public universities and colleges promised to guarantee a space to every high school graduate and adult over the age of 18 who desired to attend. The Governor and Legislature committed to funding all of these students. Taxpayers agreed to support these costs, provided that institutions would end unnecessary program duplication and unwarranted geographic expansion. Moreover, the Master Plan framework allowed students, parents, and other residents to know what level of achievement was necessary to obtain admission to a public institution and what level of resources was needed to attend.

CHANGING TIMES

Creating a new Master Plan with these elements will be challenging given that circumstances of the day are extraordinarily different—more complex and more constraining—from those present in 1960. While precipitous enrollment increases characterize both periods, the quality of K-12 programs was assumed then and California ranked highly on student achievement measures.

Today many students cannot pursue higher education because they are not adequately prepared at the elementary and secondary levels. K-12 has been unable to provide a quality education to large numbers of children because of exceptional growth in the state's school age population, growth in demographic groups that need additional attention (for example, English language learners), and insufficient resources. California has too few qualified teachers, inadequate facilities, and insufficient funds to succeed through current approaches. Moreover, effecting change via K-12 finance mechanisms presents difficulties since the responsibility to educate students is often distinct from the authority to raise revenues in support of that effort. Collectively, these factors debilitate K-12 programs and undermine the state's commitment to higher education access. Too many of California's students receive a poor education that deprives them of any real opportunity to attend college.

Other changes since 1960 complicate the level of coordination and resources necessary for major educational reform. The state's fiscal structure is not as supportive of public services, local fiscal authority has been constrained by initiative and legal decisions, and other state entities are much more competitive for state general fund support.

MAJOR ELEMENTS OF A NEW MASTER PLAN

To meet educational challenges in this environment, it is crucial that any new framework include a clear sense of purpose, specific state goals, mechanisms to achieve goals set forth, proper delineation of responsibility, authority, and accountability, and recognition of the shared nature of responsibility for education. These features all worked very well in distinguishing California's system of higher education under the original Master Plan. The

University believes it is imperative to blend these essential elements with new conceptions of education to address the major issues facing K-12.

Accordingly, a new Master Plan should:

- retain the three-way compact established forty years ago between California, its educational institutions and the citizens of the state;
- include broad statements of state policy that reaffirm the fundamental principles of access and educational opportunity;
- identify clear and attainable state goals for education;
- develop strategies for achieving those goals that assign formal responsibility and authority to the various educational entities without being overly prescriptive;
- provide adequate resources or authority for obtaining resources to meet the goals;
- imbed systems of accountability within the plan that monitor and encourage progress toward meeting the state goals for education.

STATE GOALS FOR K-12: TO BE AMONG THE BEST IN THE NATION

As uniformly articulated by the Joint Committee and its working groups, the primary aim of a new Master Plan is to provide a high quality education to all California residents. The University supports this goal both for K-12 and higher education. We also recommend that the new Master Plan better articulate this goal by stating that an indicator of its attainment would be that California's schools and K-12 student achievement rank among the best in the nation by some future date.

However, because of the issues articulated above, the challenge in obtaining this goal will be greater in the K-12 schools than in higher education. Because of that, we believe that this review of the Master Plan needs to focus on K-12 and the ways in which all of California education can come together to achieve state goals for K-12. To that end, much of this paper articulates the ways in which the UC can partner with the public schools, using its capacity and resources in productive ways to assist the state.

FOUNDATIONS OF UC INVOLVEMENT WITH K-12

The magnitude of disjuncture between potential state goals for K-12 education and actual student achievement necessitates the University's active involvement in educational improvement efforts. Indeed such involvement aligns with UC's mission of—and historic commitment to—public service. Founded as a land grant institution under the Morrill Act of 1862, the University's charter includes a mission of service to the state that, from its inception, led UC to dedicate its resources to the key societal problems of the day. In the late 19th century, a scarce food supply and access to natural resources were among the state's most critical problems. Thus, the University's mission then focused on agriculture and mining. Today, by almost any measure or public survey, the quality of K-12 schooling ranks as among the most critical of California's key societal issues and the University needs greater engagement in addressing this issue.

In addition to public service, the University's teaching and research missions provide a basis for engagement with the public schools. UC is the primary research entity for California and new knowledge promulgated by faculty in this endeavor can be applied to education just as it is applied in many other fields. Whether investigating topics related to individual students, teachers and administrators, elementary and secondary schools, or the state school system as a whole, University faculty in education, psychology, public policy, law and numerous related disciplines study issues relevant to the educational challenges California faces today. UC's interrelationship with K-12 is also born out in its teaching mission. Many of the state's teachers and administrators attend a UC campus to obtain a baccalaureate degree in a discipline that provides the foundation for their preparation as educators. The University is responsible for graduate instruction that provides the master's and doctoral level work for many professionals and leaders in the field of education.

Accordingly, the tripartite mission of teaching, research and public service obligate the University to assist the state in addressing the issue of how to provide a high quality elementary and secondary education for all California residents. UC must do its part to make education an integrated endeavor from pre-school through college. The University's current involvement with K-12 includes a rich variety of activities—outreach programs, professional development initiatives for teachers and administrators, collaboration on curricular standards and assessment tools, teacher education programs, degrees in educational leadership, and more. A number of University faculty and staff have dedicated their careers to improving education for the state's school children.

Without diminishing the importance of these efforts, the University has not until now made a full, coordinated institutional commitment to addressing the quality of K-12 education. The University of California can assist in improving K-12 education by offering its unique strengths and resources in cooperation with the entities given primary responsibility for K-12 education. The tools at UC's disposal—research, new disciplinary knowledge, faculty expertise, and instructional programs for educators—cannot solve all of the

problems facing public schools in California. Nonetheless, they form the basis for the University's contribution to a K-12 educational improvement.

PRINCIPLES FOR UNIVERSITY ENGAGEMENT WITH ELEMENTARY AND SECONDARY SCHOOLS

The future of the University of California is intimately tied to the quality of the K-12 education system and the extent to which the University can attract, retain, and graduate a population of students who represent the rich diversity of California. More broadly considered, UC must work to ensure that all state residents value the capacity of this institution to contribute solutions to society's most complex problems, contribute to the overall welfare of this state, and provide essential societal goods. If vast numbers of today's young people grow up disenfranchised from higher education generally, and if they remain skeptical of the University's mission and fundamentally unaware of the public good served by this or any other research university, then UC leaders have reason for concern.

As presently constituted, UC outreach is a necessary but not sufficient dimension of UC's work with K-12. The high profile focus on generating more diversity among college-bound high school graduates is an extremely worthy and important goal. However, this focus does not address the full nature or magnitude of the challenges in K-12—the glaring inequities in opportunity to learn and teacher quality, for example, which fall disproportionately on poor students, students of color, and students whose primary language is not English.

There is a need for UC to have a broader, deeper, more ambitious engagement with K-12. The principles described below are compatible with and complementary to the University's outreach efforts, yet frame the challenges facing young people, K-12 educators, and policymakers in a more comprehensive context. The ideas presented in this paper expand upon a perspective advanced in the 1997 report of the UC Outreach Task Force, "New Directions for Outreach." Namely, the report noted that outreach was often viewed as "a peripheral, rather than core, University function." It recommended establishing faculty-based research units to coordinate research, development, and evaluation of UC outreach programs. By involving UC faculty more centrally in intellectual inquiry focused on the learning continuum (K-12 through college and graduate instruction), such research units could elevate the importance of outreach and other UC involvement with schools.

UC President Richard Atkinson recently affirmed the University's progress toward achieving this goal. In a message that accompanied the fall 2001 status report on UC educational outreach and K-12 improvement programs, President Atkinson noted that, since expansion of outreach efforts and with the support of the Governor and Legislature, "faculty and staff on (UC) campuses have elevated outreach and drawn it into the academic core of the University."

The principles outlined below build upon the aim of integrating all forms of K-12 involvement, into the core of University activities. They build upon ideas presented in a comprehensive report prepared by the Advisory Committee for Planning Professional Programs in Education at the University of California, chaired by Professor Jeannie Oakes. That report, “A Call to Action,” (1993) is instructive in its clear presentation of problems and recommendations for change.

1. UC’s academic and professional work in education should be dedicated to a mission of research, teaching, and service that has as its highest priority the goal of ensuring equal access, opportunity, and benefit to young people who have historically been least well served in public schools and underrepresented in higher education.
2. The UC mission in education, once defined, must be comprehensive in its manifestations and genuinely distinguish UC’s advanced degree and credential programs, induction and professional development programs, policy studies, and research.
3. The faculty and programs of undergraduate preparation of students in the *disciplines* must articulate in synergistic, mutually beneficial ways with the faculty and academic and professional programs in *education*.
4. UC’s work with K-12 and its academic programs in education must build upon the strengths of UC faculty—specifically (a) discipline-specific work devoted to the development of academic content knowledge, (b) research and analysis, and (c) creative and innovative approaches to complex problems.
5. UC professional development programs for educators must support the success of teachers and administrators who are at once (a) employees of organizations that have legitimate authority to require and expect certain actions *and* (b) independent professionals who have their own interests, priorities, and points of view. UC must prepare and empower teachers, principals, and others to be successful in both roles.
6. UC academic and professional programs in education must recognize and embrace the knowledge of accomplished teachers and develop program structures that systematically engage their expertise and experience.
7. In the context of its mission, UC must develop and enhance structures of accountability for its academic and professional work in education with an unwavering public commitment to assessing student and teacher outcomes.

UC AS A PARTNER IN K-12 EDUCATIONAL IMPROVEMENT

To help create a new integrated Master Plan, the University of California intends to:

- More effectively coordinate UC's existing activities devoted to supporting K-12.
- Initiate new efforts to help improve elementary and secondary education.
- Better integrate into core University missions those programs of collaboration with and assistance to K-12.

UC can draw on its strengths, applying these strategies to critical points of intersection with K-12 for collaboration in these key areas:

Educational leadership: UC is committed to taking a number of actions to help meet the need for educational leadership, including (a) expanding existing UC and joint CSU/UC doctoral programs in education, (b) creating new programs to ensure that the Ed.D. is available throughout the state and is accessible to working professionals, (c) assessing regional needs for educational leadership with CSU and the other educational sectors, (d) ensuring that UC programs are aligned with those needs, including the expansion of educational leadership programs that may not result in a doctoral degree. The University has reached a recent agreement with CSU to expand joint Ed.D. programs in this area and continues to implement the new Principal Leadership Institutes. In addition, the University is developing a new California Institute for Educational Leadership.

Teacher training: Just as high-quality faculty are the key to success in higher education, having an adequate supply of excellent teachers is crucial to improving K-12. UC can contribute to the quality of California's teachers in a number of ways:

Increase enrollment in UC credential programs. UC is more than doubling the number of credential enrollments for teachers and administrators as part of its partnership with the state. While not specifying particular targets, the Master Plan should anticipate how the state forecasts the overall number of teachers needed and identifies those subject areas and geographic locations facing shortages. It should enable the state to work with UC, CSU, and AICCU to set goals for teacher credential production.

Provide high quality teacher credential programs with status similar to that of other UC professional programs. Currently, the state regulates teacher preparation programs to a degree not seen in other professions. UC supports efforts to ensure that University teacher preparation programs are seen as high-quality, freestanding professional programs linked to research and service. The state has a role in setting requirements for the teaching profession, but it should not be directly regulating higher education curricula through extensive course mandates. In addition, the state should resist current attempts to make teacher training primarily an undergraduate activity. Such a directive would not allow enough time for adequate preparation of

prospective teachers in subject matter areas and pedagogy. It would also further diminish the stature of teaching as a profession, setting teaching apart from other professions such as law and medicine that require significant advanced study beyond the baccalaureate.

Give UC undergraduates the opportunity to view teaching as a viable career option. The University should pursue new and expand existing programs that encourage the best and brightest students in the state to pursue careers as teachers at the conclusion of their baccalaureate studies. Programs already in place include the Community Teaching Fellowship. This program places undergraduate UC math and science majors as teacher assistants in K-12 schools and has shown success in exciting these students about teaching as a possible career choice. In addition, UC should examine how widespread such programs are and how departments or disciplines that offer students this type of teaching opportunity link to campus service learning or community service programs

Offer creative, cutting edge teacher professional development. The University should strive to be one of the state's most credible and engaged providers of professional development for teachers and administrators. Recognition of UC as a provider of high quality professional development would derive from preeminence in transmitting the latest findings for both disciplinary knowledge and pedagogy. The University does not need to be the primary provider of professional development, but it should be at the cutting edge of articulating effective strategies for the state to implement to ensure that teachers are kept current in these areas.

Partner with K-12 to share subject matter expertise for both curriculum and assessment. In addition to professional development, the University should work to join its subject matter expertise with that of K-12 education professionals to develop state policy on curriculum and assessment. Under the current scenario, the state adopts curricular standards and assessments without sufficient or effective dialogue between relevant K-12 and higher education interests. Similarly, some educators and members of the state government feel that higher education admissions and placement requirements are adopted without regard to their effect on high school curricula and college preparation practices. Collectively, state policy makers, K-12 educators, and disciplinary faculty in higher education need to forge a more collaborative, consultative process for adopting new standards and assessments.

Admissions policy and college preparatory curricula: The University's admission requirements align with those of the California State University and set a high standard for student achievement at high school graduation, the culmination of students' public schooling. UC should maintain this high standard as well as its efforts to reach out and provide assistance to disadvantaged students who face many challenges in meeting the academic goals that enable them to attend college. As a related matter, the University should work with K-12 educators to align high school assessments with faculty expectations of competency in various disciplines.

Research into effective student learning and best practices: UC should continue to use and enhance its research capacity to identify effective student learning strategies as well as best practices for teaching and administration that can be incorporated on effectively into California's large and diverse K-12 educational system. UC has significant capability in this area—in each of the campus's education schools, in multi-campus research units (such as PACE, UC ACCORD, and the new leadership institute), and in numerous disciplines outside of the education schools. UC should consider ways to better support, disseminate, and translate this research in so that it can be of use to the K-12 schools.

Supplemental programs to encourage college going: Because they have the best understanding of what is needed to gain admission to and succeed in college, postsecondary institutions must invest in programs that apprise K-12 students, parents, teachers, counselors and others of these requirements. The University has a variety of programs to relay this information to various constituents—information on course-taking patterns for middle and high school, how and when to apply to college, planning for educational expenses, etc. In some cases, the aim of information dissemination efforts is simply to acquaint some students with the notion of college attendance, especially for poor and immigrant populations. Though such informational campaigns suffered some cutbacks under recent budget constraints, the University continues to support informational outreach along with other supplemental programs that encourage college attendance.

All the foregoing constitute ways in which UC can partner with K-12 to help improve elementary and secondary education by strengthening existing links and establishing new ties to students and schools. Cumulatively, these connections form a closer, reciprocal, more effective integration of University programs with the whole of K-12 education. While top-down governance changes may facilitate some specific cooperative efforts, the faculty-to-faculty and campus-to-school linkages do much more to fuel improvement of educational circumstances within the state. The school-University partnerships that have been created in the last five years are an example of this approach. They provide new foundations upon which ongoing collaboration can build—foundations which hopefully will endure given the commitment of individuals involved, the personal relationships formed, and the respect engendered for educators at all levels. The new Master Plan should provide additional avenues and resources to form these links as well as incentives to make them successful.

HIGHER EDUCATION: BUILDING ON THE ORIGINAL

While K-12 commands primary attention in the context of current reform, a candid, thorough assessment of Master Plan principles for higher education is necessary to complete the review. Today's most salient concerns will be addressed most effectively if the state retains the vision captured in the best parts of the original Master Plan. Significant elements of the landmark agreement—universal access and differentiation of mission and function—are fundamental to the strength of state's higher education system as a whole as well as achievements of the respective segments.

Since 1960, changes in the demographic and fiscal environment create challenges for maintaining the success of the original higher education Master Plan just as they impose obstacles for K-12. For instance, college students today are very mobile. They are more likely to exercise choice about the institutions they attend than were their counterparts forty years ago. Given this circumstance, some policy options adopted in 1960 would not be easy to implement now. The original Master Plan redirected 50,000 students from UC and CSU to the community colleges. Both the mobility of today's students and their exercise of choice regarding college attendance would make it difficult to implement a similar redirection now absent significant incentives. Moreover, today a college degree is perceived as more important for entry into the workforce and as an essential component of economic advancement. University research and graduate education are seen as more vital to the state's economic future. At the same time, increased competition for state funding as well as the recent economic downturn have made state support for these functions less certain.

Thus, there is a need to better delineate the state's goals for higher education beyond broad statements about access and designation of distinct segmental missions. The reason the 1960 Master Plan worked so well is that there was a willingness to accommodate near-universal access by prioritizing access to each of the state's educational institutions. To develop a new master plan, there must be a willingness to state at the outset that different paths will be developed for students seeking postsecondary education, and that the rules of access to the various paths will be fair and well understood by the general citizenry. Before the specific pathways are constructed, however, a clear, common understanding of institutional and state higher education goals is needed.

The following Master Plan principles generally represent the overarching goals for higher education in California:

ACCESS: Every Californian, regardless of place of residence within the state or previous educational attainment, should have the opportunity to obtain a postsecondary education.

AFFORDABILITY: Access to postsecondary education should be provided regardless of income.

QUALITY: Access must not be defined simply as having a place in a college or university but rather it must be access to the opportunity to obtain a quality education within that college or university.

The Master Plan mission statements for the respective segments of higher education equate to the essential state goals for each. Accordingly, state goals for the University are embodied in UC's mission statement: research, teaching, public service—the creation and transmission of knowledge, dissemination of knowledge, application of that knowledge in service to society, repository and archive of accumulated knowledge, engine for economic, social, and cultural development.

With these state goals and university missions in mind, UC should pursue positive change and improvements in California's educational system. Commenting on Master Plan endeavors—old and new—places the University of California in a somewhat awkward position. First, while UC wants the state to retain crucial elements of the original Master Plan that have served California and the institution well, such defense is often mistaken for advocacy of the “status quo.” Like other Californians, UC faculty, staff and students clearly see the need for educational change. California must create better educational opportunities for disadvantaged residents. To this end, the University values highly efforts of the Joint Committee to initiate change across the educational continuum.

California now faces the challenges of a second tidal wave of students and significant, rapid shifts in the state's demography, economy and culture. We believe the new Master Plan needs to reaffirm the aspects of the original Master Plan that have been successful as a foundation for addressing some key issues facing the state. Specifically, we have identified the following key issues that a new Master Plan should attempt to address:

1. How does the state accommodate Tidal Wave II? What recommendations does the University have to ensure that this influx of students is guaranteed continued access to a high-quality higher education? How do we ensure demographic and geographic diversity? As noted, the original Master Plan provides a template for addressing the access issue. The current challenge is to develop state support for the more than 700,000 additional enrollments expected in the next decade. Assuming a robust economy, the state should be able to fund access in the traditional sense, but it is unclear if there is the political will to dedicate the necessary funding. The Master Plan should first and foremost seek to create that political will for adequate state resources to support higher education. We urge the Master Plan committee to develop an approach that ensures that the next generation of students gets the same kinds of opportunities as were afforded the Baby Boom generation. However, a new Master Plan should also contemplate other solutions for developing the resources: new policies on fees, new alternatives for raising revenue, and consideration of additional efficiencies to reduce costs. But the new Master Plan should not excessively focus on efficiencies. It must recognize that knowledge is expanding in depth, breadth, and complexity and educating future students will inevitably require an investment of more rather fewer resources per student.

2. Diversity and opportunity in higher education. California has become one of the most diverse societies in the world. It is estimated that by 2005, one in every three Californians will have been born outside the U.S. Nearly four in ten Californians speak a language other than English in their homes. One in five K-12 students in the state are not proficient in English.

Every segment of higher education is less diverse than the population or the K-12 schools. Though amazingly diverse, UC has a smaller proportion of students from underrepresented groups than CSU and the community colleges. The last two reviews of the Master Plan focused heavily on increasing the number and proportion of underrepresented minority groups in higher education. Proposition 209 prohibits the use of race or ethnicity as factors in most decisions about access to opportunity in higher education and some of the prior policies need revision or replacement. Thus, this Master Plan needs to look for creative approaches to issues of diversity.

We would recommend that the new Master Plan embrace the path being pursued by the University. To meet their responsibilities to a diverse and knowledge-based society, the colleges and universities must choose the state's highest-performing students in ways that are demonstrably inclusive and fair. We should do this by assessing students in their full complexity, which means considering not only grades and test scores but also what students have made of their "opportunities-to-learn," the obstacles they have overcome, and the special talents they possess. UC has moved in this direction via four proposals set forth by President Atkinson: (1) comprehensive review of applicants for admissions; (2) a new definition of eligibility (Eligibility in the Local Context) that considers the most worthy students in every high school; (3) Dual Admissions, in which students are admitted by UC and a community college simultaneously; and (4) changes in test requirements (including the SAT I) that seek to align the tests with content actually taught. These proposals focus on UC, but could be applied more broadly as state initiatives.

3. Explicit recognition of economic development as a state goal for higher education. The current Master Plan does not state that one of the key functions of higher education is to create the advances in knowledge that drive California's economy. An increasingly educated workforce is necessary to operate this knowledge-driven economy. The new Master Plan should explicitly recognize these purposes of higher education and should delineate responsibility for knowledge generation and workforce training. This recognition should not come at the expense of higher education's functions in social and cultural development, but rather as recognition of higher education's unique importance to the state's economy and fiscal health.

Once this goal for economic development is articulated, two other key issues emerge for higher education:

4. Research and Graduate Education. The state will be hard-pressed to accommodate the surge of undergraduates. How does California ensure that research and graduate education are given adequate state support in an environment of fiscal constraint and enrollment growth? Since 1960, the proportion of graduate students at the University has declined

dramatically. The state needs to adopt policies that recognize that graduate students are essential to the new economy and need to be supported by the state. Similarly, the state should recognize that California's pre-eminence in competing for federal and other research support is a direct result of Master Plan policies that sought to explicitly identify research institutions and support the faculty at those campuses with resources to ensure they could carry out their research responsibilities.

5. Workforce preparation at both the advanced and entry levels. The state's economic needs mean that higher education needs to think carefully about preparing the future workforce for the state and ensuring that it have the skills to compete nationally and internationally. There are two areas the state should consider in a Master Plan:

Degree attainment. What are the state goals for individuals to receive various degrees, certificates credentials? What proportion of the California population should be obtaining baccalaureate (BA) degrees? Current data suggests that California produces a low number of BA degrees but has a high percentage of BA degree holders in its adult population. This suggests the state imports many of its baccalaureate degree recipients. The state should set a goal to increase its proportion of "home-grown" baccalaureate degree holders and to monitor not only access to, but also degree completion in our colleges and universities.

General workforce preparation. While California clearly needs to set as a goal increasing the numbers and proportion of Californians completing college, it also needs to recognize that large numbers of students will enter the workforce prior to completing college. How can the new Master Plan goals acknowledge vocational and other forms of job training as a viable, productive alternate to postsecondary instruction that provides the best mechanism to employ the human capital of a significant share of the state's population?

6. Quality of undergraduate education. As enrollment surges are accommodated, how do we ensure a quality undergraduate experience for our students? As the state moves into a new era of constrained resources, there will be pressures to increase student/faculty ratios and reduce funding for student services. We believe the state and its colleges and universities should continually examine the undergraduate experience and ensure that students are well served with the resources we are devoting to their education. Research on effective learning at the undergraduate level shows that residential education improves the quality of the undergraduate experience. However, most reforms proposed in recent years propose methods of educational delivery at odds with the residential education model. Policy choices on methods of education needed to be informed by research and should ensure that quality is not compromised for quantity.

7. Accountability. How should progress toward state goals be measured? Should qualitative goals accompany numerical or statistical standards? Accountability was achieved in the first Master Plan because clear delineation of responsibilities was coupled with a clear understanding of the qualifications for access—if a student meets the

qualifications, they were entitled to a place in UC, CSU, or the community colleges and the state agreed to fund that access.

One model of accountability that we would recommend as the basis for a new Master Plan is the existing Compact/Partnership model in use for UC and CSU. Specifically, this model establishes a *two-way* partnership between the state and higher education institutions in which the state commits to an adequate and stable level of funding for higher education in exchange for a commitment by the institutions to achieve specific outcomes in areas that further state goals (e.g., providing access to all eligible students, reducing “time-to-degree,” increasing the production of graduates in high-need areas like teaching and engineering/computer science, etc). In a sense, this model functions as the year-to-year implementation of the Master Plan. State goals are made explicit and institutional progress is monitored. By linking achievement of the goals to explicit state commitments on resources, it makes clear that reducing resources will have particular and usually adverse consequences for the state. It establishes a baseline for state support. It also creates an on-going dialogue on goals and the best strategies for achieving those goals.

TOWARD A NEW MASTER PLAN

The University welcomes the development of a new Master Plan for Education. It needs to be informed by the original Master Plan for Higher Education, both substantively and as a template for how a Master Plan can work. The educational institutions themselves need to be involved in its development—no easy task considering the numerous and diverse organizations that represent K-12 interests as well as the many entities concerned with higher education.

Much of the existing Master Plan for Higher Education needs to be retained, but this paper points to some new directions to pursue. The state needs to establish as a goal the development of an excellent system of public elementary and secondary schools. The University and the rest of California higher education stand ready to assist the state in these efforts. Principles for higher education involvement in K-12 and interactions between segments should be developed. Areas where the University can have a particularly useful role are identified.

Higher education itself faces many of the same challenges and this paper seeks to define those areas needing attention. Demography and resources will be a significant challenge, but the Master Plan could become the vehicle by which the state and its educational institutions make the case to the public that the future of California depends on adequate and early investment in its educational infrastructure. In exchange, the schools, colleges, and universities stand ready to deliver to Californians uniformly high educational experiences.

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