

The Regents of the University of California

COMMITTEE ON EDUCATIONAL POLICY

February 19, 1998

The Committee on Educational Policy met on the above date at UCSF-Laurel Heights, San Francisco.

Members present: Regents Atkinson, Chandler, Connerly, Davis, Eastin, Gonzales, Hotchkis, Khachigian, Lee, Levin, McClymond, Montoya, and Soderquist; Advisory members Miura and Willmon

In attendance: Regents Bagley, Brophy, Davies, Johnson, Leach, Nakashima, Ochoa, Parsky, Preuss, and Sayles, Faculty Representatives Dorr and Weiss, Associate Secretary Shaw, General Counsel Holst, Provost King, Senior Vice President Kennedy, Vice Presidents Broome, Darling, Gomes, Gurtner, Hershman, and Hopper, Chancellors Berdahl, Carnesale, Dynes, Greenwood, Orbach, Vanderhoef, and Yang, Vice Chancellor Bainton representing Chancellor Debas, and Recording Secretary Nietfeld

The meeting convened at 9:15 a.m. with Committee Chair Gonzales presiding.

1. **UNDERGRADUATE ADMISSIONS PROCESS**

Provost King stated that the presentation would provide an overview of the definitions, the procedures, and the criteria for freshman admissions to the University of California. He recalled that the Master Plan for Higher Education recommended that UC select its first-time freshmen from the top 12.5 percent of all graduates of California public high schools. Graduates of private high schools are in addition to these students. The Master Plan also recommended that the University be responsible for implementation of this guideline through the establishment of specific eligibility criteria. The Regents adopted the Master Plan as University policy and delegated to the Academic Senate the responsibility for determining the conditions for admission. The Senate in turn has delegated this responsibility to one of its standing committees, the Board of Admissions and Relations with Schools (BOARS). Provost King explained that eligibility criteria represent on the one hand what the faculty expect students to achieve in high school in order to be able to undertake college-level work successfully; on the other hand, eligibility in the context of the Master Plan defines which students will have access to the University of California. Any student who achieves eligibility is guaranteed admission to a UC campus, although not necessarily to the campus or college of choice. Provost King explained that selection is the process by which campuses determine which UC-eligible students are accepted for admission.

Provost King discussed the criteria by which a student is judged for eligibility. Nearly all students achieve UC eligibility by completing the following requirements:

- The subject requirement, consisting of 15 units of college preparatory work

- The scholarship requirement, consisting of a 3.30 grade point average (GPA)
- The examination requirement, consisting of the SAT I or the ACT plus three SAT II subject tests

Eligibility may also be achieved by examination alone, although this is fairly rare.

The subject requirement focuses on a specific set of high school courses known as the (a)-(f) requirements. The examination requirement serves to validate the level of performance as expressed in students' grade point averages and to provide a means of normalizing among students from different high schools. Students with a grade point average above 2.82 may become eligible based upon SAT scores. Students whose GPA falls between 2.82 and 3.29 must achieve a specified score on the SAT I or ACT following a sliding-scale index which weights the GPA and the examination score. No minimum score on the SAT I or ACT is required of students with a GPA of 3.30 or greater. According to the recent eligibility study done by the California Postsecondary Education Commission (CPEC), 92 percent of students deemed to be eligible become so through their high school grade point average alone. Students were ranked by CPEC as fully eligible, potentially eligible, and ineligible. Students who have completed all of the subject and scholarship requirements but who lack part or all of the examination requirement are designated as potentially eligible. As reported at the November 1997 meeting, the CPEC study found that 11.1 percent of 1996 public high school graduates achieved eligibility for UC, while an additional 9.4 percent were in the potentially eligible category. Provost King noted that while it was gratifying that the University's (a)-(f) requirements had become standard coursework for California's high schools, the failure of so many students to take the required examinations raises questions for further study. It is possible that these students do not intend to apply to UC, which is somewhat unusual in its requirement of three SAT II examinations.

Provost King then turned to a discussion of how the campuses choose which students to admit. Students are required to file one application, which is filed centrally, and copies are forwarded for review to each of the campuses which the applicant has listed on the application form. The campuses review the applicant's file independently and make admissions decisions accordingly. An applicant may be admitted to all or some of the campuses to which he or she has applied or to none. Campuses with the capacity to accommodate all eligible students who have applied admit all such students. Campuses without sufficient space to admit all eligible applicants use academic criteria and supplemental criteria in determining the entering class. According to SP-1, *Resolution Ensuring Equal Treatment—Admissions*, the campuses are required to admit 50 to 75 percent of students based solely on academic criteria. Specific supplemental criteria are established by the individual campuses working within guidelines that have been established for use throughout the system. The academic criteria used to select 50 to 75 percent of freshmen include the following:

- Grade Point Average
- Test scores
- Depth and breadth of coursework completed

- Honors and advanced placement courses
- The quality of courses taken in the senior year
- The quality of performance relative to programs offered in the school
- Outstanding performance in one or more academic subject areas
- Outstanding work in one or more projects in any academic field of study
- Recent, marked improvement in academic performance

The remainder of the eligible candidates are reviewed on the bases of the academic criteria listed above plus the following factors:

- Special talents, achievement, and awards
- Special skills and interests
- Evidence of leadership
- Service to the community and other achievements
- Completion of special projects
- Achievement in light of disadvantage or other special, personal circumstances
- Location of residence

Because all eligible applicants are guaranteed admission, it is likely that a candidate denied admission at one campus will be admitted at another campus or be offered the alternative of enrolling in the winter or spring term. In fall 1997, nearly 83 percent of applicants were admitted to the University through this process. Provost King explained that a final avenue to admission is “admission by exception,” which permits the campuses to admit up to six percent of freshmen in this fashion. Four percent of these special admission slots may be used to admit students who are economically or educationally disadvantaged. The other two percent are admitted in consideration of factors such as exceptional ability in the fine arts, in athletics or other endeavors, outstanding leadership, or being ineligible for reasons beyond the student’s control.

Professor Keith Widaman, Chair of the Board on Admissions and Relations with Schools, discussed the role of the faculty in setting the conditions for admission to the University of California. Professor Widaman explained that BOARS is composed of 11 faculty members, one member representing each of the nine UC campuses, plus a chair and a vice chair. Each member of BOARS also normally chairs or sits on his or her local campus Academic Senate committee overseeing matters relating to undergraduate admissions and enrollment. As a result, the BOARS committee garners wide input from the University Academic Senate community for its deliberations. BOARS also consults widely with campus and Office of the President administrators and, whenever appropriate, with high schools, community colleges, and the California State University system.

Professor Widaman recalled that, as described by Provost King, a prospective student must satisfy the subject, scholarship, and examination requirements to gain eligibility for admission to the University. As representatives of the Academic Senate, BOARS sees these requirements as a comprehensive statement of what constitutes the minimum level of academic preparation the UC faculty believe students should have as they enter their first year

at the University and begin their studies in freshman-level courses. The (a)-(f) course requirements consist of a minimum of 15 college preparatory courses in prescribed curricular areas. The faculty believe that solid preparation in English and mathematics will provide students with the appropriate foundation for all courses at UC, which is why students must take academic English courses during all four years of high school and must complete a minimum of three years of study in mathematics providing fundamental instruction in elementary and advanced algebra topics and in two- and three-dimensional geometry. The faculty also want students to have a solid knowledge of science and of its importance to modern society. Hence, two years of laboratory science work are required, drawn from the fundamental disciplines of biology, chemistry, and physics.

Additionally, in order for students to have a good understanding of the history of man and of the many cultures that shape the modern world, there is a two-year requirement in history and social science, which includes the study of American history and world history, cultures, and geography. To strengthen further the understanding of other cultures and also to complement proficiency in language arts developed in English courses, there is a two-year requirement in the study of foreign languages. Finally, to allow students experience with other discipline areas and to take more advanced work of their choosing to enrich fundamental knowledge in the disciplines described above, the University asks that students complete two additional courses. These elective courses may be taken in visual and performing arts, social science, mathematics, history, foreign language, science, or English.

The scholarship requirement defines the grade point average a student must attain in (a)-(f) courses to be eligible for admission to the University. In meeting the scholarship requirement, typical college preparatory (a)-(f) courses are graded on the usual scale, with an A equal to 4 points, a B equal to 3 points, and so forth. However, grades obtained in honors or advanced placement courses are given an extra grade point. The GPA is based only on grades in (a)-(f) courses taken during the tenth, eleventh, and twelfth grades. While the subject requirement represents the need for students to have well-rounded academic training in college preparatory courses during high school, the scholarship requirement reflects the need for students to have acceptable levels of performance in these courses.

To satisfy the University's examination requirement, an applicant must submit test scores on the Scholastic Assessment Test I Reasoning Test or the American College Test. Second, the student must submit scores on three SAT II Subject Tests, including writing, mathematics, and a third test of the student's choice. The SAT I (or ACT) and SAT II examinations are broad-range achievement tests that have substantial value in predicting how successful students will be at the University. The examination requirement provides the only common measurement for comparing students from different high schools and represents levels of achievement that students must exhibit in a timed, standard environment similar to those in which university course examinations are administered.

Professor Widaman explained that the subject, scholarship, and examination requirements embody messages that are keys to the University's relationship with the public and, in particular, with the high schools of the state. The faculty feel that it is of utmost importance

that these messages are kept clear, specifying precisely the preparation students should have when entering the University of California. In particular, students should take a specified array of courses, exhibit high levels of performance in those courses, and attain acceptable levels of performance on college entrance examinations.

Despite general satisfaction by the faculty with the present subject, scholarship, and examination requirements, some changes in these requirements are currently under consideration. The primary likely change in the subject requirement is a revision of the elective category. At present, the (f) category includes two college preparatory courses of the student's choice that will improve their knowledge and skills in chosen areas. BOARS is currently considering changing the (f) requirement into (f) and (g) categories. The (f) category would involve a required course in visual and performing arts, and the (g) category would include a single elective college preparatory course of the student's choice. The principal reason for this change is to align the subject requirements for the UC and California State University systems, a plan that has been under consideration by the two systems together for some time. Both segments believe that a complete alignment of the UC and CSU subject requirements would be a considerable gift to students, parents, counselors, and the public in general when planning or helping others plan for attendance at the public colleges and universities in the State of California.

Professor Widaman informed the Committee that BOARS is presently discussing two changes in the scholarship requirement. The first is a possible change in the way in which extra grade points are awarded for honors and advanced placement courses. A validity study is currently under way, undertaken jointly by the Office of the President and BOARS, to study the relationship between high school GPA and SAT scores and first-year college GPA at the University. One key aspect of this study is to examine the utility of the extra honors and advanced placement grade points when predicting success at the University. If little or nothing were gained when adding the extra grade points from honors and advanced placement courses into the GPA, then some modification of current practices, such as eliminating the extra grade points, would be called for.

The second potential change in the scholarship requirement is a broadening of the scope of the "eligibility index." The present scholarship requirement states that a student must take the examinations in the examination requirement, but scores attained on these examinations are irrelevant to eligibility if the student has a GPA of 3.30 or above. The validity study may show the additional benefit from broadening the eligibility index. Under this change, a student with a GPA higher than 3.30 might still have to attain a corresponding examination score to satisfy the scholarship requirement.

Professor Widaman reported that at present no changes to substitute the current examination requirement with other standardized tests are under consideration. The Latino Eligibility Task Force suggested elimination of the SAT test and the substitution of other examinations, such as the Golden State Examinations, for the SAT. However, at the current time, no validity data for these alternative tests are available, and the SAT continues to have appreciable power for predicting student success at the University, especially when used in

conjunction with high school coursework and GPA. Until appropriate validity data are obtained on alternative tests, it would be unwise to substitute an untested examination for the SAT, a test that has been quite useful in predicting student success in all prior validity studies conducted by the Office of the President and BOARS. BOARS will continue, however, to assess the role of standardized tests in UC admissions.

In its continuing commitment to provide equal access to UC from all sectors of the state, BOARS is considering another path to eligibility. Specifically, BOARS is considering making the top four percent of students from each high school eligible for admission to the University. Since the University's founding, one principle guiding admissions has been that it should draw students from all parts of the state. A criterion making the top four percent of students from each high school eligible for the University would clearly fulfill this agreement between the University and the people of the State of California. In addition, the faculty hope that this top four percent criterion would have a long-range effect, raising the visibility of the University in each high school in the state and motivating high schools to strive to make more than four percent of their students eligible for the University.

The faculty know that educational opportunities are not distributed equally across the state. The top four percent proposal recognizes both unequal educational opportunities and academic excellence at the school level and at the student level. This proposal focuses on development of academic excellence within the educational contexts confronting students, embodying student promise or potential the faculty desire in terms of preparing for University-level work.

Professor Widaman stressed that any proposed changes are still under consideration. BOARS is in the midst of considering the positive and negative aspects of each. When BOARS has finished its deliberations and made its determination of proper actions, these will be forwarded to the Academic Council, the Office of the President, and The Regents for approval.

With respect to the selection of the student body for a particular campus, Professor Widaman recalled that following the passage of SP-1, President Atkinson appointed a task force to review selection criteria and suggest changes to these criteria. This led to the reaffirmation of traditional selection criteria and the development of several new criteria, as described by Provost King. The campuses use the supplementary criteria to assess further each applicant's academic potential as well as his or her potential to contribute to the educational environment and intellectual vitality of the campus. These academic criteria were devised by the Outreach Task Force and then considered and approved by BOARS, the Academic Council, the Office of the President, and the Board of Regents. They represent the best efforts of faculty and staff to devise criteria that reflect the academic potential and promise of each applicant. Faculty members on each campus work with admissions personnel on their campus to devise procedures for implementing these criteria during selection of students for the given campus. BOARS receives a report each year from each campus describing how selection procedures were implemented and to determine that all selection criteria used on the campus fit within the framework of the selection criteria described above.

In conclusion, Professor Widaman noted that the Academic Senate has been involved in formulating and reviewing eligibility requirements through BOARS, formulating and reviewing selection criteria through BOARS, implementing selection criteria through campus committees overseeing admissions, and overseeing the implementation of selection criteria and the entire selection process through BOARS. The faculty always intend to devise eligibility and selection requirements that will be fair and that will accomplish the fundamental goal of ensuring that incoming students are representative of students throughout the State of California, adequately prepared for UC and with a good chance of persisting and graduating.

Regent Bagley referred to reports that there had been an increase in the number of applications received from underrepresented minority students for the 1998-99 academic year and asked whether this increase would compensate for the decline in applications experienced following the passage of SP-1 in 1995. Associate Vice President Galligani affirmed for Regent Bagley that the increase did come in the wake of two years of declining applications on the part of Chicano and African-American students but also noted that applications for the 1998-99 year showed a large increase in the number of students who chose not to identify their race.

In response to a question from Regent Leach, Professor Widaman stated that the quality of courses taken in the senior year and the residence of an applicant are selection criteria that are used by the campuses in ways developed by faculty and admissions office staff. The faculty are interested in whether or not students continue to take academically challenging courses in their senior year. Mr. Galligani added that some campuses consider whether a student lives in a rural location while other campuses consider a student's specific school environment.

Regent Brophy pointed out that this fact implies that the campuses may be making their selections based on quite different criteria.

Provost King responded that the guidelines for admission which were developed at the systemwide level by a joint administration-Senate committee specify the criteria that may be used and, as noted by Regent Brophy, leave the application of those criteria to the campuses.

Regent Brophy stressed the fact that while the Board of Regents has delegated to the faculty the responsibility for determining the criteria for admissions, final authority rests with the Board.

In response to a question by Regent Ochoa regarding admission by examination, Associate Vice President Galligani explained that the faculty have determined that a person can attain eligibility by high examination scores alone. For example, a minimum score of 1400 out of a possible 1600 would be required on the SAT I and, in addition, a combined score of 1760 on the SAT II examinations. Regent Ochoa asked for a profile of the type of student who would be admitted in this way. Faculty Representative Weiss suggested that it is often an older student who has been out of the system for many years. President Atkinson stressed that the percentage of students who enter via this path is less than one percent; as a result, it is difficult to give a general description of who such a student might be.

Regent Ochoa pointed out that it is in the interest of the faculty to select the most qualified students in order to continue the excellence of the University and asked how the selection process meshed with the commitment to admit the top 12.5 percent of the State's public high school graduates. Mr. Galligani responded that once the top 50 to 75 percent of students have been chosen, the admissions staff works to build a class of individuals who can come together to create an exciting intellectual environment. The Senate has defined high academic standards coupled with supplemental criteria which allow for the creation of a balanced freshman class. President Atkinson continued that the admissions process has changed in order to permit a wide array of measures to be used in selection, with a focus on opportunities to learn. The faculty are committed to ensuring that a broad set of measures are involved in the selection process.

Referring to the top four percent proposal, Regent Johnson asked how many of the 858 public high schools in California do not traditionally send students to the University. Professor Widaman reported that fifty high schools send no students and that one-third send very few students. The best estimate by both BOARS and the Office of the President is that admitting the top four percent from each high school would lead to a 1.3 percent increase in eligibility because presently more than four percent of students in two-thirds of the high schools qualify for admission. If the University were to inform the students who were eligible by virtue of being in the top four percent of their eligibility, it would raise the visibility of the University of California in areas where it does not traditionally have a presence.

In response to a comment by Regent Johnson about the quality of students admitted through the top four percent proposal, Associate Vice President Galligani stressed the fact that these students would be chosen based on the selection criteria established by the faculty. The high schools would not have a role in determining who the students were.

Regent McClymond asked whether, under the top four percent proposal, those students would be required to take the SAT. Professor Widaman reported that the assumption is that they would because the test scores are valuable in the selection process. Provost King reiterated the fact that the University would determine which students belong in the top four percent of a high school class.

Regent Khachigian stated her understanding that there would be a full discussion of the top four percent proposal at the Committee's March meeting and that Senator Hughes would be in attendance to present her views.

In response to a question from Regent Davies regarding the potentially eligible category of students, Associate Vice President Galligani explained that, prior to 1986, when the University instituted the multiple-filing process, a student could apply to only one campus. Campuses at that time allowed students who had not completed the required tests to take them after being admitted. Once the multiple-filing process was implemented, admissions decisions were made based on a student's eligibility at the time the application was filed.

In response to a question from Regent Lee, Mr. Galligani stated that about thirty percent of students at the University graduate in four years. Regent Lee pointed out that, for varying reasons, two years at a community college is a better choice for some students. President Atkinson noted that the University places a special emphasis on transfer students; the University has signed an agreement with the community colleges to expand its efforts in that regard.

In response to a question from Regent-designate Miura concerning the eligibility of the top four percent of high school students, Professor Widaman stated that at most 1.3 percent of the top graduating seniors would become eligible, resulting in an increase of about 3,600 eligible students.

Regent Chandler raised the issue of grade inflation, noting that it is theoretically possible for a student to receive an A grade in an advanced placement class and not do well on the related SAT II test. Professor Widaman explained that one of the key aspects of the validity study currently being undertaken by BOARS and the Office of the President is to understand how well grades in honors and advanced placement courses predict success at the University. Preliminary data from the study suggest that SAT scores are stronger predictors of college performance for Chicano, Latino, and African-American students than their high school grades are.

Regent Davis supported the concept of empowering each high school in the state to qualify students to attend the University of California, noting that the top four percent proposal should result in all high schools offering advanced placement courses, which will enrich the curriculum and encourage students to perform better.

Regent Eastin observed that the State of California is fiftieth in the number of counselors in the high schools due to low funding for public education. As a result, students are not getting the counseling they require regarding coursework needed to qualify to attend the University.

She expressed the opinion that automatically qualifying a certain percentage of students from each high school would serve as a disincentive to offering advanced coursework and was concerned that as a result these students would not be prepared once they were enrolled at the University. She suggested that the University should continue to press the State to raise graduation requirements for all students, noting that the CPEC eligibility study had found that the most common reason for a potentially eligible student not to be eligible was missed coursework. This problem could be solved by requiring that all students take the University's required (a)-(f) classes.

President Atkinson agreed with Regent Eastin's observations, recalling that when BOARS increased the (a)-(f) requirements in the early 1980s some people predicted dire consequences as a result.

Professor Widaman believed that, if the University were to adopt the four percent proposal, there would be competition among high schools to qualify more than four percent of their students for the University. BOARS is also concerned about students who attend schools that

do not offer advanced placement and honors courses, because these students have almost no chance of being admitted to the most selective campuses.

In response to a question from Regent Ochoa, Professor Widaman reported that his analyses of student data have shown that a student's GPA and SAT scores are both strong predictors of the graduation rate.

With respect to transfer from the community colleges, Regent Ochoa pointed out that most community college districts transfer less than one percent of their students to the University. President Atkinson emphasized that this is the reason why the administration is focusing so much attention on the transfer function.

With respect to the top four percent proposal, Regent Brophy pointed out that it was not developed in response to Senator Hughes' proposal that the University admit the top 12.5 percent from each graduating class. He stressed that it would be unfortunate to adopt this proposal if the result were to be the enrollment of students who were not prepared for University-level work. He believed that much more would need to be known about the outcome before the Board takes any action. Regent Brophy noted that students who can afford to pay for coaching often raise their SAT scores and suggested that such coaching be provided for all students who are identified as being college bound.

Professor Widaman reported that he recently testified at a hearing held by Senator Hughes that, according to his research, coaching improved students' scores by about ten points on the SAT. He believed, however, that because perception is important, one aspect of the Outreach Action Plan could be an approach such as that put forward by Regent Brophy. He added that taking the test a second time improved a student's score more than coaching and supported the opportunity for students to take the PSAT.

President Atkinson reiterated the fact that the four percent proposal is not in response to Senator Hughes' proposal that the University admit the top 12.5 percent of students from each high school; rather, the matter has been under consideration within the University for over two years. He was confident that the members of BOARS understood the complex nature of the issue.

2. **PROMOTING TEACHING AND LEARNING IN GRADES K-12 THROUGH INSTRUCTIONAL TECHNOLOGY: REPORT ON UC NEXUS PROGRAM**

Senior Associate to the President Pister noted that today's presentation was the second in a series designed to inform members of the Board about the scope and progress of the University's Outreach Action Plan in carrying out the recommendations of the Outreach Task Force. At the January meeting, the Office of the President reported on plans and activities under way to develop a comprehensive and coordinated set of outreach programs. These initiatives provide for a broader and deeper level of engagement with California schools through activities that range from traditional student recruitment to teacher professional development and collaborations with communities. The purpose of the Nexus program is to create connections among people and ideas, with the objective of promoting high-quality teaching and learning. While a narrow purpose is to increase eligibility rates of students for admission to the University, over time a much greater impact will be found in providing a helping hand to the entire K-12 community to use effectively a new mode of access to information through the computer and the internet.

UC Nexus works to provide incentives and assistance to campus faculty and staff in order to:

- support coherent teacher professional development in instructional technology;
- advance technology-based curriculum development and assessment;
- encourage innovative distance learning tools and strategies; and
- facilitate communication between K-12 and UC communities through interactive internet connections.

Mr. Pister observed that the K-12 system in the State of California dwarfs the University. It serves nearly six million students in one thousand districts, with more than eight hundred high schools. There are nearly 250,000 teachers. A recent Office of the President survey compiling interactions between the University and K-12 schools disclosed more than eight hundred projects. Mr. Pister noted that, in spite of this, the two systems function in near isolation in most respects. The scale of the problem of bridging the size gap between the two systems provides the University with the opportunity to reaffirm its land grant roots by focusing its resources in teaching, research, and public service on the education of California's youth as a partner with colleagues in the K-12 system. While such a partnership is not something new for the University, computers and the internet provide the possibility for a new kind of outreach aimed at enhancing the quality of education in the state, just as the faculty and staff have enhanced the quality of agricultural and industrial products over the past century.

The UC Nexus website will provide a new kind of interface between the K-12 community -- teachers, students and their parents -- and the University community. New modes of gaining access to information about the University and its resources and new forms of tutoring and mentoring of K-12 students by University students are made possible. The campuses are, and have been, moving in these directions. Mr. Pister reported that, in creating links to K-12, new networks and new synergies have been emerging within and among UC campuses. For example, among the exciting programmatic developments is UC Links. At present, UC Links is the only systemwide network of UC faculty, staff, and students providing after-school computer-based activities for K-12 students in school- and community-based sites throughout

the state. UC Berkeley's Interactive University is a cross-disciplinary collaboration among the campus faculty and staff working with educators from Bay Area schools to explore how the internet can be used for classroom instruction. UC Nexus will help sustain and increase links among these and other campus efforts.

Senior Associate Pister pointed out that whenever new artifacts of instructional technology appear, new relationships emerge between teachers and students, along with new teaching methods. From its initial conception, UC Nexus has embraced a principle universally accepted in higher education that the quality of an educational institution rests upon the quality of its faculty. That same principle is rarely associated with K-12 institutions. Based upon extensive experience with developing teacher-leaders in the California Subject Matter Projects, the first efforts of UC Nexus focused on K-12 teachers. Last summer UC Nexus conducted four instructional technology institutes for K-12 teachers across the state.

Mr. Pister then introduced Mr. Stephen Bock, a sixth-grade teacher from Wilson Elementary School in Selma and 1997 California Teacher of the Year, for a presentation on the use of the computer in the classroom. Mr. Bock explained that his class uses technology to extend learning beyond the textbook, to research topics that fit with the curriculum, and to communicate what the students have learned to each other and to a larger audience. He presented samples of class portfolios that his students had created on the computer during the year which contained examples of the student's best work and an autobiography. Mr. Bock noted his enthusiasm for the fact that the University of California is interested in partnering with K-12 in technology because teachers in California are in need of assistance in this area.

Teachers also need to create networks in order to share common problems and solutions.

Senior Associate Pister reported that the critical element upon which the Nexus program is being constructed is a content and functionally rich website the purpose of which is to bring the University's vast spectrum of resources to the K-12 community and to interconnect people with common interests in education. The design and construction of the website is being done under the direction of Mr. David Greenbaum, Director of UC Berkeley's Interactive University (IU) Project, with the assistance of a team headed by Mr. Rollie Otto, Director of the Center for Science and Engineering Education at the Lawrence Berkeley National Laboratory.

Mr. Greenbaum explained that over the past two years the Interactive University Project has experimented with ways to use the internet to support K-12 teachers and students. There are presently twenty experimental pilot projects with the San Francisco, Oakland, and Berkeley school districts involving faculty, students, and staff from forty academic and outreach departments. The Interactive University Project asks the following:

- whether the internet can make a difference in the scale of the campus' participation with K-12 schools;
- whether the technology can help the campus to sustain its ongoing programs;

- whether campus-school collaborations can be more effective; and
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- whether the use of technology can improve the practice of teaching and learning.

Mr. Greenbaum explained that members of the IU Project had come to recognize the need to create an integrating and common space for collaboration and that the internet could be used to create such a space. He contrasted the size of the UC system, with its nine campuses, with the K-12 schools in the state, and noted that this disparity cannot be addressed solely through traditional methods. The website is also addressing the challenge of the different cultures that exist within the University and the K-12 system, as well as the fact that many faculty and teachers work in isolation from each other. The IU Project had envisioned the creation of a new type of campus where the University and the schools are located together. Because it is unlikely that such an idea will become a reality, the project is attempting to construct a website which would create a virtual space for such interaction.

Mr. Greenbaum then demonstrated the UC Nexus Collaborative Web, the major components of which are the following:

- A set of tools and spaces for collaboration, including web pages, e-mail, chat rooms, and document sharing.
- A community of people and organizations, including a directory of UC/K-12 programs and activities by region and campus and an access point for interaction with electronic mentors, researchers, and laboratories.
- A library of digital learning materials and best practices about teaching and learning with technology, sorted by curriculum and evaluated for quality.
- A gateway to outreach programs.
- A channel for news about education.

Senior Associate Pister noted that Nexus builds on ongoing work of UC faculty and staff who are actively engaged in a variety of technology-based programs for K-12 students. One example of the UC Links program is located in Fresno at the Carver Academy, a middle school. Mr. Pister then called upon Mr. Roy Mendiola to introduce the Fifth Dimension Program, Fresno's name for UC Links. Mr. Mendiola first introduced Mr. Brandon Smith, a sixth-grade student at Carver Academy and a Fifth Dimension leader. Mr. Smith reported that, as a leader, he has the responsibility to help other children in the program, which has broadened his social skills. Ms. Elizabeth Brincefield spoke as a representative of the Edison High School student research team, which provides assistance with literacy and other programs at the Carver Academy Fifth Dimension Program. Ms. Brincefield stated that, because she had enjoyed the Fifth Dimension program as an eighth-grade student at Carver, she had decided to volunteer as a tutor there. The program enables her to travel around the state giving presentations on UC Links. Ms. Kecia Hecker, a paraprofessional who works

at Carver Academy as a teacher-in-training, reported that her recreation program had been integrated with the Fifth Dimension Program. During after-school hours, she sees from fifty to more than one hundred children in her program, which includes organized games and special sports events. She noted that she benefits from the Fifth Dimension Program because it allows her to make a positive contribution to her community. Mr. Mendiola stressed the importance of the Fifth Dimension as an after-school program of great value to the community, citing the important contributions being made by students, alumni, and community members, as represented by Mr. Smith, Ms. Brincefield, and Ms. Hecker. He reported that, as a result of his involvement in the Fifth Dimension, he had applied to enter the UC-CSU joint doctoral program.

Mr. Pister concluded the presentation by noting that the UC Links program was conceived by Professor Michael Cole of the San Diego campus, who also directs the Laboratory for Comparative Human Cognition. The Fresno site is directed by Professor Robert De Villar of UC Davis, who heads the Education Research Center in collaboration with CSU Fresno. Mr. Charles Underwood is the Executive Director of UC/K-12 Instructional Technology Initiatives for the Office of the President.

He gave special recognition to those from Carver Academy who attended the meeting, including Mr. Vurdell Newsome, Principal of Carver Academy, Mr. Nicholas DeBenedetto, Vice Principal, and Mr. Zack Sconiers, a lead teacher and student research team advisor at Carver.

Regent Eastin observed that the problems that the University is experiencing in attempting to obtain public funding for the tenth campus are similar to those experienced by K-12 for needed modernization. The public schools in the state rank 45th in the country in terms of the number of computers per student. In order for programs such as UC Nexus to be successful, more computers will need to be purchased and teachers will need to become better trained in their use. Regent Eastin recalled that \$12.2 million in funding for the California Subject Matters Project was deleted from the University's 1998-99 budget. She stressed the importance of the Project, noting that in 1997 it created 18,000 teacher-leaders in mathematics. Half of the mathematics teachers in the State of California were not trained in mathematics and thus need instruction in how to teach mathematics, which is accomplished through the Subject Matters Project. If the funding is not restored, this training will be eliminated. She urged the Regents to seek restoration of funding for the Project.

Regent Khachigian pointed out that while teachers are using technology, they still work one-on-one with their students, which is also important to their success. She asked how available programs such as UC Nexus are throughout the state. Professor Cole responded that there is a pilot program at the San Diego campus which uses the community as a laboratory for its students; similar programs now exist on all nine campuses. Carver Academy has the largest program in the state. In San Diego, the San Diego Links program supports the establishment of programs by the San Diego State University, the University of San Diego, and the local community colleges. A major issue is the ability to move these programs outside of the Schools of Education to departments such as Psychology and Linguistics.

In response to a further question from Regent Khachigian, Principal Newsome explained that any child who has his parents' permission can attend the Fifth Dimension Program. Referring to the presentation on admissions, Mr. Newsome reported that schools in Fresno base their curriculum on the University's requirements. They also provide SAT training classes for students on Saturdays two to three times per year. A further goal is to familiarize students with the test early in their high school careers.

Regent Chandler reported that she had had the opportunity to tour Carver Academy and encouraged all of the Regents to take the time to visit a classroom.

3. **MULTICAMPUS ACADEMIC COLLABORATION: A SPECIAL INITIATIVE OF THE COUNCIL OF VICE CHANCELLORS**

Provost King explained that the Council of Vice Chancellors has been concerned with coordinating planning among departments of the various campuses in order to create synergies that would enhance the quality of education and provide budgetary savings. He introduced Mr. Charles Kennel, the outgoing Executive Vice Chancellor at the Los Angeles campus, who was recently appointed the Director of the Scripps Institution of Oceanography.

Mr. Kennel noted that the University is effective at bringing together interdisciplinary groups of experts to serve the State through its Multicampus Research Units. New initiatives are being developed, such as the California Virtual Library and the California Virtual University, which will extend beyond the University's boundaries. The Council of Vice Chancellors looked at the issue of multicampus collaboration among the disciplines. Some of the goals of such collaboration would be to reduce the duplication between campuses in various subjects, to tailor the training of doctoral students to the job market, and to create multicampus undergraduate courses. Mr. Kennel reported that the Council initiated the project by commissioning key deans and department chairs to design an activity that would answer these as well as discipline-specific questions. Over the past three years the Council studied the disciplines of history, foreign languages, education, anthropology, physics, the arts, and conservation biology, with mixed results. History had interesting results, which were described by Professor Ted Margadant, the chairman of the History Department at UC Davis.

Mr. Margadant reported that the history department chairs met with the Council of Vice Chancellors in May 1995, the first time that such a meeting had been held. Many issues were raised at the meeting, including departmental plans for the hiring of new faculty, the optimal size of the graduate program, and the advantages of collaborative graduate instruction. Because subsequent meetings were also productive, the chairs intend to meet annually. They have used e-mail to evaluate proposals for intercampus collaborations in history. Because of this collaboration, the history departments will be able to respond more effectively to the challenges of the future. Professor Margadant reported that over the past two years historians had developed interdepartmental relations that are building networks of faculty and graduate students throughout the system. They have held several large conferences with representatives from all fields of history, the first of which featured

presentations by young faculty about their research projects and a plenary session which addressed the teaching of world history to undergraduates. A second conference brought together historians and students of Latin America from throughout the system. Planning conferences and workshops have been held to plan intercampus instructional collaborations among historians and graduate students in specialized areas such as the history of science and technology. Such workshops have proven to be especially valuable in specific thematic or geographical areas of history where faculty expertise is dispersed over several campuses. Intercampus graduate courses have been offered recently in British and Russian history, and plans are under way for such courses in the next academic year in Chinese and world history. The British historians use teleconferencing technology to hold a team-taught course every spring that enrolls students from across the system. Russian historians from several southern California campuses have been commuting to a single campus for each meeting of their seminar, while Chinese historians from the northern campuses will combine website technology with intercampus travel in order to team teach a graduate course. Mr. Margadant emphasized that while these initiatives are time consuming, they have been eagerly undertaken by historians who are reaching out to colleagues and graduate students in their specialized areas on other campuses. Mr. Margadant noted that initiatives such as the ones he had described are enriching education for graduate students in fields that have only one faculty member on a campus. Graduate students are able to establish mentoring relationships with faculty on another campus who can assist with research on their dissertation and write letters of recommendation for them. The collaborations are also fostering an intellectual community among historians which aids in their professional development and stimulates a greater sense of membership in the University of California as a whole.

Professor Roberto Peccei, Dean of Physical Sciences at the Los Angeles campus, explained that the efforts of the Council of Vice Chancellors with respect to the physical sciences followed the same schedule as that for history. When the Council met with the deans in July 1995, it determined that not enough information was received about their concerns. As a result, an ad hoc committee was formed, consisting of two deans, two department chairs, Director Shank, and University Professor Cohen, and was asked to address the following questions:

1. Is the discipline healthy at the University of California?
2. What size and focus should the programs have?
3. Are there ways to foster increased campus-to-campus and campus-to-laboratory collaborations?
4. How can the COVC ensure continued UC leadership in the discipline?

The ad hoc committee convened a systemwide meeting in order to address these questions, which focused the discussion on the future of physics over the next fifty years. The conference also addressed the strength of the various educational programs, infrastructure needs, and intercampus collaborations. With respect to infrastructure, Professor Peccei

noted that while the University had made a large investment in the science disciplines over the past forty years, the infrastructure is eroding. Those in attendance also stressed the importance of physicists working with scientists in other fields. With respect to education, he noted that graduate enrollment in physics is declining across the nation; the conference addressed how students could be exposed to other related disciplines. The conference informed the Council of Vice Chancellors that instruction at both the undergraduate and the graduate level would benefit from more extensive intercampus collaborations. This could include an annual meeting of academic chairs and vice chairs as well as a retreat to discuss undergraduate education. The conference believed that because the most critical issue is infrastructure for science and engineering, the COVC should establish a task force to address this long-term matter.

Mr. Kennel observed that, considered as a whole, the University of California has unparalleled strength in most academic disciplines. A small increase in the amount of collaboration should produce enormous benefit. The collaborations must be tailored to the discipline or the sub-discipline. At the present stage, communication is a key to the success of collaboration. Investments in electronic networks should improve the quality of faculty decision making. The long-term prospects for increased quality through intercampus collaboration are good.

President Atkinson reported that this spring the University of California will unveil Internet 2, which is principally funded by the federal government. Internet 2 will link the nine campuses, the three national laboratories, Stanford University, Cal Tech, and a number of other institutions into a new educational internet.

Regent Johnson asked that the President schedule a discussion of the University's infrastructure for a future meeting.

The meeting adjourned at 12:35 p.m.

Attest:

Associate Secretary