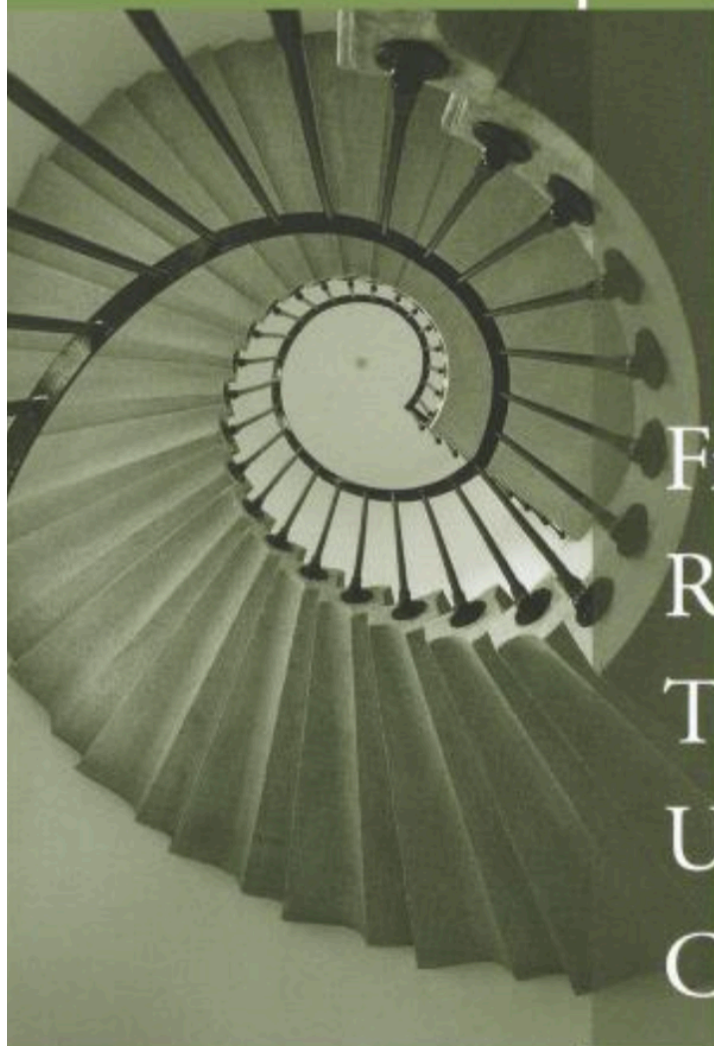


New Directions for
Higher Education



From Rangeland to
Research University:
The Birth of
University of
California, Merced

Karen Merritt
Jane Fiori Lawrence
EDITORS

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EDITORS' NOTES

In 2004, the editor of *New Directions for Higher Education* approached us about a volume that would spotlight the University of California, Merced, as the first new American research university to be opened in the twenty-first century. We enthusiastically accepted the invitation, suggesting that not only should we focus on the lengthy and complex planning for this exciting new enterprise but also report on what we were able to accomplish during the inaugural year of instruction. We approached a group of our colleagues, all responsible for planning and initiating from scratch critical elements of a full-fledged university, and asked that they consider the following questions: What did you think your job would be? What did it really turn out to be? What helped or hindered you in reaching your goals? In the light of this experience, what lessons do you want to share with others? Our chapter authors have found this a welcome chance to reflect on what our bold enterprise reveals about the state of public higher education today.

We hope that campus leaders and our counterparts across the country in academic administration will find this volume useful as they think about how to tackle their daily challenges. We also hope that this new chapter in the history of American higher education will offer historians and other scholars fresh insights into how today's complicated web of institutional, state, and federal contexts affects major institution building.

Overview of This Volume

This volume offers some in-depth looks at the kaleidoscopic and extraordinary effort from many of the key campus founders who turned the idea of this university into reality. The chapter authors tell the story of UC Merced's unpredictable and difficult birth in five parts.

Part One examines through two lenses the labyrinthine politics brought to bear during UC Merced's long gestation. Part Two offers a variety of academic views on what it took to begin a new research university with a unique character and academic distinction. Part Three places the emphasis on starting the first new student-centered American research university of the twenty-first century. Part Four is devoted to the academic support enterprise that is both the classic center of a research university and the physical center of the budding campus: the library. Part Five answers the question of what was it like for students experiencing the end product of the budgetary ups and downs, triumphs and lost opportunities, and ideals of this unique American research university. The Conclusion gathers the principal lessons



learned from the UC Merced experience. From these multiple perspectives, we hope that an understanding of the complexities and accomplishments will emerge and that our colleagues in higher education can take away some useful insights from this tremendous enterprise.

Acknowledgments

We thank our chapter authors, who are both good friends and admired colleagues, for prying free a corner of time to tell their stories. Our own contributions, particularly the Conclusion, owe much to our conversations with them, individually and as a group. We also thank our other UC Merced colleagues who were not able to carve out the time to offer a chapter, but whose ideas and insights are, we hope, captured in this volume. The Center for Studies in Higher Education at UC Berkeley hosted key events that helped us move the book forward, for which we are grateful.

We give special thanks to Martin Kramer for his patience, guidance, and advice. His invitation has led to a record of experience and accomplishments in the face of considerable challenges, a history that will be invaluable to those who follow us at UC Merced and in the University of California.

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Introduction: Why a New Research University at Merced?

Karen Merritt

In February 1989, the University of California (UC) Regents authorized President David P. Gardner to plan up to three new campuses; the first of the three would be located in the San Joaquin Valley, a rapidly growing area of the state with the largest population fifty miles or more from a UC campus. The campus was scheduled to open in 1998. Instead, UC Merced, the tenth UC campus, opened for instruction in September 2005, with 706 freshmen, 132 transfer students, and 37 graduate students, 13 of whom had begun study at UC Merced the year before.

Building the first American research university of the twenty-first century has proven to be especially challenging and complex in both anticipated and unexpected ways. The entire story, from search and selection of a campus site in the San Joaquin Valley through layers of advance planning, largely in the absence of those who would ultimately lead the campus, to physical and academic redirections as new obstacles were encountered, to the actual building and staffing of the campus would be a long one indeed. The discrepancy between the original and actual tenth campus opening dates is suggestive of the roadblocks, readjustments, surprises, and controversies faced by UC Merced. As founding chancellor Carol Tomlinson-Keasey observes in Chapter One, “I took the job as chancellor thinking that I would hire an administrative team; lure talented scholars to the faculty; build classrooms, office space, and laboratories; and admit students. I found instead that I was embroiled in multiple other issues, all with political overtones.”

Building a new research university from the ground up was an ambitious goal. Not only was a rationale for building a new research university called for, planners needed to institute new ways to ensure that education at all levels would be the more robust through infusing the research mission into every part of the enterprise. The project called on the founders’ ingenuity and flexibility in navigating complicated political, fiscal, and physical development waters. Insofar as this is a story about innovation, midcourse correction under pressure, and management of a highly complex endeavor in an equally complex regulatory setting, the lessons learned by the UC Merced founders offer unique insights into American higher education in the late twentieth and early twenty-first centuries.

Getting Under Way

Toward the end of the 1980s, the pressure of current and projected enrollment demand for the University of California prompted President Gardner and the board of regents to request updated growth plans from the nine campuses that constituted the UC system: the eight general campuses at Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, Santa Barbara, and Santa Cruz, offering a comprehensive curriculum of undergraduate, master's, doctoral, and professional degree programs, and a ninth campus in San Francisco specializing in the health sciences and offering both professional and graduate degree programs. Under the 1960 California Master Plan for Higher Education, the University of California was designated the state's research and doctoral university, selecting its undergraduates from among the upper eighth of California high school graduates. By policy, the university has endeavored over the years to offer a place to every eligible student who has applied, though not necessarily accommodating every applicant's first-choice campus or degree program.

The two other public segments of higher education were also planning an expansion to absorb their share of California's growing college-aged population. The California State Universities are comprehensive institutions that enroll students from the top third of California high school graduating classes. During the period in which UC planned and opened its tenth campus, the California State University system added three campuses, one built from the ground up and the other two in preexisting physical facilities adapted for university use, and it acquired a fourth, well-established, institution. The California Community Colleges, which are open to all California high school graduates, also added capacity through new off-campus centers throughout the state.

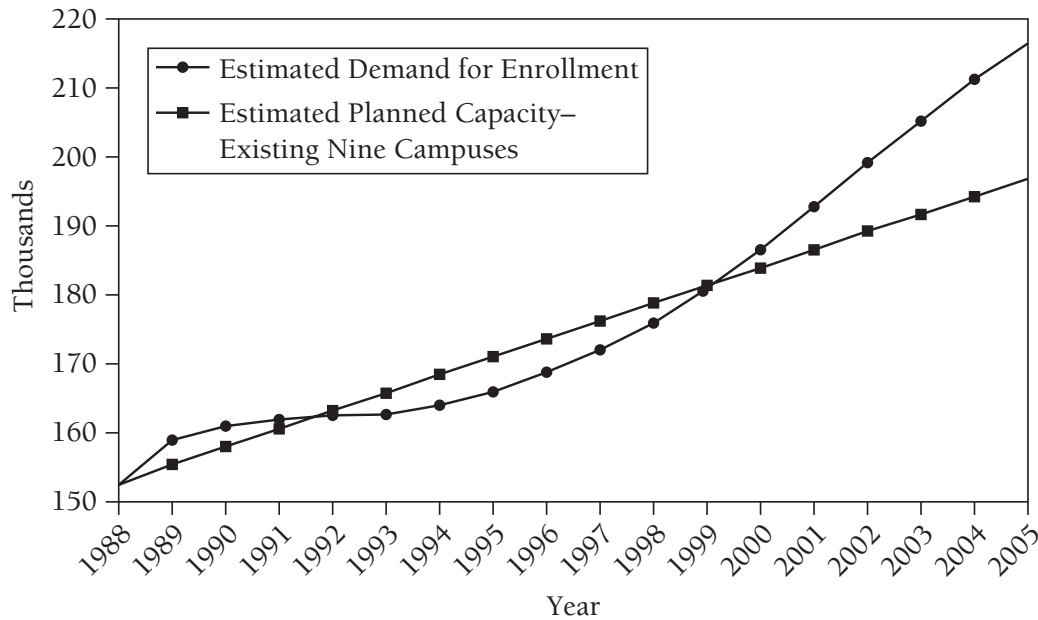
Since 1957, total undergraduate enrollment on the UC general campuses had grown almost every year, from 88,379 in 1957 to 165,400 in 1988. The university forecast a demographic pause in the early 1990s, reflecting the so-called baby bust of the 1960s, followed by explosive growth fueled by a baby boom echo, as children of baby boomers reached college-going age.

The result of updated campus growth plans was presented to the regents at their October 1988 meeting, synthesized in a graph that showed total growth on the nine campuses and projected enrollment demand to 2005 (Figure I.1). Beginning in 1999, demand was projected increasingly to outpace university campus capacity.

Locating a Tenth Campus Site

With approximately 10 percent of the state population and the second-highest growth rate in the state, the San Joaquin Valley in the central region of California became the regents' target as the home of the tenth University

Figure I.1. Estimated Planned Capacity and Estimated Demand for Enrollment, 1988–1989 to 2005–2006



Source: University of California Office of the President

of California campus. Chapter One details some of the critical economic and social factors behind the fact that valley high school graduates were participating in UC education at only half the statewide rate (3.4 percent versus 7.7 percent). Given the strong correlation between campus proximity and student participation, a leading academic reason for locating the tenth campus in the valley was to improve UC participation among its high school graduates.

President Gardner and the regents established a site selection task force in 1999 to analyze and make recommendations on a San Joaquin Valley site. Envisioned exclusively as a land acquisition task, chairmanship of the task force was placed in the hands of the senior vice president for administration, with membership drawn from the regents, Office of the President, campuses, and Academic Senate. In order to maintain a process untainted by political interference, the Office of the President engaged Bechtel, Inc. to frame a methodology for analyzing and weighing site characteristics and hired a range of consultants to perform the analyses. The four analytical stages, variously applying thirty-seven criteria, narrowed over eighty-five potential sites to three finalist sites.

During the early 1990s, state revenues took a severe downturn, while university enrollment growth slowed (as had been projected). Only through the success of three early-retirement incentive programs did the university escape laying off professorial-rank faculty. As it was, staff layoffs, unfilled positions, frozen wages, and deferred maintenance were among the numerous

steps required to meet enormous budget deficits. The president and regents proposed discontinuance of a tenth campus site selection, citing the need to shore up funding for the existing campuses. Only an earmarked allocation from the state legislature persuaded the regents to complete site selection. In July 1995, they chose a two-thousand-acre site six miles to the northeast of the city of Merced, a gift of land from the Virginia Smith Trust, whose purpose is to provide college scholarship money to Merced high school graduates.

The Three Periods of Tenth Campus Planning

The University of California faced a dilemma in planning a new research university: the need for a long lead time in completing state approval processes for a new campus and new campus buildings. During the Clark Kerr presidency from 1958 through 1967, the university had opened three new campuses: in Irvine, San Diego, and Santa Cruz. Irvine and Santa Cruz were built from the ground up, and although San Diego was founded on the base of the Scripps Institution of Oceanography, which had been offering UC graduate degree programs since 1958, its campus too was built from the ground up. Site selection was completed between 1959 and 1961, with the first day of classes at UC San Diego in 1964 and at the other two campuses in 1965.

This brisk pace was no longer possible by the end of the century. Virtually every step needed for completing a new campus had become lengthier and more complex. As set forth in Chapter One, the lengthening of the planning and approval processes also made the tenth campus vulnerable to economic ups and downs in the state, affecting the university's budget. Chapter Two offers insight into how the university navigated those troubled waters. As a result, the eighteen years between regent authorization of new campus planning to the first year of instruction at UC Merced can be divided into three distinct periods:

- Period 1: 1989–1995. Site selection task force activities predominate throughout this period. The Office of the President appointed a Tenth Campus Faculty Consultants group to advise on an initial academic planning statement. The period concluded with the regents' selection of the Virginia Smith Trust (known as the Lake Yosemite) site near the city of Merced in July 1995.
- Period 2: 1995–1999. Under pressure from San Joaquin Valley legislators, the university engaged in limited academic planning through appointing the Tenth Campus Academic Planning Committee and conducting associated public forums in the San Joaquin Valley. Recruitment of new Office of the President position of vice provost for academic initiatives led to the appointment of Carol Tomlinson-Keasey in 1997.

The tenth campus was one of those initiatives. The vice provost began preparations for the university and statewide new campus approval process by appointing faculty committees to advise on possible research initiatives, engineering, and other academic matters. She also named the student planning advisory committee. Parallel planning committees were appointed in the areas of business affairs and technology. In September 1998, the Academic Council of the systemwide Academic Senate appointed the sixteen-member Senate Task Force on UC Merced to carry out functions delegated by the regents to the faculty, as a surrogate for a tenth campus division of the Academic Senate.

- Period 3: 1999–2005. The founding UC Merced chancellor, Carol Tomlinson-Keasey, was appointed in May 1999 and guided detailed physical and academic planning; recruitment of founding administration, faculty, and staff; campus site development; and admission of pioneer freshmen, transfer, and graduate students. The campus opened in September 2005.

This volume concentrates primarily on the range of actions required during period 3 to open the campus, in particular, the years immediately preceding and the year after opening.

Early Planning

As evident from this overview, each period saw the establishment of formal committees to advise on the academic character of the campus. All saw their tasks as an avenue for analyzing the strengths and weaknesses of current educational operations in the university—in a sense, the nine campuses represented nine different histories, models, and cautionary tales—and then imagining how a new campus might incorporate what was best, avoid problems, and innovate. In each case, the excitement of imagining a new campus resulted in highly detailed plans. It was up to the founding administration, faculty, and staff to review these documents and decide how much, if any, of the plans might be adopted.

Two questions animated the preliminary planning activities. First, what would ensure that the tenth campus would take its place with the other nine UC campuses as a center of educational and research distinction, preferably as expeditiously as possible? A corollary to this question was, What would make the campus stand out as a modern research university, and what would make it unique and distinctive? Second, what would ensure success in meeting expectations for attracting and graduating students, especially the many educationally at-risk, low-income, ethnically diverse students from the San Joaquin Valley? Underlying all these questions was the critical issue of figuring out how a new research university could be funded in an era when state support for higher education was dropping across the nation. Based on the answers to these questions, tenth campus planners in the

Office of the President could determine what to look for in the founding chancellor and key administrators; which degree programs would be mounted first, and therefore, where faculty recruitment would focus; and what would characterize student life on campus.

An external question also required thoughtful attention and a vigorous reply: Why did California need another research university? During the 1980s, several state legislators had been highly critical of what they perceived as the university's excessive attention to research at the expense of undergraduate education. In addition, the California Postsecondary Education Commission raised this issue. A variety of external critics questioned whether a research university was a good choice for the San Joaquin Valley.

Within the university, there was never any question of whether the tenth campus would be a research university. UC San Diego was embraced both within the Office of the President and by the Senate Task Force on UC Merced as the most desirable model for tenth campus development, not only owing to its rising research and graduate education reputation but also because its residential college system was seen as one of the best UC approaches to ensuring an excellent undergraduate education.

Furthermore, the university culture saw undergraduate, graduate, and research education as inextricably entwined. Aside from ongoing student exposure in the classroom and laboratory to the results of faculty research, the university had responded to the critics of the 1980s with a variety of programs that intentionally expanded undergraduate participation in research. The tenth campus would be expected to initiate its own undergraduate research programs as a member of the university system.

As it happened, the university itself was not the sole voice in defense of building a new research university. Tenth campus advocates in the San Joaquin Valley, including valley legislators from both sides of the aisle, in Sacramento and Washington, D.C., made the case for the university. From their point of view, the valley was well served by the California Community Colleges, with twelve community colleges located throughout the eight valley counties; and by the California State Universities, which had campuses located in Turlock, Fresno, and Bakersfield, with the Fresno campus a particular regional force. What the region lacked was the state's public research university, widely seen as a regional economic driver. Ironically economic development was one factor that had been deliberately omitted from the site selection task force criteria. For valley leaders advocating a new UC campus, it was a leading factor, embodying a hope for a diversification of valley business and industry over the long run.

In the end, the valley advocates influenced general acceptance that UC Merced would be planned and built to carry out all aspects of the University

of California's tripartite mission: teaching, research, and service. The following chapters present multiple perspectives on what this meant for the campus executives, academic and student affairs leadership, and library planners and how the first students experienced the fruits of these Herculean labors

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1 *The major challenges in building the tenth University of California campus did not come from the academic arena. They came from the political arena.*

A Delicate Dance

Carol Tomlinson-Keasey

At first glance, building the tenth University of California campus might appear to be a straightforward assignment: hire faculty and administrators; build the necessary classrooms, offices, and laboratories; and admit students. But that initial assessment ignores the layers of complexity surrounding the University of California and the consequent challenge of bringing a new institution to the state of California.

With an annual budget of roughly \$20 billion, the University of California covers the state, encompassing the general campuses, the Office of the President, two U.S. Department of Energy National Laboratories in California and a third in New Mexico, and countless research stations crisscrossing the state from Monterey to Yosemite and extending from the Intermountain Research Center in Tulelake on the Oregon border to the Scripps Institution of Oceanography at UC San Diego. In addition, the University of California operates agricultural extension outposts in every county, five medical schools that each involve multiple venues, thirty-five Natural Reserve System sites scattered around the state, and educational arms that permeate the society at every level. Each of these venues has its priorities, needs, and fervent supporters. Each chancellor, director, professor, physician, and researcher, if asked, could present a compelling need for more resources and could argue persuasively and justifiably that his or her venue was underfunded.

How does a new campus emerge in these circumstances? How does a campus with no chancellor, no students, no professors, and no researchers compete for scarce resources? Where are the supporters whose voices will be heard amid the cacophony of existing wants and wishes?

This chapter chronicles the emergence of a research university, beginning when the university was just a twinkle in some eyes and noting the obstacles that had to be surmounted to arrive at opening day. After outlining the complexities that faced us in building a new research university, I focus on the political and environmental issues that tenth campus planners had to overcome. The chapter concludes with a survey of the academic underpinnings for creating the first new American research university of the twenty-first century.

Understanding the Complexity of Opening a New Institution

Obstacles emerge in beginning any complex venture because of the many perspectives and constituencies that have to be addressed. To open, UC Merced had to address multiple layers of educational, environmental, financial, and political complexity.

Organizational Context: The University of California. One layer of complexity comes from within the University of California. The nine existing campuses did not exactly embrace the idea of a new campus. The regents and the president initiated tenth campus planning in response to the state's long-term educational needs, but each campus could imagine many other uses for the hundreds of millions of dollars that the new campus would require. I was at the University of California, Riverside when President David P. Gardner announced the initial plan for adding three campuses, shortly reduced to a focus on just a tenth campus. Riverside was approaching seven thousand full-time-equivalent students and just a decade earlier had been threatened with closure because of low enrollments. So it was not surprising that Riverside's chancellor, Rosemary Schraer, returned from the monthly council of chancellors meeting, scoffed at the idea of a tenth campus, and forcefully pronounced that the Riverside campus would enroll the surplus students and obviate the need for a tenth campus. After the site was selected, the chancellors for the most part publicly accepted the need for a new campus because they had followed the many discussions that took place at the board of regents. Still, each chancellor had to explain to many deans, directors, and faculty why there were no funds for critical projects, yet a campus that would not open until 2005 needed funds.

As the state's financial picture darkened in the early 1990s, the will within the UC system to build a new campus waned. As the nadir in state funding approached in the mid-1990s, the Office of the President made the decision to slow down planning for the tenth campus and offer instead a variety of services to the San Joaquin Valley designed to improve the region's access to a UC education. As early as 1986, an outreach office had been established in Fresno to recruit more valley students to the university. In 1997, the university established a UC Center in Fresno to house not only the outreach office but other scattered university services in the valley and

to establish an office of academic programs in order to expand university services. Instead of a chancellor of the tenth campus, the university would hire a director for the UC Center in Fresno. At that point, the tenth campus could have been sidelined for many years. Strong outside pressures had to be applied to the University of California as a system, or the campus would have sunk into oblivion.

Regional Context: Economic Engines. Another layer of complexity comes from the interface between the University of California and the region in which it is located. Each campus of the University of California serves as a powerful and dependable economic engine. The economic impact begins with the campus's monthly payroll, which ripples through the area, supporting families and businesses and providing local government with income. Students buy local services and are constantly in search of recreation and entertainment. In addition, the campuses attract a steady stream of visitors—parents visiting their students, professors gathering for a conference, international guests, and tourists—each staying in the area, going to dinner, buying souvenirs, and contributing to the local economy.

More subtle, but extremely significant, economic boosts occur when existing companies locate in the area, attracted by the campus's intellectual capital. In addition to attracting established companies to the area, research campuses spin off start-up companies when professors and students decide that a promising idea is ready for prime time. Typically these start-up companies begin in local rented space, and each hopes to become the next Qualcomm or Genentech.

The full economic impact of a medium-sized research campus is measured in billions of dollars annually. Attracting such an economic engine becomes a top priority for local elected officials, legislators, and booster organizations.

State Context: The University of California and Sacramento. The interaction between the University of California and the state provides a third layer of complexity. It is an ongoing task to educate the population and the ever-changing cast of elected officials in Sacramento about the economic value of the University of California as a world-class research university. Research universities fuel the state's economic progress in multiple ways. They provide undergraduate and graduate education to thousands of students each year. Research universities also bring a steady, strong flow of federal and private monies into the state. Each year the University of California receives some \$4 billion from nonstate sources for extramurally funded operations. Although largely unheralded, these federal grants and private monies provide the foundation for the continuing research innovations that benefit the state. This flow of dollars allows research universities to incubate ideas that shape the future. Finally, the citizens who are educated and then employed help fill the state's coffers each year at income tax time.

Most investors would be thrilled at these returns on their investment and would systematically increase the dollars that they invested. But the state

of California has many pressing needs in a highly constrained budget environment. Addressing these immediate concerns can outweigh the longer-term view of how investment in the university can serve the state. Chapter Two probes the factors that have led to the university's reduced share of the state budget. Inevitably, UC Merced became part of the continuing dance among the state legislature, the governor, and the University of California.

Federal Context: Federal Regulations. The layers of complexity do not end with the state. Dizzying arrays of federal agencies have a hand in any new institution. The U.S. Environmental Protection Agency, the Army Corps of Engineers, and the Fish and Wildlife Service have all been charged to protect various aspects of the environment. Furthermore, federal financial aid, on which so many students depend, is tied to an institution's regional accreditation status.

Negotiating these four layers of complexity was indeed a delicate dance for a new campus, as the following account of how UC Merced went from an idea to a reality will show.

Siting the Campus: Demographics

The San Joaquin Valley had been identified as early as 1903 as an area whose agricultural interests could benefit enormously from the research done at a University of California campus. As the Introduction observes, a constellation of factors in 1988 prompted University of California president David P. Gardner to consider adding a tenth UC campus in the San Joaquin Valley. The valley was home to the largest group of students in the state who had to commute more than fifty miles to attend a UC campus. Furthermore, the San Joaquin Valley, which covers an area about as large as New England, was growing at twice the rate of the rest of California, and the population was one of the youngest in the country in terms of average age (see Figure 1.1). Sadly,

Figure 1.1. Population Growth, San Joaquin Valley. 2000–2020

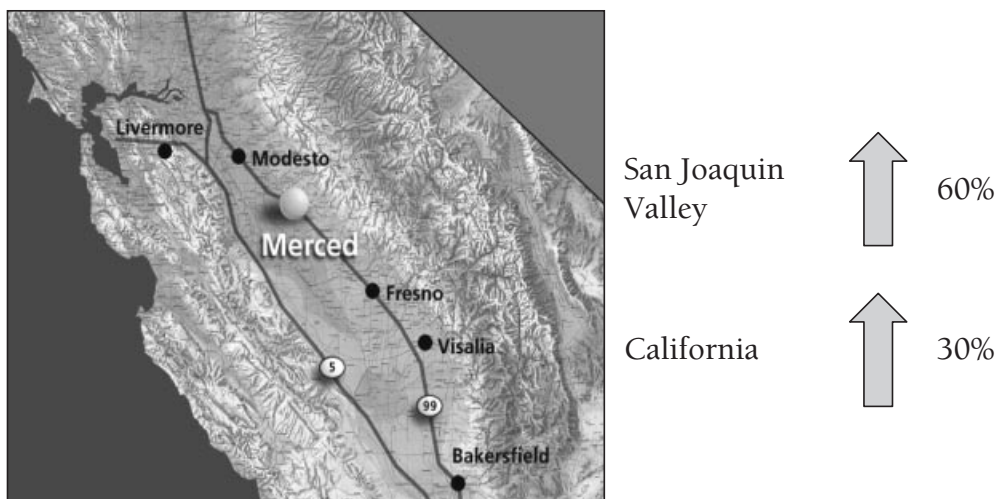


Table 1.1. Central Valley Demographics

	<i>Central Valley</i>	<i>California</i>
UC attendance	3.4%	7.7%
College graduate	14.2%	26.6%
Graduate or professional school	4.6%	9.5%
Unemployment	12.6%	6.7%
Lunch program eligibility	53.3%	48.7%
Per capita income	\$15,700.00	\$22,700.00
Percentage poverty	19.9%	14.2%

prisons constitute the largest number of public institutions in the valley, with seventeen correctional institutions dotting the valley, nine of which have opened since 1990. Until UC Merced opened, there was no public research university.

The demographic picture of the San Joaquin Valley was at the center of the case for locating the campus there. The number of college graduates, the number of advanced-degree holders, and the number of young people attending the University of California is approximately half that of the rest of the state, while the per capita income is lower and other indicators of poverty are much higher than in the rest of the state (see Table 1.1). The dearth of doctoral and certain professional degrees in the San Joaquin Valley showed that graduate education also had to be a priority. Santa Clara County boasts that 26 percent of its population holds graduate and professional degrees; the San Joaquin Valley does not come close to that percentage holding bachelor's degrees. Considering California's future and the place of the San Joaquin Valley in that future, there was a need to increase the population holding graduate and professional degrees. Providing another access point to higher education would help reach these goals and raise the educational level of the region.

Tradition mandates that land for UC campuses be donated. The Introduction describes how site selection proceeded in locating two thousand acres for the tenth campus. During the extended period of site selection, California experienced a roller-coaster ride in its annual budgets from the state. The first fiscal downturn in the early 1990s led to a delay in the original opening date of 1998. That delay in turn left UC Merced vulnerable to a second round of state fiscal difficulties as its opening date neared in 2005.

The state's budgetary gyrations highlight one of the most important lessons learned in building the campus: in the end, political forces shaped the creation of this institution much more than academic considerations did. The state's budgetary fluctuations determined when we received funding for capital projects. The political maneuvering surrounding the budgetary deficit ultimately determined when the campus would open.

Although the site selection criteria were highly detailed and the process was analytical, and designed under President Gardner to be politically

bulletproof, political elbowing was rampant during site selection as different regions tried to woo the task force. This was particularly true when the semifinalist eight sites were made known, the first time that the locations of sites under consideration had been publicly announced by the university.

As the budgetary picture for the state deteriorated in the early 1990s, so did the enthusiasm in the Office of the President for building the tenth campus. The newly elected assemblyman from Fresno, who would become Speaker of the Assembly in 1996, Cruz Bustamante, had long been a proponent for a UC campus in the San Joaquin Valley and felt strongly that the valley did not receive its fair share of the California budget. As a member of the assembly and then as Speaker, he monitored the progress of the campus. As the state's fiscal situation got worse, he and valley assemblyman Dennis Cardoza stepped in on two occasions to keep the campus moving forward. Two vignettes from this period give a flavor of the political pressure that was necessary.

The first led to special funding for an environmental review of the three finalist sites. To decide among the sites, the regents needed to perform a full-scale environmental review under state and federal regulations. If any of the sites presented difficult environmental issues, this would certainly affect the regents' final decision. An appropriate environmental impact report for the three finalist sites would cost approximately \$1.5 million. The Office of the President decided not to go forward with the environmental impact report since existing campuses were already having their budgets reduced. Assemblyman Bustamante and other elected officials from the San Joaquin Valley lobbied successfully to add the necessary funds to the state budget. The Office of the President then had no excuse for delaying the environmental impact report. This moment of hesitation on the part of the Office of the President had a larger impact in Sacramento: it signaled the state legislators from the San Joaquin Valley that budgetary woes might well serve as an excuse to delay progress on the new campus.

When the environmental impact report was completed, the regents selected the Lake Yosemite site six miles northeast of the city of Merced. Nevertheless, this selection meant little if there were no funds to build the campus. The story of the campus from 1995, when the site was selected, until 2005, when the campus opened, is a story of political wrangling at all levels. The Office of the President had to keep the other campuses happy from a budgetary perspective; the legislature had to meet the needs of the state; and somehow, someone had to find approximately \$400 million to build a new campus. Early signals from the Office of the President that the new campus was not a priority rankled the San Joaquin Valley legislators in Sacramento. From their perspective, they had been waiting decades for this new campus, and the Office of the President was engaging in delaying tactics.

A second vignette illustrates how political pressure from the San Joaquin Valley was brought to bear. In 1997, President Richard Atkinson had

appointed me his special assistant for the tenth campus as part of my larger responsibilities as the Office of the President's first vice provost for academic initiatives. Also in 1997, a director was hired to run an array of San Joaquin Valley programs in the new UC Center in Fresno. Yet selection of a tenth campus chancellor remained on hold. These circumstances precipitated a showdown between the Office of the President and Speaker Bustamante. Speaker Bustamante called President Atkinson to Sacramento and, in his typical bombastic style, demanded to know why the campus was not moving forward. A wily and extremely smart negotiator, President Atkinson responded by laying out the legitimate budgetary issues with the other campuses. Although he expressed support for the tenth campus, he also argued that without a level of funding that would sustain the existing campuses, which were still recovering from the losses of the early 1990s, the will to build the new campus would evaporate. The compromise that emerged, saving the university's budget and allowing the campus to go forward, was brokered by Assemblyman Dennis Cardoza. The agreement was that new funds would be found for the tenth campus and no funding would be taken from existing campuses. To ensure this, UC Merced was not included in the UC budget but became a separate line item in the governor's budget. This decision assuaged some of the concerns from the other campuses and was certainly a pragmatic compromise. As the years passed, the wisdom of having UC Merced's budget as a separate line item would be questioned. Each downturn in the state budget made the UC Merced budget extremely vulnerable.

Indeed, from final site selection in 1995 to the opening of the campus in 2005, the budget surplus soared to over \$24 billion in 2000 and then plummeted three years later when California posted a budget deficit of more than \$30 billion. During the surplus years, the University of California managed to push through a request for \$160 million to build UC Merced. During this euphoric period, Governor Gray Davis urged us to open the campus a year earlier, in 2004. The subsequent deficit led to the campus's opening being pushed back to the original date.

Our initial plans were to have one hundred tenure-track faculty, but political considerations, not academic ones, led to a revised roster of sixty tenure-track faculty, plus lecturers. The reduced number of faculty limited the majors we could offer, which meant that fewer students would take advantage of the new campus, and the reduced faculty meant that the academic founders carried an extraordinary burden of service, teaching, and research. Yet as troublesome as these circumstances were, we had to open.

Political Leaders—and Friends of a New Campus

The majority of the population in California lives in coastal areas; hence, political decision making tilts toward the coastal regions. The San Joaquin Valley is a stepchild in many ways. If the legislature has to prioritize projects

and has a limited budget, the tendency is to eliminate projects in the valley. UC Merced was blessed to have some leaders who truly cared, who wanted San Joaquin Valley students to have ready access to a University of California education, and who understood the economic and social benefits of a research university.

The following leaders were especially important in ensuring that UC Merced would be built and opened:

- Dennis Cardoza, a state assemblyman at the time and now a member of the House of Representatives, was extraordinarily helpful to UC Merced. He is adept interpersonally and extremely smart, and he has tremendous vision combined with a genuine love for the San Joaquin Valley. During difficult budgetary years, he was the spokesperson for UC Merced in the assembly. He fostered relationships that crossed political boundaries and garnered support in both houses of the state legislature.
- Cruz Bustamante, especially after he became Speaker of the Assembly in 1996, had power and used it to work with the state budget and garner resources for UC Merced.
- John Garamendi Sr. has served as state senate majority leader, insurance commissioner, and, currently, lieutenant governor, and knows all the roads in Sacramento. He could get me into any office that I needed to get into, and on very short notice. I spent countless days in Sacramento during the difficult budgetary years building relationships with the leadership, the valley representatives, the members on the educational and budget committees and the Hispanic Caucus.

Building a campus occurs over such a long time frame that it often requires support from multiple generations of office-holders. UC Merced was part of the agenda during the administrations of four governors. Two were critical to the campus opening in 2005:

- Gray Davis, governor from 1999 to 2003, deserves much more credit than he has been given for building UC Merced and, in addition, for negotiating funding that allowed the University of California to develop four California Institutes for Scientific Innovation. Both of these actions on his part will turn out to be powerful contributors to California in the years to come. UC Merced was facing strong environmental pressures, which I detail in the next section. Governor Davis put \$30 million into the budget for conservation easements to help with mitigating the effects of UC Merced development on seasonal wetlands; to this he added \$15 million to do scientific surveys and regional conservation planning. Governor Davis was present at UC Merced's opening day ceremony and received a heartfelt ovation from the five thousand people who had assembled to launch the campus.

- Arnold Schwarzenegger arrived in Sacramento with no track record in the San Joaquin Valley. Yet during his administration, he has spent more time in the San Joaquin Valley than any other governor during my tenure. He has listened to the issues in the region and has been a strong supporter of the tenth campus. Because he began his tenure during—even owing to—a state fiscal crisis, it would have been very easy to say, “Now wait: California has multiple research universities. Why do we need another one in the San Joaquin Valley?” Instead he recognized the economic engine provided by the University of California’s research and understood how many San Joaquin Valley issues will be addressed by research conducted at UC Merced.

Finally, it required support of the Office of the President to see the campus built:

- President Richard Atkinson enjoyed the full confidence of Governor Davis and presented a compelling case for the University of California and its impact on the state. Once he committed to hiring a chancellor for the tenth campus, following the agreement to sequester UC Merced funding from the rest of the UC budget, UC Merced had his total support.

In 1999, I took the job as founding chancellor of UC Merced thinking that my responsibilities would entail recruiting administrators and faculty, building buildings, and attracting students: in short, creating the university itself. I found instead that I was embroiled in multiple other issues, all with political overtones. Fighting for the resources in Sacramento, dealing with regulatory agencies, and keeping a number of constituencies on board took most of my time. In these battles, I had to have political allies and was thankful to have the vision and the constant support of President Richard Atkinson, Governor Gray Davis, and Assemblyman Dennis Cardoza. Among the heroes of UC Merced’s beginnings, they have a special place.

Environmental Issues

Anyone considering building in California needs to confront the environmental issues early and head-on. The western part of the United States is a battleground for environmental issues, and California leads the way. In selecting the site for the tenth campus, the regents were confident, owing to findings in the site selection environmental impact report, that the Merced site was relatively free of environmental issues and that the site had ample water.

A year after the site was selected, a tiny fairy shrimp that lives in seasonal vernal pools was added to the federal endangered species list. A vernal pool (*vernal* means spring) emerges from the depressions in the land where there

is clay hardpan soil. For a brief period during the winter rains, these dips retain water, allowing the dormant fairy shrimp and other animal and plant species adapted to ephemeral wetlands to go through the active phase of their life cycle. As the pools dry up in March and April, the fairy shrimp burrows into the mud and resumes the dormant phase of its existence. Fairy shrimp can remain in this dormant phase for decades if there is a drought. Vernal pools exist only where the soil has not been seriously disturbed by farming, orchards, vineyards, and development, which all break up the hardpan, leading to the disappearance of vernal pools. For this reason, there are only a few areas in California where significant vernal pools remain. Furthermore, as the federal Clean Water Act has been extended over the years, vernal pools have been included among the waters of the United States and now come under the jurisdiction of the U.S. Army Corps of Engineers.

A number of groups with special interest in vernal pool ecology noticed that the campus and associated development would have an impact on one of the last major swaths of vernal pools in California. Among them were UC faculty on several campuses whose research interests include rangelands, soils, and species characteristic of eastern Merced County's vernal pool ecology. These faculty provided education and advice that led us to reconsider the planned campus site and relocate it as a means to reduce campus impact on the vernal pools. Chapter Two details the negotiations that ensured that the campus could be built and opened on the relocated site. An added advantage of relocation was that the campus now connected with the planned development corridor for the city of Merced, thereby reducing concerns about sprawling development.

In responding to its environmental charge, the Army Corps of Engineers' mantra is "avoid, minimize, and mitigate." By moving the campus site, we avoided 90 percent of the vernal pools that would have been affected by the original site. We minimized the impact further by reducing the main campus from 2,000 acres to 910, and we mitigated the impact by purchasing conservation easements with funds from the state of California, brokered by Governor Davis. By these actions, UC Merced actually halted the loss of vernal pool habitat that had been going on for decades in Merced County. Altogether, we have saved some 20,000 acres of vernal pool complexes in Merced County, in addition to the 5,000 acres in conservation on our original campus site.

The Merced site was selected in part because it was donated to the university by the Virginia Smith Trust, a nonprofit whose funds are used solely to provide scholarships to local students. The regents knew that many families in the San Joaquin Valley would have a difficult time funding their children's education; hence, the fact that development of trust lands around the campus would add to the scholarships was a factor in final site selection. When we moved the site, we were in danger of losing the scholarships, as the adjacent campus community would now be built on land that was not part of the Virginia Smith Trust. To solve the problem, a local rancher

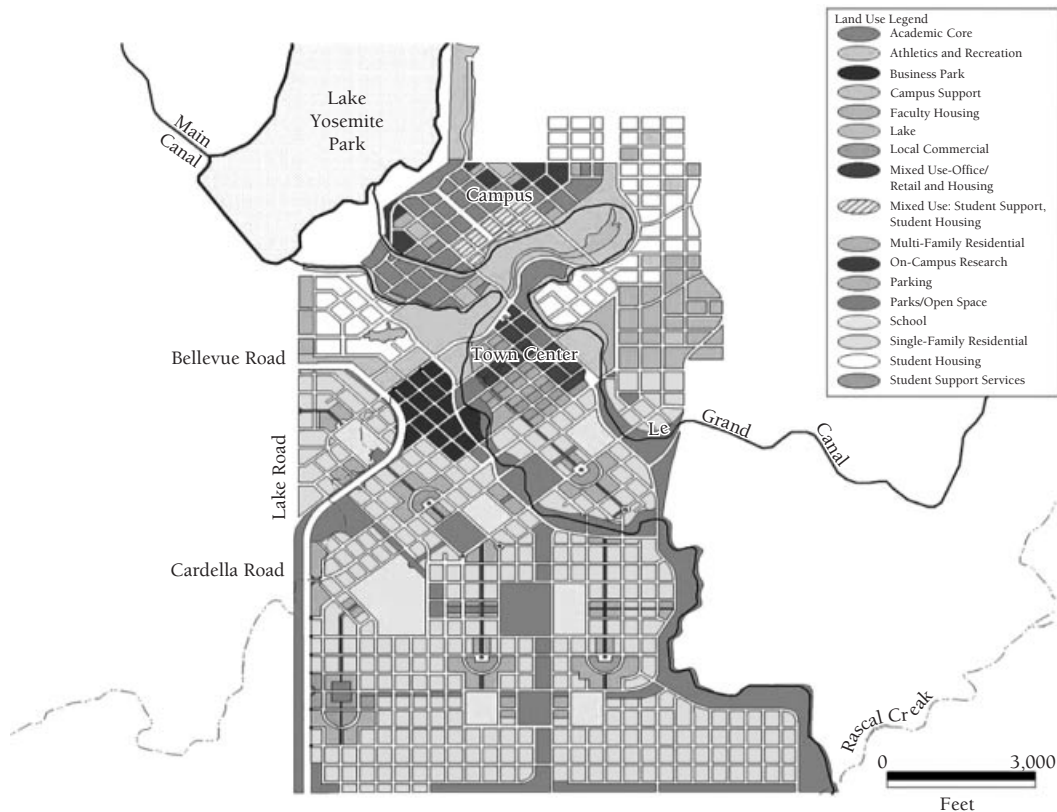
and supporter, John Myers, agreed to sell the land immediately adjacent to the relocated campus site for community development (see Chapter Two for details). Nevertheless, the full campus build-out of twenty-five thousand students and associated faculty and staff will require development on about eighty acres of vernal pool habitat. In terms of the functionality or the quality of the vernal pools, a study done by the U.S. Army Corps of Engineers shows that the vernal pools we have preserved are actually three times more functional than the ones that we will affect. In terms of the overall mitigation, by purchasing conservation easements, we are preserving about thirty-two acres for each acre that we will affect.

When the previous three campuses were built, the Environmental Protection Agency did not exist, the Clean Water Act had not been passed, and the Endangered Species Act was still in the future. All of these and dozens of other regulations from the federal and state governments are now in place to preserve the environment. Meeting each requirement requires extensive surveys, environmental consultants, legal expertise, and inevitably legal challenges. Would another site have proved as difficult from an environmental stand point? I believe the answer is yes. Even if a site is infill in an urban environment, there are regulations and environmental concerns that have to be addressed, as well as complexities in assembling sufficient land for the needs of a modern research university. In addition, there are legal challenges from those who do not want the development to occur.

In considering environmental impacts, we also needed to think about where faculty, staff, and students would live. The University of California has built ten campuses, and each began in an undeveloped area. At its opening, Berkeley was considered remote from the urban center in Oakland, with over an hour's commute by horsecar each way. UCLA was located in Westwood, far from downtown Los Angeles. There is an amusing story about Duke Ellington, who was scheduled to give a concert at the University of California, Los Angeles and ended up at the University of Southern California, unable to find the fledgling campus stuck way out in rural Westwood.

Around each of the nine campuses, a community grew up, and today the skyscrapers in Westwood are just one testimony to the evolution of a campus. As part of that evolution, the land immediately surrounding the campus increases dramatically in value. After forty to fifty years, faculty and staff are forced to move farther and farther away from the campus to find affordable housing. In planning UC Merced as a campus of twenty-five thousand students at build-out, we were mindful of the need to develop a community that would house faculty, staff, and students. We wanted to exercise the principles that lead to smart-growth communities by locating the university community immediately adjacent to the campus to install pedestrian walkways and minimize commuting (Figure 1.2).

Figure 1.2. Plan for UC Merced Campus and Adjacent University Community



The air quality in the San Joaquin Valley ranks among the worst in the nation. The towering Sierra Nevada serves as a backdrop to the campus, trapping the air pollution that comes from traffic, the agricultural industry, and even China. Building a community adjacent to the campus to accommodate the growth that it induces is the only sensible response, as limiting the campus's contribution to valley air pollution should be a primary goal.

Academic Underpinnings

Apart from the political and environmental challenges, our administrative team spent many highly gratifying hours thinking about the research university of the twenty-first century and putting together an academic plan for UC Merced. All of us had spent many years at other institutions and knew the intellectual excitement of research universities. We also had experienced firsthand their peccadilloes: the bureaucracy, the academy's slow-paced decision making, and the protection of turf. We felt that we had a unique opportunity: to build a campus specifically designed to respond to new challenges. Our approach was to look at structures, policies, and procedures at research universities and ask whether we could do better. If not, we took the best

practices from other UC campuses and research universities around the country. If we thought we could do better, we tried.

One of the first academic decisions we made was not to have departments. Academic departments serve a variety of functional purposes, but they also tend to reify disciplines. Today's research is about crossing disciplines to direct expertise from a variety of fields to specific problems. If we embraced departments at the outset, we would have small, weak departments. Instead, we decided to look at some of the critical societal issues, especially in our region, and build research institutes that would respond appropriately by uniting talented researchers from many disciplines.

The Sierra Nevada Research Institute was an obvious choice for the first institute. Chapter Six describes its genesis in detail. In the four years since we first hired faculty to be a part of the institute, we have seen remarkable research progress. A November 12, 2006, front-page feature in the *San Francisco Chronicle* showcased research on the impact of global warming on the Sierra snowpack, done by faculty affiliated with the Sierra Nevada Research Institute. The impact of such research is international in scope. Chapter Five offers an overview of the other institutes, focusing on world cultures, alternative energy, and biomedical sciences.

The initial research institutes are able to concentrate our small faculty around important societal issues. As a result, UC Merced has been highly successful at obtaining federal contracts and grants. Our vice chancellor for research recently did a calculation, and per capita, we are bringing in more dollars from contracts and grants than any other UC campus. Since our faculty arrived in 2003, they have secured more than \$30 million in research funding. Our decision to move toward immediate academic excellence by embracing institutes rather than departments currently seems to be a wise one. As the years go forward and the faculty grows, it is clear that the organizational structure will have to be refined, but we hope the commitment to multidisciplinary research will remain.

Conclusion

In reviewing my nine years leading UC Merced, first as a special assistant to President Richard Atkinson and then as the founding chancellor, it is clear that the major challenges did not come from the academic arena. For our founding faculty of sixty, we had over twenty-five thousand applications from an international array of scholars. Our initial faculty are outstanding scholars and self-starters who embraced the opportunity to build a new University of California campus. They were selected and reviewed with the standards of excellence that have characterized the University of California faculty for decades. Chapter Three offers a detailed discussion of our academic planning and faculty recruitment strategy.

The major challenges came from the political arena: garnering support for a less populated but fast-growing area of California, riding the state's

budgetary roller-coaster, negotiating with regulatory agencies whose mandates often force them to look at the trees while ignoring the forest, and building a base of support within the layers of complexity that surround a new venture in California. The delicate dance, thanks to a few visionary leaders and an administrative team whose commitment never wavered, culminated in the opening of UC Merced on September 6, 2005.

CAROL TOMLINSON-KEASEY held administrative positions at UC Riverside, UC Davis, and the UC Office of the President before being appointed the founding chancellor of UC Merced in 1999. After celebrating the first graduating class in 2006, she resigned from the chancellor's position to return to research and writing.

2

The direction of California society and politics has made it more and more difficult to deliver on the dream of ready access to a University of California education for the state's qualified high school graduates.

A Fragile Birth

Lindsay A. Desrochers

Should you wish to illustrate for future generations the best intersection of key public issues in California circa 1983–2005, would you likely point to the creation of a new public research university? I doubt it. You would more likely point to the end of the Berlin Wall and its impact on the California defense industry, or the rise and retrenchment of the great technology industry, or the initiative process that enabled the taxpayers' revolt of 1978 trumping representative government, or the passage of the antiaffirmative action Proposition 209 reflecting fear and resentment of immigrants and its galvanizing effect on the political participation of Hispanic/Latinos, or the backlash against population growth by the not-in-my-backyard environmentalists.

I believe, however, that the University of California, Merced project was a lightning rod for all these pushes and pulls in California society between 1983 and 2005. In fact, the project provides a clear window into California during this period. In this chapter, I describe the political context in which UC Merced was conceived and built, with special attention to how fluctuations in the state budgets affected the project. I conclude with some of the organization-building and construction challenges that we faced as the founders of UC Merced.

Many observers thought that the tenth campus of the University of California would never be built. In his end-of-the-century sad survey of the State of California, *Paradise Lost: California's Experiences, America's Future* (1999), Peter Schrag, one of the best students of contemporary California, concludes:

But California, even with a large burst of new post recession revenue, is no longer the progressive model in its public institutions and services, or in its

social ethic, that it once was—had indeed ceased to hold that position long before the last recession began. California’s schools, which thirty years ago, had been among the most generously funded in the nation, are now in the bottom quarter among the states in virtually every major indicator—in their physical condition, public funding, in test scores—closer in most of them to Mississippi than to New York or Connecticut or New Jersey. The state, which has almost doubled in population since the early 1960s, has built some twenty new prisons in the past two decades. But it has not opened one new campus of the University of California for nearly three decades [pp. 7–8].

Clearly Schrag saw the shine was off the Golden State circa 1999, evidenced by the building of new prisons rather than a new University of California campus. The university had symbolized the California dream, but by the turn of the twentieth century, it had yet to grow to accommodate new Californians.

To those of us directly involved in building the tenth campus, it became an absolute point of pride to succeed. At one point in 2003, as we officers of UC Merced were yet again testifying before a state senate budget committee, a young Latina student from the San Joaquin Valley testified most eloquently on behalf of the Merced Project stating that the state owed the valley Hispanic/Latino population more than just prisons. She was making a social and economic justice argument. Contrast this with the views expressed at the same time by long-time state senator John Burton of San Francisco, who coolly called the project a “boondoggle.” This we saw as coastal elites denying the underserved valley the advantages of a state public research university, arguably the most prestigious public university worldwide. Passions ran high over the UC Merced project.

Coastal elites and the valley Hispanic/Latinos were only two countervailing forces affecting the tenth campus project. Encompassed in the twenty-two years prior to its opening was an array of competing forces juxtaposed along the state’s political landscape. Some of those forces were:

- Coastal Californians, particularly San Francisco liberals like Burton versus the old guard San Joaquin Valley ranch families (read: Republican)
- Economic urban elites versus rural poor
- The (almost former) white majority versus the (no longer) sleeping giant of the Hispanic/Latino community
- Public services demands versus antitax ballot initiatives
- Environmentalists versus free-style land developers
- Union advocates versus free market developers in the San Joaquin Valley.
- The Californian construction industry versus the Chinese growth juggernaut

California’s Constrained State Budget

California grew vigorously after World War II, and the state and local budgets grew accordingly. But by the late 1970s, property taxpayers were feeling

the burn of added taxes to support growing schools and other local programs. Proposition 13 brought property tax relief to the Golden State and, along with the Gann spending limit, which was intended to ensure that state and local spending would not grow beyond the population increase plus cost of living or increases in personal income (or the lower of the two), sent all government service providers scrambling. These propositions put the brake on government spending and a wrench into the works of public support for schools, colleges, and universities, as well as other services. The significance of these developments for the University of California's financial fortunes and future directions was profound.

The University of California had always relied on the state as its fundamental source of funds for its core missions. The university had a proud policy of no tuition and only minimal fees for most of its history. Over the five decades of the post-World War II era, federal financial aid supplemented this state support, as did gradually growing research support from federal agencies and other extramural providers. The university had no history of local financial support. But as a result of Proposition 13, it and other state-supported programs would now have to compete with schools and other local services for state largess. Diminishing state funds provided the backdrop of crises and uncertainty that made the creation of UC Merced no small miracle.

The Gardner-Deukmejian Partnership: The Idea of a New Campus Is Born

Perhaps it was fortuitous that David P. Gardner, who served as president from 1983 to 1992, was well regarded in Republican circles, having just come from chairing the National Commission on Excellence in Education, which in 1983 produced the much-hailed *A Nation at Risk* study. That study was a no-nonsense reform agenda for the nation's public schools and music to the ears of conservative politicians. Beginning his term in 1983, Governor George Deukmejian, a Republican, created a partnership with President Gardner that led directly to the decision to build the tenth UC campus.

Before Gardner could enter a new campus discussion, he needed to and did lay out the groundwork for improving the University of California's budget by means of a very good partnership with the new governor, who seemed to genuinely care about the quality of the institution. This groundwork was a prerequisite for discussing the prospect of a new campus (or campuses). The nine UC campuses had lived through poor budgets during the governorships of Ronald Reagan and Jerry Brown, and there was little internal support for establishing new campuses. Thus, Gardner knew he had to provide a robust UC budget before he broached the topic of new campuses within the UC system. His first budget year included a stunning increase of almost 30 percent, plus substantial capital construction funds. The Gardner-Deukmejian era was off to a good start. As Chapter One details, President Gardner launched full-scale planning for a tenth campus.

The Tenth Campus Hits a Speed Bump

In 1990, the Republicans once again captured the statehouse when Peter Barton “Pete” Wilson began his term as governor in January 1991. But unfortunately for the new governor, California’s perennially fickle economy took a nosedive in 1991, the most serious fiscal downturn since the Great Depression. In addition, Californians had recently approved Proposition 98, which protected budgets for the schools and community colleges, further reducing the state’s discretion in assembling the annual budget. All of this spelled new budget woes for the state, particularly for the vulnerable University of California, whose woes proved to be deep and prolonged.

Constant pressure from the San Joaquin Valley delegation, spearheaded by Assemblyman Cruz Bustamante, brought site selection to a conclusion only after the state earmarked an allocation to complete site environmental review. The Merced community, which had organized a highly effective booster effort to propose the Merced County site, pursued a truly admirable and savvy campaign strategy to win regents’ approval. Their strategy included having six thousand area school children send postcards to the regents, each conveying the writer’s sentiment about the importance of the new UC campus to the region. The community also arranged for an offer of free land to the regents from a local educational trust. Advocates for the finalist sites in Madera and Fresno counties were not nearly so vigorous in their pursuit of the prize, though this did not prevent expressions of sour grapes from some Fresno supporters after the Merced site was chosen. However, Fresno’s snub was the least of the problems. If project advocates thought site selection ended the difficulties, they were mistaken. Soon to come were new challenges, including reluctance at the UC Office of the President, aggressive attacks by local no-growth environmental activists, and, again, state budget distress.

Restarting Tenth Campus Planning

In 1995, Richard Atkinson became president of the university. He was initially reluctant about building the tenth campus, owing to his doubts about enrollment growth and concern that resources would not be sufficient to restore the budget for existing UC campuses or robust enough to build a new one. Negative publicity haunted the new campus’s leadership team over the next five years, resulting in endless public relations difficulties. We were constantly looking for strategies to reassure all parties we would get to the finish line.

The balancing act for the UC leadership was to ensure that the other campuses would not suffer as a result of the new campus project. The vice president for budget, Lawrence Hershman, played a key role in the solution to the funding dilemma. The July 1997 board of regents minutes record:

Mr. Hershman noted that budgetary planning for the tenth campus must be undertaken in the context of long term planning for the financial health of the University as a whole. . . . From a financial point of view, the University's ability to build the tenth campus depends on the availability of adequate resources both to develop a new campus and to insure the continued financial health and enrollment expansion at existing campuses [p. 13].

For the preopening phase of campus development, the total construction and operating requirement was rounded to \$400 million. This was no small investment, and not lost on the state legislative analyst's office, the state's fiscal watchdog, which consistently resisted making positive recommendations on the project.

In 1997, a critical step advanced the cause of the campus. For the first time, the statewide higher education bond measure included capital funding for a new campus in the San Joaquin Valley, and planning funds were appropriated. In addition, the deal to treat the UC Merced budget as a line item separate from the rest of the UC budget was concluded. Demonstrating the same determination that the Merced community showed in the site selection process, the bipartisan valley delegation did not quit until they had the university officials and legislative colleagues on board.

Governor Davis and High-Gear Planning

In the 1998 gubernatorial election, the state's Democrats finally found a winning candidate after sixteen years of Republican domination of the California statehouse with the election of Joseph Graham "Gray" Davis. When he assumed office in 1999, Governor Davis quickly endorsed building the tenth campus. In fact, he declared that this would become one of his top priorities, and he astonished university leaders in declaring that a 2005 opening date was too late; instead, it should be advanced to 2004, not coincidentally, the year he would face reelection. He took the unprecedented step of creating a cabinet-level "Red Team," chaired by his secretary of consumer affairs, to assist UC planners in getting the job done. This team proved useful to the newly formed campus administrators as we made our way through environmental challenges, financing of essential utilities through a state infrastructure bank, and construction contracts.

Appointed by the regents in 1999, Chancellor Carol Tomlinson-Keasey began to assemble an executive team to help her organize the university. A first appointment was the vice chancellor for university advancement, who assembled the magnificent UC Merced Foundation Board, consisting of regional and state leaders from both the private and public sectors who time and again assisted in the political advocacy. By 1999 planning funds were flowing, and capital construction funds were in the wings. However, Governor Davis's advanced time line for opening was truly a difficult

proposition. The declaration to open by 2004 weighed heavily on the mind of the new chancellor and her team. Experienced people could easily see the folly in attempting to meet the governor's time line, but we had no choice but to plunge ahead.

By 1999–2000, things were looking up for the prospective campus in the Valley. The regents had selected a site, the university president was supportive, local politicians had insinuated the project into the capital planning funding streams of the state budget process, and the new governor had avidly taken up the cause, putting some of his chief lieutenants on the task. The Hispanic/Latino community pledged support and volunteered advocacy. The UC Merced planning team, however, encountered a buzz saw of environmental opposition that would put the project to the test most severely. Chapter One outlines the decision to move the campus site in order to mitigate its impact on seasonal wetlands and the challenges presented by federal environmental regulations and local antigrowth activists. These environmental issues constrained potential campus development on the site and put its successful opening in jeopardy. In the first months of 2001, we developed the strategy for resiting the campus within the Virginia Smith Trust lands from the center of the trust property to a site adjacent to Lake Yosemite. This action greatly reduced the wetland acreage that would be affected by campus development.

The university recognized that the general use of the Smith Trust lands required a clean water permit from the U.S. Army Corps of Engineers and approval from the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service. But federal permitting would take years of negotiation. With an eye on the governor's declaration that UC Merced was to be opened in 2004, the decision to resite the campus was entirely practical. As it happened, the Virginia Smith Trust had built a golf course on 210 acres of its land near the lake. Because the land was previously developed, we believed it was possible to persuade the federal agencies to agree that the university could build on that acreage until the longer-term process for the full 2,000 acres could be completed.

When I arrived on campus in fall 2000, however, the university did not yet actually own any of the trust lands, and negotiations with the trust had bogged down. The project stood merely as a promise at this point. What to do? My first major task was to steer the acquisition of an appropriate two thousand acres within the Virginia Smith lands that would become the actual campus site. Since the campus was at that time slated to move from the originally planned location on trust land, complex, quick analyses and careful teaming with the Office of the President was needed. Sketching out the sequence of events that would lead to bringing the negotiation to conclusion and coordinating the team of real estate experts and lawyers occupied much of my first six months.

Land acquisition had to happen in parallel with other pressing tasks, among them building an organization sufficiently populated with

appropriate professional staff to start a university; working with the UC budget office on the next rounds of budget requests in Sacramento; and developing financing plans for a number of key elements that had not yet been contemplated, including major campus utilities, student housing, and temporary facilities for a brand-new but growing staff and faculty who would soon arrive.

As it turned out, the Virginia Smith Trust was carrying debt on the golf course. At the same time, we learned that the golf course could indeed be developed more easily from the perspective of the federal Clean Water Act requirements. While the two thousand acres were, by promise of the Merced leaders, to be donated to the regents, the trust was in no position to make the donation of the golf course portion of their lands. The regents needed to take formal action to acquire a portion of the Smith Trust lands in order to proceed with the project. The property initially offered by the trust was not immediately available for development given the permitting issue, and the portion on which it was possible to build was encumbered with debt. Once again we faced the question: What to do?

The issue of “free land” posed no small concern. The board of regents’ approval of the Merced site was contingent on the idea of donated land. Should the university now have to pay for the land, the site selection process itself could be questioned. As we pondered these matters with UC lawyers, we were lectured by the Office of the President about the Merced community’s commitment. We were pushed to bring home to the local community leaders that their commitment must be met. Both the city and county of Merced had scant financial resources and were hard-pressed to raise funds. To complicate the picture, the chancellor and I were soon to visit Sacramento in search of approval for major construction funds, and the state legislative analyst was seriously questioning whether the university was making sufficient progress on the project.

At this point the chancellor and I began discussing possible financial help from nonpublic sources to assist with defeasance of the Smith Trust golf course debt so that we could acquire the property. While I worked with the Office of the President and UC general counsel, and reassured the Smith trustees that we would find a solution, the chancellor sought the assistance of the David and Lucille Packard Foundation, which proved willing to entertain a proposal. We proposed that the foundation could make history by helping the University of California acquire the two thousand acres needed for the campus through a gift and at the same time satisfy the foundation’s environmental protection goals by putting the residual Smith Trust five thousand acres in a permanent trust with the Nature Conservancy, never to be developed. By resiting the campus adjacent to Lake Yosemite, damage done to the wetlands would be substantially reduced. We would create a dense, urbanized community just south of the campus on purchased rangeland, to be jointly owned by the university and the Smith Trust. In the long run, profits from that development would enrich the Smith Trust

scholarship fund. An additional advantage was that the university community would connect with the City of Merced's corridor of planned growth, minimizing suburban sprawl in the county. The Packard Foundation generously granted us over \$12.7 million, which allowed us to achieve all of these goals. The Packard grant, our magic bullet, allowed us to acquire the Smith Trust lands in March 2002.

The regents were in a delicate position when they were confronted with the acquisition proposal. When we brought it forward in January 2002, together with a proposed campus long-range development plan and the first building project designs, the decisions before the regents were monumental. At stake were millions of state and university dollars and, more important, the reputation of the University of California. The land transaction was a complex package, but one that seemed to have wins for everyone: UC regents, the San Joaquin Valley legislators, the governor, the Merced community, the Virginia Smith trustees, and the environmental community. But one serious flaw remained: there was no guarantee that the federal agencies would ultimately grant the permits needed to fully develop the campus. The regents could go forward with building on the first one hundred golf course acres, but the risk was enormous. What if the federal agencies denied the permits to complete the campus? How would the campus grow to its projected twenty-five thousand students?

We did considerable advance work in preparing the regents to approve the land acquisition, the long-range development plan, and the first building designs. Over the previous three months, certain regents had combed through the plan and building designs, demanding numerous changes. These board interactions proved a fascinating illustration of how regents involved themselves in campus business and their intent to improve oversight. The concerns were finally dealt with to the board's satisfaction, although not without costs, especially loss of precious time. It was now time for the regents to act.

In executive session, the regents thoroughly discussed the risks. They asked the general counsel a number of strategic questions about possible legal challenges. Everyone knew the stakes financially, politically, and legally. We all expected to be sued by the local antigrowth environmental groups. However, the regents decided to go forward. It was a dramatic moment when the entire package was approved. I believe we breathed easily for perhaps ten minutes after the approvals. Then the truly hard work of delivering was on us.

After the regents' approval, we wasted no time in taking the next steps. In March 2002, the Smith Trust land was conveyed to the regents, and site and infrastructure work began in September. Over the course of the next several months well into 2003, further construction plans were made. Many members of the UC Merced Foundation had a special interest in advising the chancellor on the development project. Among them were a former state legislator, a lawyer and former UC regent, two respected developers, and a

retired executive from a highly successful construction company who had been on several major higher education boards. These were experienced professionals who gave enormously of their time and were willing to help whenever the chancellor called.

Some of these advisers simply wanted the chancellor and her staff to turn the project over to a developer. At the time, the chancellor was inclined to do this, but I worked with this issue and finally persuaded the chancellor that this strategy would not work for a number of reasons, not the least of which was the public funds and competitive processes required by law. Although these advisers provided much good advice, it was also important to establish the university leadership as clearly in command of the project. Once this group was convinced that the university had this huge project under control, they reversed their earlier position on how to manage it. By summer 2003, most major contracts were under way. By late 2003, the local community could finally see the framing for large structures under way from the distant road that led up to the property. That moment in history changed the community of Merced and the San Joaquin Valley forever.

Dot.Com Bust

Even this visible progress, however, did not deter all Sacramento detractors. In 2002–2003, the drama concerning funding for UC Merced came to a head. Yet again the state of California found itself on the bust side of the economic cycle. The legislative analyst's state fiscal picture, her annual analysis of the governor's budget bill, was gloomy indeed. She outlined that tax revenues were perilously declining due to stock option devaluation in the technology sector. This same, even deeper problem persisted into 2003–2004, and the legislative analyst began calling the problem a "structural deficit" in the state budget. As gloom spread in the public sector, including the University of California, the public's affection for their recently reelected governor plummeted—disfavor that was exacerbated by the state's energy crisis. Within a year of his reelection, Governor Davis was recalled from office in one of the most amazing chapters in California state history. More amazing still, Arnold Schwarzenegger, the internationally known Hollywood icon, was elected governor of California on November 17, 2003.

Given the continuing fiscal distress of the State, the recall of Governor Davis, and the election of a new governor who was a complete political mystery, the future of UC Merced was once again under discussion. Because it was a high-profile effort of the governor and valley legislators, UC Merced was easily played as a political football time and again. In 2003, the legislative analyst recommended delaying the opening of the campus until fall 2005. The legislature agreed to that delay in the 2003–2004 budget bill. Even as buildings were going up and campus recruiters were scouring the valley for potential students, doubts persisted. Would the new Republican governor

support this project, especially given Governor Davis's strong support? In the meantime, we moved as fast as we could to be ready. Calming all parties, including construction contractors and ourselves, was a constant effort.

The good news was that we had another year to meet the goal, and this year was needed, given all the difficulties attendant on a project that was beset not just by reduced state operating budgets. Adding to our problems were soaring construction costs that hobbled the progress of construction as aggressive development in China drove up competition for concrete and steel, labor unrest, and still-unresolved matters with the U.S. Army Corps of Engineers and Environmental Protection Agency. Although we were thankful for that year, we did not know whether we would have an operating budget going into the following year.

Governor Schwarzenegger made his first State of the State address to the California legislature in January 2004. In it he unequivocally stated his support for the UC Merced project. It was the only project specifically mentioned in that speech. Had the UC Merced team the time to do so, we might have uncorked the champagne. But fall 2005 was looming, and much work remained. Most attributed the new governor's support for the project to his understanding of the rising importance of the San Joaquin Valley, especially to Republicans. Some months later, the governor visited the emerging campus. He was intrigued by our new super "green" utility infrastructure. In fact, UC Merced is the first entire campus to meet the Leadership in Energy and Environmental Design (LEED) Green Building Rating System standards. The governor was cheered by the campus construction crews, and one weary chancellor and her crew breathed more easily.

Organization Building and Getting the Job Done

All of us who were creating this new university experienced a dilemma. We were fielding the rocky politics of the state and building the campus at the same time we were putting in place the campus organization and operations. While I had in mind what elements would be needed to operate the institution and early on prepared a bubble chart of the steps needed to meet the legal and financial requirements, in practice, we proceeded by instinct as much as anything else. In my sphere, which evolved to include the budget, administration and finances, and the campus design and construction, the immediate imperative was to obtain the funding resources and get the campus built. We certainly did not have in place at the outset the people we needed to do this job but found them as we proceeded.

Recruiting employees was difficult in the early years, especially, as people's lives and careers would be staked on this very big gamble. Although we had many candidates, including some excellent ones, it took adventure-some souls to do well in these circumstances. We were in a small agricultural community: "out in the boonies" from the point of view of employees

we had hired from the other UC campuses, accustomed as they were to the culturally rich setting of a mature campus.

Our employees did not always know how to proceed with their jobs, as there was no obvious road map. After all, we were creating a new organization forty years after the last UC campus had been created. Given the terrible budget reductions we suffered as a result of the state's circumstances, we were unable to do many things that we would have liked to do to properly launch the campus. There were endless decisions about how to do the work. Should we replicate everything a typical UC campus had? Should we contract out work? Should we piggyback on work of other campuses? Each of these strategies had pros and cons. There were no obvious and easy solutions.

In my area in particular, we had to proceed at lightning speed. Basic university instructional functions could not happen if the campus was not built, or sufficiently built, to house the opening class and faculty. We were not only dealing with typical bottom-line-oriented construction companies and touchy architectural firms, we were dealing with them at a time when the costs of construction shot through the ceiling. The construction market hit a twenty-year high due to a robust rash of construction in China. In fact, the California construction market was so bad that it was dubbed “a perfect storm,” and many companies found themselves in terrible trouble. We lost at least one company to bankruptcy, and others were looking for ways to cut their losses. In sum, our internal challenges were substantial even as the pushes and pulls of California society and politics, especially the budgetary challenges, set the external context.

Final Words on the Miracle

It is a fact that UC Merced opened; frankly, it was against all odds. It took grit and guts of a handful of determined people. Why these people, led by a chancellor with off-the-chart tenacity, were so determined is another chapter that should be written. Some of us owed our lives and fortunes to the California dream and its universities and wished mightily to make that dream available to the children of the Central Valley. Contemporary circumstances have made it much more difficult to deliver on the dream. While UC budgeteers continue to battle for sufficient funds each year, investment in universities diminishes as investment in prisons grows. Students now carry much more of the financial load. The obstacles to building public institutions like a new university are breathtakingly daunting, and frankly it should not take a miracle to achieve such a goal. So Peter Schrag is unfortunately still correct in his assessment that the progressive model has receded in California. The golden age of towering giants who believed in the California dream and put the resources where their rhetoric was—the 1950s through 1960s and for a brief period in the early 1980s—is gone.

As a founder of UC Merced, I carry deep concern about this fragile new institution. What are its chances to fully blossom into a vital center of education and knowledge for the other California—the Central Valley? For the largely Hispanic/Latino as well as other less affluent children who reside there? The odds are not good. But I am usually an optimist, and I do hope that we may yet produce a renewed consensus for educating all of our people and make choices to apply our resources for improving the human condition rather than degrading it. Perhaps I am a believer in miracles.

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3

Founding faculty made huge career choices in coming to UC Merced, leaving campuses that met their needs and provided comfortable infrastructures.

Building Academic Distinction in a Twenty-First-Century Research University

David B. Ashley

The heart and soul of a university is the academic enterprise. Students attend a university because it offers them the knowledge and skills they need for lifelong success. The reputation of UC Merced as a student-centered research university rested on our success in attracting top-flight faculty. This chapter discusses how we got this process started, through choosing the deans, then recruiting the faculty. As faculty arrived, the academic picture came into focus. Not surprisingly, the initial ideas about which fields would be at the forefront changed as faculty and their ideas about how to get the campus going overshadowed the abstract earlier plans. Some embraced the ambiguities inherent in moving from well-established institutions to one in which infrastructure needed to be created. There were both disappointments and successes as we tried to realize the interdisciplinary ideals that would meet the educational needs of this century.

When I accepted the position of founding executive vice chancellor for academic affairs and provost, I discovered that some preliminary thinking about what the academic profile of the campus should be had been completed. Basic academic areas clustered around the three schools: the Schools of Engineering, Natural Sciences, and Social Sciences, Humanities and Arts. Two interdisciplinary research organizations—the Sierra Nevada Research Institute and the World Cultures Institute—had been proposed. Academic strengths and weaknesses at the existing UC campuses and the state of California's future needs had been examined, with a view to applying findings

to UC Merced. A few focus areas for research and curriculum, well suited to the campus location in the San Joaquin Valley, had been identified. In particular, initial degree programs were envisioned in the biological sciences, psychology, and computer science fields that had high student demand on other UC campuses and for which UC Merced could provide additional capacity and access. I expected to work iteratively with the school deans, whose hiring I oversaw, to define the initial centers of academic strength that we would build. And the deans and I would work with the Senate Task Force on UC Merced, organized by the Universitywide Academic Senate, to carry out functions delegated by the regents to the faculty until UC Merced could organize its own faculty senate division. Knowing how time-intensive faculty recruitment is, I was aware of the large burden on a small number of individuals—both faculty and administrators. Nevertheless, I felt comfortable—perhaps too comfortable—with the anticipated timetable to opening day.

Hiring the Deans

We were cautious in hiring the three founding deans, since their credentials and scholarship would set the campus standards for high-quality hiring. The engineering and natural sciences deans were our first priority. The constituent fields in their schools require a long lead time for faculty to move their laboratories and research programs. This needed to be done well before the campus opened, since the founding faculty would also need to take the lead in planning the undergraduate and graduate programs and general education and recruiting the faculty to join them in staffing the programs. The promise of a new research university is in part an opportunity to create forward-looking curricula in both the traditional disciplines and new interdisciplinary configurations. An additional reason for bringing in the science and engineering faculty first is that the budget of the modern research university depends on the extramural funding that they attract. It is a fact of contemporary university life.

The search for the dean of engineering, which had been conducted in tandem with the search for the provost, lagged a bit so that I could participate in the final interviews and hiring decision. Still finishing my duties as dean of engineering at Ohio State University, I interviewed the two finalists in Columbus. The candidate from Purdue University, Jeff Wright, was creative and open-minded and understood the priority placed on quality at the University of California. His background in environmental engineering, with expertise in water resources, fit well with the research excellence we hoped to build in the natural resources sciences.

Filling the position of dean of natural sciences proved more difficult until we turned to UC San Francisco's representative on the Academic Senate Task Force on UC Merced. Maria Pallavicini understood the campus goals and plans and had credentials in the biological sciences, with a focus on

cancer research, that were impeccable. We concluded hiring her about a year after hiring the dean of engineering.

The dean of social sciences, humanities and arts proved the most difficult position to fill, with two unsuccessful iterations before we succeeded. We attracted an outstanding Stanford School of Education psychology faculty member, Kenji Hakuta, whose research on bilingual education policy and personal and compassionate commitment to school reform well suited UC Merced's San Joaquin Valley location .

The founding deans put a high priority on collaboration, which served to soften the more typical tensions that can occur between established schools on established campuses. Kenji Hakuta was a strong collaborator.

Hiring the Faculty

The dean of engineering had arrived by the time the first faculty advertisements went out in fall 2001. Although the fields for initial recruitment had been spelled out, we decided to cast the net as wide as possible. The advertisements encompassed broad fields at all ranks and in all areas. Most hiring would be at the senior level in order to have leadership to help in refining the academic areas that would be the first campus foci. The advertisements emphasized UC Merced's interest in interdisciplinary work, especially in research.

The response was overwhelming: before opening day, more than twenty-five thousand applicants for all disciplines. There is a photo of me with applications piled up to my waist! We hoped that two strategies, spousal hiring and cohort hiring, enabled by our flexibility as a start-up, would help us in attracting the best faculty. In the case of hiring spouses, we had great success. The idea of cohort hiring—inviting geographically scattered colleagues to apply as a group, with a proposal for their planned curricular and research focus—had promise, but applications in this category did not match our early needs.

The first sixty faculty positions were allocated equally among the three schools. Deans would drive the planning for the first twenty positions; the founding faculty would be key in hiring after that. With the lag in the third dean recruitment, Kenji Hakuta did not have the same advantage in building his faculty that the other two deans enjoyed. It was also clear that given the large number of disciplines represented in the School of Social Sciences, Humanities and Arts, twenty positions would not be enough to populate all the desired areas at once. But it was still too early to tell where that hiring should be made after the first twenty faculty were on board.

In order for UC Merced to succeed as a campus of the University of California, it was critical to establish excellence from the beginning. The University of California hiring process puts a premium on candidates' demonstrating their research prowess. We received excellent support from the other UC campuses, which hosted candidate seminars and offered a

rigorous evaluation of each candidate's research. The faculty hiring process raised UC Merced's reputation at the other UC campuses.

The influence of the founding deans was felt at once in the schools. Maria Pallavicini as a life scientist brought a new orientation to the School of Natural Sciences, which changed priorities and reshaped the direction of the school. Jeff Wright took advantage of the Sierra Nevada Research Institute and embraced the early plan of building up computer science. However, this latter field presented unexpected problems. The academic community was beginning to see a drop-off in student interest in computer science, and senior hiring was difficult. A problem in hiring junior faculty is that you do not want to chew them up with the committee work and curriculum development required by a new campus. This program will take time to develop.

UC Merced's initial hiring was strong in history and psychology, but the early hiring efforts in the social sciences also produced a certain disappointment. Because the Senate Task Force on UC Merced assumed the role of the campus department, under UC regulations governing faculty hiring, it played a key role in the early hiring. Divisions within one of the social sciences fields coupled with the Senate Task Force's worry about signs of eminence in initial hired faculty undermined what would have likely been an excellent fit of a potential faculty member's strengths with campus needs. This case illustrates the tension between foregrounding individual reputational criteria and giving less attention to the unique planning and start-up needs of a new university. Debates within the candidate's field questioned whether there was enough "science" in the cultural subfields. In the end, we did not accept the candidate owing to being in the "wrong" subfield at the "wrong" kind of institution, that is, one teaching primarily undergraduates. I often speculate on what potential contributions we lost when we allowed our decisions to be influenced by such external debates and perceptions.

This early experience pointed to difficulties that the School of Social Sciences, Humanities and Arts as a whole would face. On most campuses, the disciplines represented in this school are divided into two, even three, separate schools or divisions. Some fields have experienced great internal divisiveness and need a strong hand to manage them. Furthermore, although faculty were brought in to build programs rather than departments, it was difficult to leave departmental thinking behind. In all the schools, as faculty arrived, they wanted additional colleagues in their own subfields. But there was not sufficient initial funding for this; instead the campus needed to cast the net more widely in order to develop. Even with these difficulties, there were serendipitous early successes. The School of Social Sciences, Humanities and Arts attracted a strong cognitive science group, and UC Merced gained a highly sophisticated research area as a result.

Early tensions and shifts in disciplinary balance occurred in the other schools as well. A critical mass of environmental scientists was brought in initially, but students flocked to other areas of interest. Thus, further hiring

followed these student interests. In natural sciences, biological science hiring surpassed that in the physical sciences as students in large numbers chose the life sciences majors. The result was tension between the life and physical scientists. UC faculty do not react well to their disciplines' serving only a service role to other fields, a situation that is more likely to occur in the buildup years and could last as long as a decade for some areas at UC Merced.

To some degree, start-up packages for the first faculty were another aspect of the tension. If dollars rather than positions had been distributed equally among the three schools, it would not have been possible to get the high-quality faculty whom UC Merced was able to recruit given the differences in start-up costs among disciplines. To ensure the strongest possible faculty, a degree of future debt was taken on in the start-up packages.

Being a faculty member in a start-up university is unique and difficult. Perhaps only one in ten can deal with the open-endedness and uncertainty. The rest want to be left alone in their laboratories or the library to do their work, with infrastructure to support them in place. There was considerable angst among the first faculty around the lack of departmental structure, which leads to the question, Should the campus have tried to form departments from the beginning? The hope was that faculty would find structure through research institutes, graduate groups, and interdisciplinary groups at the beginning, grounding the campus interdisciplinary culture in the opening years. It was certainly expected that as critical masses developed in each field, departments would form. However, on the whole, I am convinced that not having faculty focused on departments at the beginning was more a strength than a hindrance.

The School of Social Sciences, Humanities and Art is, unsurprisingly, departmentalizing first. Variations among the cultures of the various social sciences were evident even during the hiring period. To an economist, research is done by the faculty, and graduate students are expected to teach courses. In other social science fields, graduate students are part of the faculty member's research team. In still other fields, graduate students advance to the point of getting their own research grants to fund their research prior to graduation.

Knowing UC Merced would be compared with the other UC campuses was a strong motivation to build the curriculum area by area in depth rather than spreading the faculty thinly across a lot of disciplines. To build research strength, it made sense to develop concentrations. Among the early concentrations have been environmental sciences and measurement in psychology.

Graduate education is an expensive part of a research university. As a result, UC Merced opened with less than 10 percent of its student body at the graduate level. Yet the critical nature of offering graduate education from the beginning was reinforced by admitting the first graduate students a year before the official opening of the campus.

Overall, the Senate Task Force on UC Merced was a boon in faculty hiring. Its members provided academic reinforcement for UC Merced's own academic plans. They were detached from living with the outcomes of the new faculty hired and thus gave their best advice without being self-serving. I had great respect for them. They saw their role with me as in part an effort to train administration in what the senate ought to be.

A key relationship between my office and this virtual UC Merced faculty was with the primary advisory body on faculty hiring, the Committee on Academic Personnel (CAP), chaired by a task force member and composed of additional faculty from the other campuses. There was great mission support but also some heated debate and a little conflict. For example, CAP did not approve of hiring the social scientist described earlier in this chapter. Some directional choices made by the deans, such as theoretical versus applied mathematics, were not fully embraced by CAP. The task force itself played the role of the department, and members were clearly swayed by the cases made by the deans. In the final analysis, CAP's absolute allegiance to quality was undeniable and will yield the ultimate benefit of creating a coequal UC campus.

Because the task force met monthly with the senior administration, it provided good discipline in keeping planning directions clear, absent the campus having its own faculty. Problems arose when task force views were strong and not necessarily persuasive to the administration. Endorsement of a residential college system as the means for delivering general education was an example of this difference, with the task force supportive of the approach and the administration worried about overhead costs. The compromise was to support a nonresidence-based college approach, but the idea just sat there until UC Merced's own faculty came. They were able to establish their own philosophy of general education, an important engagement in institution building. Though cautious about using the college system approach to deliver general education, they asked the provost to keep the possibility open.

Being Part of the University of California System

The value of framing a new campus within the existing University of California system is that although it was small at the beginning, UC Merced is expected to be one of ten campuses and will participate in all the activities and decisions of the system. It is beneficial to have UC expectations as a guide, even if the campus will not achieve its potential for ten or twenty years. The one downside is that participation in UC committees and issues took a toll on a stretched and small faculty and administration.

While I was still on the UC Berkeley faculty in the 1990s and the Merced site was selected, I remember the negative feeling that the UC campuses had about building a tenth campus in a poor fiscal climate. That attitude turned around with the agreement of the vice president for budget that

UC Merced would be funded separately from UC as a whole. Chapter One describes how this agreement came about. As a result, the executive vice chancellors on the other campuses, with whom I met monthly as part of the council of vice chancellors, were supportive of UC Merced. The attitude in the University of California was that now that we are going to build a new campus, we need to ensure that it is up to the UC standard; we need to be sure that UC Merced succeeds. The higher education institutions of the San Joaquin Valley also were great supporters of UC Merced.

What Worked Well; What Did Not

It is not often that you see an engineer as provost. Other sectors of the campus are likely to claim that engineers do not understand their scholarship and resource needs, given engineering's seemingly comfortable resource base on most campuses. But engineers are also problem solvers, and given the vicissitudes of UC Merced's budget, problem-solving skills were essential. It was critical to maintain flexibility as funding availability changed. For example, the initial campus plan was to hire one hundred faculty. California's budget problems in the early 2000s required that we reduce that number to sixty and adjust academic planning accordingly. As it happened, not having all the policies, processes, and regulations in place before the founding administrators and faculty arrived was a help.

The campus had begun building some special relationships before I arrived. In addition to the national parks relationship described in Chapter Six, a second relationship proved helpful and productive. Lawrence Livermore National Laboratory, a Department of Energy laboratory managed by the University of California, was eager to help in building up the campus and played an important role in research infrastructure development at UC Merced. Although a start-up campus could not offer much for Livermore's professional researchers, who already had access to some of the most advanced scientific instrumentation in the world, UC Merced nevertheless benefited from some early joint appointments and faculty recruits from Livermore.

Most dissatisfying to me was the way campus build-out happened. The shortage of funding was probably most evident in the construction of the new buildings. More academic involvement in the building program would have been especially helpful in assuaging the legitimate faculty concerns that arose. There was great stress on the faculty owing to not being able to move into their permanent campus homes on time. The founding faculty had made huge career choices in coming to UC Merced, leaving campuses that already met their needs and provided comfortable infrastructures. Delays in communicating the evolving construction situation to faculty exacerbated stresses already created by the pressures of academic planning, recruiting, and start-up.

The good news was that the administrative team was able to maintain a harmonious working relationship over the five stressful years before

opening. This good working relationship was perhaps surprising, given the nonstop tensions that each area of university development was under.

When we came to Merced to build the first research university of the new century, we arrived with stars in our eyes. We recognized that this was a once-in-a-lifetime opportunity. The reality of a reduced budget and construction challenges decidedly reduced that starry-eyed feeling. Nevertheless, the campus founders have realized incredible achievements in spite of the pitfalls, expected and unexpected. The grand ambition of building an outstanding research university in California's San Joaquin Valley remains as a guide for the campus and a worthy goal for the future. Each of the founding academic administrators played an essential and unique role in setting UC Merced on this noble course.

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4

Building an academic institution can be likened to an endless race. Success is reflected in satisfaction with processes and events rather than products.

Building the School of Engineering

Jeff R. Wright

The opportunity to lead the building of the School of Engineering within the new tenth campus of the renowned University of California was compelling from the outset. The challenges were much less obvious, and thus much less daunting. What began as the result of a collegial conversation with Karl Pister—Roy A. Carlson Professor of Engineering at UC Berkeley, former chancellor of UC Santa Cruz, and, I later found out, chair of the search committee for the position of dean of engineering at UC Merced—grew into an alluring vision; what seemed initially to be a risky venture rapidly became the chance of a lifetime.

The major attraction was always to lead the creation of an engineering research and education program of the highest quality, and to do so without the burden of solving legacy problems found in even the best engineering programs. At the end of what became a lengthy and frequently disjointed interview process, I decided that this would be the job for me if this position would provide a platform from which I could accomplish five important goals: improving engineering student retention; improving diversity and representation within our engineering professions; establishing an open and transparent administrative structure within the school; improving educational and economic opportunities for the population of the underserved San Joaquin Valley of California; and enhancing information empowerment among our faculty, students, and staff.

Although the decision was a difficult one, the choice became very clear. September 2001 was a life-changing month for me and my family in more ways than one.

The Opportunity

My excitement as I joined what at that time was a small team of dedicated and committed individuals was overshadowed only by how impressed I was with this group. It was clear from the beginning that the UC Merced academic leadership team that Chancellor Tomlinson-Keasey had assembled was a remarkable group, all of whom had left comfortable positions for the opportunity of doing something that only a very few have the chance of doing in their lives and that none of us would have the chance to do again. Each had individual visions for what he or she wanted to accomplish, but all shared the common goals of academic excellence and regional impact. My course was set, and I was eager to get started.

Student Retention and Success. Perhaps the major challenge faced by the engineering profession, and certainly engineering education programs in the United States, is student retention. Fewer than 50 percent of all who start engineering undergraduate programs in the United States complete those programs. Even many well-known engineering programs have retention rates below 30 percent. A guiding principle behind the development of the School of Engineering at UC Merced has been the establishment of a formal structure for student success (during our first year of operation, we are proud of having achieved a retention rate of more than 80 percent among our inaugural students, 40 percent of whom are the first in their families to attend college).

Early discussion among the joint faculties of the Schools of Engineering and Natural Sciences suggested a common freshman year for all students interested in a technical education. Rather than require students to specify their submajor at the time of application, we would establish for the first year a curriculum in which students would be able to better understand the differences between the fields of science and engineering and the career paths each offered. If students made better choices early on relative to career interest, it was felt, they would be more likely to stay focused on their educational goals. During this year, students would take foundational courses and have learning experiences that would help them select the major for which they were best suited.

One of the advantages of building from scratch is the opportunity to adapt the best ideas from other engineering programs. A cornerstone of our student retention effort has been the creation of our own version of what has become the premier engineering service learning program in the country: the Engineering Projects in Community Service (EPICS) program from Purdue University. Under the advisement of a faculty team mentor, students have the opportunity to join teams of peers who work with and for an approved community nonprofit organization, or client, to solve practical engineering problems. An example is a team composed of students from the freshman through senior levels who work together to design, develop, implement, and test an information system to serve the needs of a local

nonprofit organization such as food banks, housing assistance and shelters, women's assistance programs, animal shelter and rescue, or after-school programs.

Interacting closely and continuously with their client, students learn about the needs of the organization, delineate project objectives, formulate work plans, conduct design activities, implement resulting solutions, and monitor and assess program effectiveness. Students' performance and contributions to team effort are formally assessed through regular written reports and panel interviews. In addition to obtaining practical experience that complements their formal course work, students gain experience in working in teams, organizing and writing reports and proposals, interacting with clients, performing and evaluating basic engineering designs, and formally evaluating outcomes. Because teams and team activities extend across multiple semesters and years, clients are assured of continuity of technical support and ongoing attention to their needs.

The development of new and innovative freshman-level learning experiences was also explored as a means to improve retention. The Schools of Engineering and Natural Sciences undertook together the design of an innovative combined lower-division calculus-physics course sequence that would help students master and understand the relevance of both subjects. One-unit freshman seminars were instituted across all three schools as a means of creating more, and more informal, dialogue between faculty and students. Other such efforts included aggressively recruiting undergraduates to work in research laboratories and assist in the development of facilities, processes, and systems.

Another key component of our student retention initiative involves establishing early links with professional engineering societies and organizations. Research shows quite clearly that one of the best indicators of student success in engineering fields is the intensity with which students participate in out-of-class learning experiences, especially peer involvement with student professional organizations.

Diversity, Representation, and Inclusiveness Within Engineering.

Decisions about other programmatic developments within the school were also driven by our foundational goals and objectives. Initially each of the three academic schools put forth two undergraduate majors. For engineering, these were computer science and engineering, a major at or near capacity within other UC campuses, and environmental engineering, owing to the importance of environmental and natural resources to the San Joaquin Valley of California. As planned, this major has become a popular one within engineering for women students and those from other groups underrepresented in the practice of engineering. Similarly, our third engineering major was bioengineering, a subdiscipline that within the United States has become by far the most popular among women who enter engineering programs.

Among the most important factors for improving engineering student diversity is to increase the numbers of women and minority faculty at the

top engineering institutions. Although the California voter-approved referendum that barred affirmative action within the state makes this goal very difficult to address explicitly, UC Merced faculty candidates realize at the time they are hired that this is a priority for our programs. They understand the necessity of being both creative and aggressive in maintaining this as a priority for the development of our faculty and school.

Shared Vision Academic Development. Driven initially by the desire to build strong cross-disciplinary research and education programs, the initial academic planning of UC Merced resulted in the decision not to develop formal departments. Undergraduate degrees are offered through academic majors and graduate degrees through graduate groups—research clusters with which faculty self-associate and that have formal bylaws and procedures. Faculty appointments are made in the academic schools. In order to maintain an open and transparent planning culture within the school, our faculty as a whole, rather than individual subdisciplinary groups, make recommendations about future faculty hiring and academic resource decisions. The objective has been to create and maintain a shared vision about the direction of our programs. As a complement to the shared governance structure and function of the University of California, the shared vision of the management structure and function of the School of Engineering enables all members of the faculty to contribute their best ideas to the foundational ideals of this program.

Regional Impact. The paradox of UC Merced exists as a conflict between the fundamental mission of the university and the context of the campus. By definition and conception, the University of California is the institution that serves the research and scholarship needs of the state without regard to geographical location or need. The top students from the graduating classes of all high schools and community colleges in the state are invited to apply and are subsequently admitted to one or more UC campuses. Acceptance is based on qualification and performance; region of origin is not and cannot be a consideration. Yet the approval of the tenth campus by the California legislature contained the strong directive that this campus would be the first UC campus located in the educationally and economically underserved San Joaquin Valley. Thus, if we are to be successful, we must not only measure up fully to the standards of the other nine UC campuses but also help fulfill the promise of bringing educational and economic value to this region of the state.

Information Empowerment. In retrospect, the fifth goal—developing a unique culture of information empowerment—seemed straightforward and the least challenging of all. In discussions with the chancellor and provost before accepting the position, it was clear that both wanted to establish a model technical university of the twenty-first century.

Resources were still fairly plentiful during those early discussions, and several large computer equipment purchases had been made. But as the fiscal winds shifted, it became clear that this would not be sustainable and that

we would not be able to compete with strong, well-established technical universities having huge technical staffs and entrenched pride in systems acquisition. Nevertheless, I naively felt confident that I could shift traditional thinking away from a strong reliance on using large amounts of expensive computer hardware and software to reach this goal. I hoped to move the campus more toward creating a community of users focused on commanding new and better information sources. We could create, I felt, an educational experience for our students, faculty, and staff that would position computer technology (both hardware and software) as a slave rather than a master; as a tool that could be dictated and commanded by users rather than one controllable by only a few technical staff or student nerds; as an appliance for all rather than an enigma to most. Our graduates, I reasoned, would be recognized for their comfort and facility with data and information. They would understand thoroughly the technology but view hardware and software as incidental and ever changing rather than as obstacles to conquer. Future employers would see immediately that UC Merced engineering students had a unique and refreshing attitude about technology—one that would make them immediately profitable within whatever problem-solving environment they became immersed.

This goal was to be reflected throughout the foundational framework that we established for using information and information technology throughout the school: the information systems that we would design and build to manage the administration of our school, the teaching and learning laboratories within which our students would learn, and the course and curriculum innovation developed by faculty. Indeed, this could become a signature for our university and a fulfillment of our chancellor's initial vision.

These were the problems that I set out to solve, or at least attack. My intent was not to build an engineering program that was uniformly superior to all others, but rather to address problems faced by even the very best engineering programs and for which the profession as a whole is struggling: retention, diversity, relevance and impact, and information empowerment. My goals and objectives were shared with inaugural faculty who enthusiastically embraced this vision. The School of Engineering at the first research university built in the twenty-first century began to take shape.

The Challenges

We frequently use the phrase “building from scratch” when describing the development of the tenth campus of the University of California. True, we are building a brand-new campus, with new courses, curricula, and research infrastructure. Nevertheless, we are doing so within the context and construct of the University of California, a system of campuses that is unique in its origin, its leadership in higher education within the state and nation, and the strength of its network of campuses. We have inherited nothing in

terms of physical infrastructure, but an enormous amount in terms of scholarly tradition, reputation, and excellence. With this inheritance has come attendant responsibility.

Our financial constraints have been, and continue to be, significant, but would have been much more serious had we not had extremely strong support from the community and our champions in the government. Most severe has been the impact on staff recruitment and hiring across most academic and administrative divisions. Combined with exploding building and infrastructure costs, the fiscal health of the university has suffered greatly. Yet not all (nor even most) of our significant challenges have resulted from fiscal hardship.

The burden on the faculty and administration of learning and understanding the governance conventions of the UC system has carried with it significant overhead and barriers to bureaucratic efficiencies. The quality of scholarship and academic programs throughout the University of California results from the strong and unique system of faculty-shared governance. The systemwide Senate Task Force on UC Merced, described in Chapter Three, endeavored to impart the culture of UC shared faculty governance to new faculty and administrators, most of them also new to the University of California, and did so with patience and in many cases compassion. The task force understood the challenges and respected the vision. But conveying a mature culture to new stakeholders is a daunting task at any time, and especially during our emergence and rapid growth. For a start-up campus, the overhead of creating this version of faculty-shared governance, combined with the need to create concurrently nearly all administrative and academic functions, resulted in a decision-making environment much less efficient and effective than that within a mature campus.

The most visible and significant impact of financial challenges and administrative and bureaucratic limitations has been the additional workload on faculty, and most severely on junior faculty. Delays of more than a year in campus opening, then almost another year until the engineering building was completed, meant that faculty either had to initiate the building of their laboratories and support systems at the transitional facilities many miles from campus or defer the development of their laboratories and try to find support from other campuses and collaborator locations. Even after the building could be occupied, the extensive changes that were required were extremely expensive and, more important, required further unreasonable delays. Weaknesses and flaws in administrative systems came to the fore, resulting in a generally high level of stress followed by the feeling that if this persisted, careers could suffer.

Most disappointing has been our inability to maintain our initially strong academic and administrative linkages with the School of Natural Sciences. The vision of a common freshman year of study offered collaboratively by both engineering and science faculty to all technically oriented students, and through which students would have learning experiences that

would enable them to more fully understand the differences and synergies of each, fell quickly by the wayside. Maintaining a strong culture of multi-disciplinary synergy between schools became difficult as budget constraints grew. Colleagues who were initially champions of cross-disciplinary hiring, team-developed and team-taught courses, and shared facilities became skeptical about the chances for sustaining such interdisciplinarity. Initial enthusiasm for new faculty split between schools as a means for emphasizing cross-disciplinarity dwindled in the face of increased discipline-based teaching responsibilities. Traditional academic cultures came to the surface, reflected in traditional courses and course sequences, discipline-specific standard teaching loads, and attitudes about course ownership. While most engineering faculty retained the desire for a strong cross-disciplinary academic culture, it became increasingly clear that many innovative teaching-learning activities would be difficult to maintain across schools. Even graduate groups that originally attracted faculty participation from multiple schools became increasingly discipline-centric.

It is awkward, and more than a little humbling, describing these challenges, the vast majority of which have not yet been overcome. But faculty and staff remain positive about the progress that we have made and the opportunities ahead. I am not convinced that all who joined our team would do so again, knowing what they have experienced, but I know that most would. Rather than attempt to defend our decisions or justify our accomplishments or lack thereof, I end with some lessons that I have picked up along the way.

Lessons Learned

When faced with the allure of great personal and professional opportunities, and, at the same time, the specter of unfamiliar and growing challenges, one should slap oneself hard, pull over immediately, and get some air. For while the opportunities are artificially illuminated by your headlights and thus appear to be approaching quickly, the challenges are coming up fast from behind and are much closer than they appear in your mirror. I suspect, however, that because you are reading this journal and have made it this far, you are most likely already chomping at the bit and will pay no attention to this advice. So I leave you with a few lessons learned thus far from this amazing adventure.

If you decide to participate on the academic leadership team in the building of a new university:

- *Understand that you have joined a group of smart and strong-willed people, none of whom have any experience whatsoever in doing the job that they have agreed to take on.* The job that you will be taking on has never existed before. My title is dean of engineering, but my job has been unique. I can endeavor to make it be the same as other such jobs, but my whole purpose

in coming to UC Merced was to build something free from cumbersome tradition. This is what pioneering is. The decision-making environment within which you and your colleagues will work will be different from what you have previously experienced.

- *Divest yourself of the self-imposed burden that you need to know the solution to every problem that you confront.* The problems that you will encounter in building a new academic institution are different from anything else you will have encountered. Ironically, if you feel that you have all the answers without discussion or deliberation, you will soon lose the confidence of those with whom you work, particularly those who might report to you. Building from scratch means having, or building, trust and confidence in those members of the team. Identifying problem solutions as a team develops a strong sense of understanding and ownership. Conflict and competition will arise soon enough—more so when financial resources are scarce. The longer you can maintain a shared vision and trust, the greater is the sense of co-ownership and accomplishment, and the stronger your institutional foundation.

- *You will have a strong compulsion to initiate many more projects and processes than you will have the capacity—either internally or externally—to handle (and you are likely the kind of person who will be unable to resist this compulsion).* Our leadership team would have been twice as successful in half the amount of time if we decreased by half or more the number of initiatives we started individually and collectively. This is not simply a matter of spending more time and resources on fewer things, but having more time to reflect on and share with each other what we were doing and taking time to celebrate small successes. Owing largely to the pace of getting the institution on its feet and the lack of sufficient staff and resources, introspection and retrospection became scarce, and in most cases nonexistent.

- *Understand that the size of the decision space you have entered is vast. You should begin your task by trying to reduce the size of that solution space as quickly and as firmly as possible.* Academic communities are not reasonably characterized by precise and efficient decision making. This is particularly true of institutions having strong bottom-up structures. For a new institution experiencing a rapid influx of new faculty, all of whom are attracted by the chance to build new programs, processes, and procedures, decision making can become a nightmare, with huge amounts of time and energy spent on decisions that are not critical or are at least not urgent. During the time in which the leadership team is small and manageable, make as many firm decisions as possible to the extent that new members of the team, particularly faculty, will not feel compelled to make those decisions. Even some important academic decisions can be made quickly before they become a huge ordeal requiring consensus. Where will we locate shared research facilities? What is the reporting structure between and among academic units, research centers, and institutes? What will be our model for indirect cost recovery? If early decisions are bad ones, they can always be changed with a level of effort

much smaller than needed to get a large group of stakeholders to agree. Most important, reducing the size of the decision space can focus attention on those decisions that are crucial for establishing the culture and character of the institution. How can we establish a strong foundation for student success through innovative freshman learning experiences? How can we build a framework for meaningful representation and inclusiveness among both genders and all ethnic groups within faculty scholarship and governance? What are our benchmarks for monitoring the impact of our university in the region whose population we are committed to serving? How can we build a solid data and information foundation that will serve our informational needs as we grow, and do so in a manner that empowers all members of our community? What modifications can we make to the tenure and promotion equation to ensure the success of both our faculty and our scholarly innovation and reputation? Questions such as these are important and difficult to formulate and resolve, and they require complete ownership by the faculty if the resulting solutions are to be sustained. A small decision space will help faculty keep their eye on the ball.

- *Establish as clearly and as early as possible the agenda for the programs that you wish to initiate, and then resist the urgings of others to take on programs that divert you from your path.* As the word gets out that you are building a new academic program, you will be inundated with suggestions from well-intentioned individuals wanting you to use their courses, curricula, instrumentation, student success and outreach programs, and many, many more. Be warned that while many, if not most, of these are very good and the people who offer to help are sincere and compassionate about their desire to help, you must keep focused on your agenda and weigh each of these offerings carefully, for each has a cost and requires a commitment.

- *You must be absolutely insistent that commodity procedures and information support systems are thoroughly tested and firmly in place well ahead of your need for these systems, and certainly before you bring users—especially faculty—on board.* Perhaps the most frustrating aspect of building a new institution results from the disappointment encountered in not being able to accomplish routine bureaucratic activities quickly and efficiently. If staff and particularly faculty are not able to acquire supplies and equipment necessary to do their jobs, for example, frustration quickly becomes anger. If bills cannot be paid, telephones cannot be installed, computers cannot be acquired and connected, and people cannot be hired, all within a reasonable period of time, trust in the system may be lost and not easily recovered.

- *It is impossible to have too much good communication (though it is impossible to NOT have way, way, way too much e-mail).* Perhaps the most important lesson of all that I've learned from this experience is the value of good and consistent communication. When dealing with smart and dedicated colleagues, good communication can prevent minor misunderstandings and setbacks from becoming huge problems. Poor communication can quickly lead to lack of trust, or at least confidence, and can create an environment

in which even small issues can quickly become problems out of control. Good communication does not correspond to the volume of e-mail that one sends or receives. In fact, I am convinced that e-mail has caused us many more problems than it has solved.

- *Building a new university is difficult and all-consuming work, but it is simple compared to changing academic cultures.* Academic cultures are strong, and disciplinary cultures may be the strongest of all. Building the physical infrastructure and bureaucracies of an academic institution may take time and may be fraught with frustrations, but these are simple compared with changing academic cultures. It is essential that the first faculty hired to build the institution be up to the task of establishing that culture. When recruiting new faculty and staff, be absolutely honest about what lies ahead for them, both good and bad. Your job is not to convince faculty at all cost to join your ranks, but to explore with each candidate whether there is a good fit between the needs of the institution and the attitudes and capabilities of the prospective faculty.

- *When you have the feeling that you have everything under control, you are wrong, and probably you are not moving fast enough.* Building an academic institution can be likened to an endless race. Never before in my academic career have I worked so long and hard as I have during the building of this institution. Everything is a work in progress, and success is reflected in satisfaction with processes and events rather than products. Keep your expectations low and your energy level high. Celebrate small successes; the large ones may be few and far between.

Pause for Retrospection

We have only begun the building of this important university. I am proud of what my colleagues and I have accomplished and of the impact that UC Merced will have for decades and even centuries to come. But when I pause to measure my attainment of those tantalizing opportunities that motivated me to alter so dramatically the course of my scholarship, I realize that I have much further to go than the distance I have come.

To date, our student success is extremely encouraging. Our engineering service-learning program has become a cornerstone of our retention effort, but it remains fragile. Our integrated calculus-physics learning experiment has been successful but is vulnerable to competing courses, attitudes, and, ultimately, resources. Our freshman seminars are struggling to find their purpose and to be uniformly embraced across campus. Fortunately our students have proven to be stronger and more patient than anticipated, and the staff who have joined our team are the strongest with whom I have had the pleasure to work.

I am particularly proud of the diversity and inclusiveness among our faculty and our undergraduate student population. We have established a strong foundation in this respect, but a great deal remains to be done. Yet

through our success in recruiting undergraduate students from the San Joaquin Valley into engineering, we are well on the way to promoting the kind of impact that has been promised for the region.

I am continually impressed by the quality and caliber of the faculty we have assembled within the School of Engineering. They are not only top scholars but have devoted enormous energy and resources to the building of this university and have done so under extraordinary pressures. I owe a huge debt to these individuals. The planning and decision-making framework that has been established within our school, still very much in the formative stages, is serving us well and has been accepted by all with graciousness and professionalism.

Our educational programs are indeed attracting increasing numbers of students from the San Joaquin Valley who would not otherwise have attended four-year research institutions. Nearly 50 percent of students are the first in their families to have done so, and there is a strong sense that we are being accepted as *their* research university. We are already establishing strong research programs that will have a clear impact in the region.

While fighting uphill against a strong culture of traditional information technology attitudes, our faculty are starting to make excellent progress in creating a user-driven, data-driven culture of information empowerment within the school. A large number of students have joined this effort, which has become a unique learning experience, and colleagues from other schools and institutions are becoming interested in our success.

The University of California at Merced did not exist when I started this adventure. It has a solid foothold and will grow quickly in strength to become one of the nation's top institutions of research and scholarship. I played a key and unique role in the genesis and evolution of this remarkable institution, and this will very likely be the most memorable achievement of my academic career.

But now reflection time is over. Back to work.

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5

Building undergraduate and graduate programs simultaneously highlighted the tensions between disciplinary-based undergraduate programs and interdisciplinary graduate programs.

Creating the Infrastructure for Graduate Education and Research at a New Research University

Keith E. Alley

Having spent my career as a faculty member and administrator at research universities, most recently at Ohio State University, I came to UC Merced familiar with the issues, approaches, and funding of modern research. I thought that my administrative experiences at a university as large and complex as Ohio State University were adequate preparation for the challenges of helping the tenth campus of the University of California put into place the infrastructure needed to mount research programs and the graduate education that is integral to them. Little did I realize how much work it could take to establish the research administration infrastructure from the ground up. The main challenge was developing an office of research that would be service-oriented and support faculty from all fields who attract grants from federal as well as state agencies, private foundations, and industry.

My vision of what a research university is and what UC Merced should become has been portrayed this way in our first four catalogues:

Research is the pioneering work of the intellect, an adventure at the frontiers of knowledge in which faculty engage both their undergraduate and graduate students. It reflects humankind's indomitable spirit of optimism that we can and must do better. Every human pursuit benefits from the ongoing process of evaluation and discovery. As the first research university to be built in the 21st century, UC Merced is positioned for new approaches to research in support of the educational mission. As the tenth campus of the

University of California, UC Merced joins in the University's unparalleled history of accomplishment. That history also sets the high standards that UC Merced must live up to [2007–2008 Catalogue, p. 121].

In 2000, the National Science Foundation survey of research expenditures portrayed the wide discrepancy in research investment between coastal California and the San Joaquin Valley. Statewide the investment in basic research was approximately \$140 per capita. In the San Joaquin Valley, it was about \$7 per person. This disparity and lack of a research base contributes to the constrained socioeconomic development of the San Joaquin Valley and precludes the development of a diversified economic base. UC Merced's bipartisan supporters hoped that UC research, which attracts talented faculty and students, would result in UC Merced's becoming an economic engine for the region, as businesses locate near the source of students with advanced education and faculty research spins off new inventions and industries that would create modern, high-paying jobs.

Given UC's history of research accomplishments, I arrived expecting that spadework to establish an Office of Research would have been done. I anticipated having to do the hands-on activities needed to build research administration but was surprised to find that although the University of California has myriad policies in place, it does not have systemwide procedures in many basic areas. In short, almost everything needed to be built from the ground up.

Research Compliance

Since the development of the last research universities in California in the 1960s, the most important changes have revolved around the formalization of compliance issues under specific federal agencies. The structures that oversee the safety of human and vertebrate animal research subjects while ensuring compliance with university, state, and federal policies governing research have become vastly more complicated in the intervening forty years. Creating a research compliance environment was a significant hurdle for our new campus. Several other UC campuses were approached to determine whether they could serve as a surrogate for the UC Merced compliance committees. However, none were able to because their campus workloads were significant and they did not have the will to take on an added burden. Next, Lawrence Livermore National Laboratory (LLNL) was approached. Located eighty-three miles from the campus site, LLNL had developed a strategic plan that called for significant interaction with UC Merced during its development. It was willing to assist us in the planning and implementation of both the Institutional Review Board (IRB) and the Institutional Animals Care and Use Committee (IACUC). We also were able to arrange for some of our first faculty to conduct animal research at LLNL while the campus vivarium services were under construction.

While the campus was under construction, faculty and staff were housed at the former Castle Air Force Base in Atwater, located many miles from the future campus site. This facility had space in which we could put laboratories for the founding faculty whom we had recruited to help plan the undergraduate curriculum and the initial graduate offerings. I worked together with the deans of natural sciences and engineering and the director of the Sierra Nevada Research Institute to design laboratories at the Castle facility that would allow faculty to maintain their research programs before campus opening. We designed flexible bench space with some shared equipment and individual preparation areas. This space was well used before the campus opened and provides overflow space for new faculty while campus construction catches up with hiring new faculty.

Interdisciplinary Focus

The campus decision to stress interdisciplinary research was the correct one. Most of the world's problems are not discipline specific, yet faculty are by and large trained in a disciplinary area. For interdisciplinary research to work, faculty must be willing to interact and work with other faculty. An institution can try to reinforce this focus, but for it to be successful, it must have support from the faculty, including promotion and tenure committees. The University of California has established the organized research unit structure to support faculty committed to interdisciplinary research in specific areas.

Research Institute Strategy

Initial campus planning efforts envisioned research institutes as the intellectual home for faculty in place of the typical discipline-based departmental structure. Two foundational research institutes, the Sierra Nevada Research Institute (SNRI) and the World Cultures Institute (WCI), were established in advance of the arrival of the initial faculty. Both of these had special significance to the San Joaquin Valley, a region that is marked by critical environmental and cultural diversity issues.

The SNRI, discussed in detail in Chapter Six, benefited from the development of a strong research prospectus. In contrast, the WCI suffered from a more generic prospectus and the lack of a faculty director. In retrospect, having a detailed road map and a champion helps an institute move forward, as was the case with the SNRI. The World Cultures Institute still has far to go to meet early hopes and expectations. In the meantime, the UC Merced faculty have proposed new institutes to focus on biomedical sciences and optical imaging devices.

Sponsored Programs

Administration of grants and contracts is a critical element for a successful research university. UC Merced was fortunate to attract an outstanding

administrator with broad experience who worked systematically through each funding agency to provide the necessary information and fill out the required paperwork to allow our faculty to submit grants. She also set up all of the policies and procedures for the office and established positive and collaborative relationships with faculty. Perhaps most important, she built a sponsored programs office on a foundation of service to the faculty. Her success underlines how critical it is for a small start-up with limited resources for hiring staff to find the person with just the right skills, flexibility, and patience to meet both expected and unanticipated challenges.

Graduate Education

It is difficult to imagine the development of graduate educational programs in the absence of a faculty. One advantage of the systemwide approach of the University of California is that graduate education is overseen by the Coordinating Committee on Graduate Affairs (CCGA), established by the university-wide Academic Senate. CCGA has members from each of the campuses and is responsible for the review and approval of proposals for new advanced-degree programs at the University of California. In retrospect, the most flexible approach to solving the problems of a new campus was exhibited by CCGA as the committee worked with me to lay out a strategic approach to establishing the framework that would allow the development of interdisciplinary graduate groups as the faculty was built out. CCGA helped me organize our initial graduate educational offerings around an interim individual graduate program on which to build mature, freestanding graduate groups.

The formation of graduate groups was our initial organizing strategy for graduate education, which had the value of providing a broad interdisciplinary approach to graduate education that was tuned into UC Merced's broad goal of building the curriculum around interdisciplinary programs. The graduate group approach is used most extensively at UC Davis. Faculty from a variety of pertinent disciplines offer interdisciplinary master's and doctoral degrees. The dean of graduate studies at UC Davis was extremely helpful in providing an understanding of graduate groups versus the traditional discipline-based graduate programs.

First and foremost, the graduate group approach offered flexibility, given that we would have only a small number of faculty thinly spread across a range of disciplines. In April 2003, CCGA reviewed the bylaws, policies, and procedures for our nascent graduate groups, ensuring that programs were in place for our first wave of graduate students, who would be arriving at UC Merced in fall 2004. This first set of documents has served as a template for subsequent graduate groups.

In 2004, UC Merced opened with four graduate groups, which have since grown to nine: applied mathematics, biological engineering and small-scale technologies, computer and information systems, environmental

systems, mechanical engineering and applied mechanics, physics and chemistry, quantitative and systems biology, social and cognitive sciences, and world cultures. To provide administrative support, each graduate group now reports to a lead dean in one of our three schools. With an early infusion of dollars for graduate student support, we have been able to continue to increase our graduate population during our first three years.

The chancellor and senior administrators had several motives for admitting the first graduate students for the fall 2004 semester. Students represented a tangible symbol that UC Merced was on track to carry out its educational responsibilities. Several of our founding faculty members brought graduate students who wanted to work with them and wanted to complete degrees at the University of California. By recruiting and enrolling graduate students, we would have the opportunity to begin to “market” UC Merced and its fledgling programs. The provost allocated \$100,000 toward this effort and, with funds from some of the faculty start-up packages and grants, we were able to provide financial support to this first group of thirteen graduate students.

The logistics involved in enrolling these students a year before campus opening proved to be a challenge. Our student information system was not fully operational, and our small financial aid and registrar’s offices scrambled to create applications, forms, and policies for these first students. In retrospect, this small group of graduate students provided us with the opportunity to troubleshoot our systems, which was a big help when we had to serve hundreds of students a year later.

International Graduate Students

One of our big challenges was gaining authorization to issue visas to international graduate students. We were committed to having international students on our campus from the beginning so as to help our students understand today’s global society. The September 11, 2001, terrorist attacks complicated the admission of international students into colleges and universities in the United States. The federal government launched the Student Exchange Visitor Information System (SEVIS) program, which all institutions that want to enroll international students must use.

The difficulties in filing the application and receiving permission to issue visas were characteristic of the myriad challenges facing a fledgling UC campus. In October 2002, the Immigration and Naturalization Service sent an inspector to meet with the vice chancellor for student affairs and me about our application. At the time, we were housed at a former Castle Air Force Base. This was a red flag for him and he asked numerous times whether we intended to start a flight school. Our application was initially turned down, but as with all other hurdles along the way, we persevered and successfully appealed the inspector’s decision. Every conceivable document on the formation and planning of UC Merced was forwarded to convince

the Department of Homeland Security and the Immigration and Naturalization Service that we were an undergraduate and graduate institution fully within the University of California tradition and had no intentions of starting a flight school.

Perhaps the biggest question the new campus had to face was, How do you recruit graduate students to a start-up institution? As with any other research university, potential graduate students are attracted by the reputation of the faculty, particularly distinguished senior faculty. In the early days, we worked diligently to let students and faculty at other institutions know the credentials of the senior faculty who had come to UC Merced as founders. Some of our first graduate students were attracted by our focus on interdisciplinary research, while others wanted to be pioneers and be among the first graduate students at UC Merced. Since opening, the quality and quantity of the applicant pool has increased exponentially. By the time that we admit our fourth class of graduate students in fall of 2007, we will have an admissions rate of approximately 25 percent of the applicant pool.

We spent the first couple of years trying to get our name out to both prospective graduate students and the faculty of potential feeder institutions in California. Our director of graduate admissions and I made numerous trips to recruiting events at all of the other University of California and California State University campuses. We often answered the questions: UC Merced—What is that? Where is that? Are we a private school? However, within a couple of years, we were recognized as the new UC. Frequently a few faculty members who joined us on our recruitment trips talked to prospective students. This had a positive effect because few other schools had faculty in attendance.

Lessons Learned

UC Merced has a special role in the San Joaquin Valley: to help residents understand what academic graduate education (that is, master's and doctoral degrees) is and what its purposes are. Valley residents are accustomed to seeing graduate education as identical to professional education. As it grows and develops, UC Merced will broaden that understanding and help to build the culture of UC excellence in the San Joaquin Valley.

There are, however, a number of lessons that have been brutally learned in the last five years. Establishing the first research university of the twenty-first century brought to the fore a host of pitfalls. Perhaps foremost among these are the research compliance issues that are an integral part of the landscape at all research universities. Having to build the compliance architecture from the ground up has been especially time-consuming, expensive, and difficult. Almost as taxing was providing temporary wet and dry laboratory space so that faculty could maintain their research programs in the gap between moving to Merced and the opening of the campus in 2005.

We had a number of significant hurdles to overcome with the development of the graduate program areas. Building undergraduate and graduate programs simultaneously highlighted the tensions between disciplinary-based undergraduate programs and interdisciplinary graduate programs. The need to build the faculty around undergraduate majors based in the schools often came into conflict with the staffing needs of the interdisciplinary graduate programs, which cut across the schools and were housed under the graduate dean.

The lack of formal discipline-based departments has been a challenge for some faculty, particularly in the school with the greatest diversity of fields: social sciences, humanities, and arts. Although many faculty liked the idea of a nondepartmental organization in the abstract, some found that they did not like it once they arrived. The department is a silent structure that is hard to identify, but faculty can be anxious without it. One of the continuing challenges is how to support faculty without a departmental structure.

Finally, it takes unique people—faculty and staff—to be willing to do the day-to-day work while at the same time developing the big picture for their area of responsibility. Most of the administration had arrived at UC Merced from institutions with large enrollments and a wide variety of support staff to help faculty do their jobs efficiently. UC Merced's administrative and faculty founders were especially animated by creating a vision of a new UC campus that would help bring to the San Joaquin Valley the same levels of prosperity offered by the other UC campuses. Our aim is to set an expectation of excellence that will encourage first-generation and underrepresented students to aim high in their educational aspirations, a commitment that helps us get through hard days.

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KEITH E. ALLEY is executive vice chancellor and provost of UC Merced. He held a variety of administrative positions at the Ohio State University before coming to UC Merced as founding vice chancellor for research and dean of graduate studies.

6

The broad vision of an environmental research institute that conducts regional research to inform local decision making has proven to be compelling.

Creating a Research Signature: The Sierra Nevada Research Institute

Sam Traina

The choice of Merced as the location for the tenth UC campus presented the planning team with the challenge of bringing both a visibility in the research university community and a distinctive research focus to the campus. During the 1990s, a federally funded effort of university faculty, together with agency resources scientists and managers, identified numerous natural resource policy challenges in the Sierra Nevada region. UC scientists saw a strong need for the creation of a Sierra Nevada research entity that would address these regional issues.

Cognizant of this earlier effort, UC Merced campus planners brought together groups of UC faculty and research institute directors in 1998 to discuss possible overarching research themes for UC Merced. Concomitantly, the nascent UC campus signed formal partnership agreements with Yosemite and Sequoia-Kings Canyon (Sequoia-King) National Parks to collaborate on research education and academic enrichment efforts. Additional input from UC faculty and resource managers and scientists in the National Park Service, the U.S. Forest Service, and the Biological Resources Division of the U.S. Geological Survey led to the preparation of a formal prospectus for the Sierra Nevada Research Institute (SNRI). This comprehensive document highlighted selected environmental problems of the region, suggested several possible structures for the SNRI, and offered some potential activities for the new research institute. Importantly, it stressed that SNRI should conduct regional research that not only informed local and regional decision making but also had national and global ramifications. In essence, the

Sierra Nevada was to be the institute's laboratory. With these documents in hand, UC Merced recruited the founding director of the SNRI.

The Challenges

As founding director, I was charged with furthering the partnerships with Yosemite and Sequoia-Kings and with the establishment of biological field stations in these national parks. These stations were to be used not only by UC Merced faculty and students, but also by researchers throughout the academic community who wished to conduct research in Yosemite and Sequoia-Kings. In addition, I had the responsibility of developing the initial research focus for SNRI. It was hoped that this research would address environmental issues of interest to these national parks as well as important environmental issues of the broader Sierra Nevada region.

While this was an exciting and attractive portfolio, it was not without challenges. Much of the research that is needed for national parks is very different than that conducted by the academic community. Natural resource managers often require very directed research on short time schedules, as information is needed to inform management decisions. University research is more typically enquiry driven. In addition, most scientific research in the university is conducted by graduate students under faculty supervision, requires extramural funding, and is conducted over the long term. Finding initial research themes that were of interest to both our partners in the national parks and UC faculty would be a challenge.

Furthermore, a second, potentially political, challenge—as well as an opportunity—was created by the SNRI's location in Merced. This is a comparatively conservative region, located in the heart of the Great Central Valley that bisects California, with an economy dominated by agriculture. To coastal Californians, the Great Central Valley is too often seen as a hot and dusty region to drive through on one's way to the Sierra Nevada. It was clearly not wise to have the first high-profile research institute of a new UC campus located in the Great Central Valley to focus all of its attention on the Sierra Nevada range while overlooking problems of interest to the valley population.

The budget model for UC Merced posed a third significant challenge. Owing to budget shortfalls, the number of starting faculty at UC Merced was reduced by 40 percent from the time that the initial SNRI prospectus was written. This meant that the initial faculty had to be completely vested in one or more of UC Merced's three schools in order to meet the needs of the undergraduate curriculum. It also meant that faculty hires for the SNRI could occur only if they also fit within the curricular needs of these schools.

Getting Started

With these objectives and constraints in mind, we chose to develop the SNRI around an ecosystem science model that would integrate faculty in

the physical, biological, engineering, and social sciences to study ecosystem problems across multiple scales. The nexus of water, climate, and land use was chosen as the first research area of interest and research effort. In the arid West, water is a limiting resource. The majority of California is dependent on the Sierra Nevada snowpack. A series of dams and canals store this water as the snow melts and convey it from the Sierra Nevada to the Great Central Valley, where it is used for agriculture, and into the coastal regions, where it is consumed by the state's urban population. Water is "California's blood," and it clearly ties the Sierra Nevada to the Great Central Valley. Climate change poses a significant threat to California as rising winter temperatures are expected to diminish the extent of the snowpack. Decreases in the Sierra Nevada snowpack will not only limit the availability of water for human use but also have significant impacts on natural ecosystems within the Sierra Nevada and the intervening areas between the mountains and the coast. Land use further threatens the water supply through the potentially deleterious impacts of pollutants on water quality. Clearly, the nexus of water, climate, and land use was and remains an integrating theme. This theme resonated with the deans of natural sciences and engineering, and in partnership, we recruited the first four senior faculty members to start the SNRI.

While water remains a major focus of SNRI, the broader vision of an environmental research institute that conducts regional research to inform local decision making and develop new knowledge on issues of global importance has proven to be compelling to many of UC Merced's faculty. Indeed, there are now sixteen members of the UC Merced faculty in SNRI, and we anticipate that the numbers will continue to grow. These individuals are conducting research in Yosemite and Sequoia-Kings Canyon National Parks, in the surrounding national forests, and across the Sierra Nevada Range. Many of these faculty members are also conducting research in the Great Central Valley. In the summer of 2008, we will begin an expanded program of summer research experiences for undergraduates in Yosemite National Park, funded by the National Science Foundation.

While the faculty will always remain the SNRI's most important asset, the institute benefits from physical assets as well. Yosemite National Park provides support to SNRI in the form of four buildings that constitute a research station, jointly sponsored by UC Merced, Yosemite National Park, and the U.S. Geological Survey in the Wawona region of the park. This has presented both an opportunity and a challenge. All of these buildings required significant remodeling to comply with state, federal, and university building codes, and yet no money was budgeted to remodel these structures. Fortunately the Yosemite Fund, a nonprofit foundation that supports Yosemite National Park, granted money to Yosemite National Park for renovating the first of these structures to serve as our research support building. Subsequent donor gifts and university funds have enabled us to renovate the remaining structures so that we can use them in our research

programs. Nevertheless, it was quite interesting and challenging to satisfy both state and federal fire marshals as we remodeled a wooden structure located in a forest in a remote national park. In 2006, we hired our first field station director for the Wawona facility, who has been an extraordinary asset for the SNRI and UC Merced. He has greatly broadened our partnerships with Yosemite to include an undergraduate leadership program, summer internships for undergraduate and graduate students, and community engagement.

In 2007, we plan to begin the establishment of a biological field station in Sequoia-Kings Canyon and hope to have a permanent station director on location by the summer of 2009.

Lessons Learned

The success of the SNRI can clearly be attributed to the hard work conducted by the UC faculty who served on the initial advisory group and who crafted the initial prospectus for the research institute. This document presented a clear path that could be followed in creating a new research entity. While the final model that the campus chose is somewhat different from what was proposed, it would not have happened without the vision of that first body of UC faculty.

Input from our partners in the National Park Service, the U.S. Geological Survey, and U.S. Forest Service also contributed greatly to the development of the final model for the SNRI. Faculty are particularly adept at identifying topics that are of interest to the broad academic research community, but input from external stakeholders is required for conducting research that ultimately will inform decision making.

Finally, creating a new research institute concomitant with the creation of a new university is a daunting but exciting task. Whereas I originally

Sierra Nevada Research Institute Gives UC Merced a Window on the World

Representatives of the UC Merced administration and Sierra Nevada Research Institute were in China in May 2006 with representatives from Yosemite National Park, UC Merced, Jiuzhaigou (China's premier national natural reserve), and Szechuan University (a research university of seventy thousand in Chengdu). The purpose was to forge a series of partnerships that will foster new discovery and knowledge. The similarity between California's and China's water issues is profound: the two mountain parks with pristine headwaters supply drinking water to a populous region as well as irrigation for crops that feed a nation. This combined research effort will address crucial issues for both countries.

–Carol Tomlinson-Keasey

thought that I would have to worry only about research issues, it quickly became apparent that I needed to be fully engaged as well in the development of academic programs because the full-time equivalent of all the SNRI faculty reside within the academic schools. Only by forming partnerships with the deans was I able to recruit faculty who would meet our common interests.

SAM TRAINA, the founding director of the Sierra Nevada Research Institute, is now UC Merced's vice chancellor for research and dean of graduate studies. He held a variety of faculty and research positions at the Ohio State University before coming to UC Merced.

7

The reality of educating students often at risk in an elite research university setting has forced academic and student affairs professionals to think creatively.

Connecting Academic and Student Services

Jane Fiori Lawrence

A blank slate and the opportunity to do, be, and create something different is what attracts one to a brand-new institution. The reality, however, is often more complex and challenging, especially at a new campus.

From the beginning, those planning UC Merced hoped to create a different type of research university. The campus was intentionally placed in the San Joaquin Valley, a region of California with high poverty, low educational attainment, and great ethnic diversity. With the educational needs of the region in mind, one among many of the innovations planned at UC Merced would be a much closer relationship than is usual at a research university between academic and student affairs.

Among the criticisms of research universities has been their almost singular focus on research and graduate education, to the detriment of undergraduates and the undergraduate experience. Over time, and at many large research institutions, silos have developed between academic and student affairs, with few interactions, little integration, and often great misunderstanding. This has led to academics' undervaluing the work of student affairs and seeing it as "fluff" or the "rah-rah" part of the college experience; for their part, student affairs professionals do not always appreciate the expectations and the rewards systems under which research faculty labor. Recent initiatives to create student-centered research universities have been an attempt to break down the silos, or at least create bridges between them to focus on support for underrepresented students, retention, and student learning in its broadest sense.

UC Merced: A New Beginning

Two initiatives undertaken in the late 1990s and early 2000 were an attempt to rethink and recreate the academic-student affairs relationship. The first was the creation by Chancellor Carol Tomlinson-Keasey of the Student Planning Advisory Committee (SPAC) composed of UC student affairs professionals, faculty representatives, and representatives from K-12 system and Merced Community College. The second was framing the search for UC Merced's chief student affairs officer as a search for someone who combined both academic and student services credentials.

The SPAC was charged with creating “a vision of optimal relationships and organizational conditions that might propel student success and scholarly discovery, while fostering an inclusiveness of access and purpose unparalleled in the University of California.” Like many of the individuals involved with the creation of UC Merced, the committee was excited to influence the development of a new campus and energized by the opportunity to offer recommendations to reduce the division between academic and student affairs.

The SPAC's final report issued in November 2000 was titled, *Thinking in Future Tense: Designing the New Architecture of Student Life at UC Merced*. It lays out a vision of student services oriented around the needs of students and organized to ensure student success. The report boldly states that “excellence in the institution's academic profile must be complemented by excellence in student life and service functions in order to transform a mere collection of buildings into a vital place of learning.”

The SPAC believed that hallmarks of this new vision of student services would include these components:

- Integration, flexibility, and community as guiding principles in planning for the new campus
- Education on a human scale to provide each student a sense of intimate, individual place connected to the larger campus
- Diversity and multiculturalism as a core feature of university life
- New concepts of staffing to emphasize the need for problem solving using technology and personal service
- Reliance on technology and integrating it into all aspects of operations, assessment, and services
- A complement of enrollment management and student life linked through a redefinition of advising

The report recommended that the initial organization for student affairs have two principal clusters: enrollment management services and specialized student life functions. Both clusters were to be supported by information technology to take advantage of the absence of legacy systems and provide 24/7 access and information to students. The committee also

recommended that UC Merced’s organizational structures foster a full partnership for student affairs in institutional and academic planning, policy development, and resource allocation.

Like any other report written by a committee that did not have to live with or implement its recommendations, some suggestions were more useful than others. Predictably a state budget deficit and the arrival of UC Merced’s own student affairs staff, with their own vision of how to connect academic and student affairs, affected which recommendations were adopted.

The most important recommendation in the SPAC report was its focus on student success. The committee accurately predicted the types of students who would be attracted to Merced—first generation, low income, ethnically diverse—and argued that all student services be organized to meet their needs. This recommendation has become part of the culture in student affairs at UC Merced, reinforced in our mission statement, organization, and even on student affairs staff identity badges, which have the tagline, “Committed to the Success of Every Student.”

The second initiative undertaken was a search for a different type of vice chancellor for student affairs. A small search committee composed of UC student affairs professionals, UC Merced administrators, and the chair of the Senate Task Force on UC Merced was charged with conducting a national search to find a leader who “would be the prime architect within the academic leadership for the student educational experience at UC Merced.” The job description further indicated that

the successful candidate will be an individual who will bridge academic and student affairs within a fully integrated academic structure. The incumbent will possess the experience and academic credentials to be able to participate as a member of the academic leadership team in creating a student-centered research university, implementing a college system that enhances faculty participation and maintains a human scale as the campus grows.

As the successful finalist, I had been vice provost for undergraduate education at the University of Vermont and headed honors programs at two other large universities. While in academic affairs, I had supervised a range of student services, from admissions and financial aid to specialized living-learning residences.

When I began my appointment in October 2001, the only employees with student affairs responsibilities were admissions staff located in Fresno, an hour south of Merced. The challenge ahead was to put in place all of the units and services required to recruit and retain students:

- Admissions
- Financial aid and scholarships
- Registration

- Orientation
- Disability services
- Health services
- Counseling services
- Housing and residence life
- Dining
- Bookstore
- Advising and tutoring
- Student life, including student government, clubs, and organizations
- Recreation
- Career services

In addition to organizing services, there were residence halls and dining commons to be designed and built, and in the library, space had to be laid out for housing student services administration and several student services units. When I arrived, the land that would become the UC Merced campus was still a golf course, and the building and floor plans were only preliminary. In 2001, the staff working to create UC Merced was very small—fewer than thirty. The only UC Merced faculty were administrators: the chancellor, provost, and one dean. Trying to connect academic and student affairs was going to be a challenge.

Senate Task Force

Fortunately, providing guidance to the chancellor and initial senior administrators was a task force on UC Merced created by the University of California's academic senate, described in Chapter Three. Participation in the task force's monthly meetings ensured that I would be involved in academic planning and could engage the task force in the development of student affairs. Participation in this forum was highly instructive in helping me to understand the academic culture within the University of California. Even having worked and consulted at other research universities in the past, I was unprepared for the strong faculty governance tradition and culture within the university. The gulf between academic and student affairs was wide, but the task force appeared open to a more collaborative relationship. During 2002–2004, I was able to participate in the discussions of curriculum and observe the faculty review and hiring process. Because UC Merced was so small in these years, I often met prospective faculty candidates and sat in on their seminar presentations. This allowed me to get to know many of our founding faculty and begin to establish personal relationships with them.

When in 2003 the task force created a committee responsible for review and approval of undergraduate curricula, undergraduate admissions, financial aid, and academic policies, I was named chair. Called the Undergraduate Council, the membership included faculty from the task force and several of UC Merced's own first faculty. Although the task force retained

the ultimate authority, we were given the day-to-day responsibility for approving new majors and policies. Being chair also allowed me to draw our first faculty into discussions of student life issues. And it was from these discussions that initial admissions and financial aid policies were formulated.

I also presented to the task force for approval UC Merced's initial academic policies, including the grading system and proposals to establish a college system. I have continued to serve on the Undergraduate Council, now as an ex officio member, and have found it to be an excellent way to establish collaborative relationships with faculty.

Because I had overseen general education programs at my previous institutions, I assisted in the creation of UC Merced's initial general education programs. In the summer of 2002, I was part of a five-person team who attended the American Association of Colleges and Universities Institute on General Education. The team met alone and with institute consultants to discuss strategies for implementing a general education program at a brand-new research university. Those discussions led to a white paper, circulated to the task force and the first UC Merced faculty. The following summer, I helped organize a general education retreat, which produced UC Merced's Guiding Principles for General Education, the initial idea for a two-semester required general education core course, and additional general education requirements for the three Schools.

Hiring of Founding Student Affairs Staff

In between task force and Undergraduate Council meetings, the Division of Student Affairs was slowly beginning to take shape. The initial hiring decisions were going to be critical to set the right tone and begin building close collaborations with academic affairs. The goal was to find individuals who could not only build an outstanding student service but also were comfortable reaching out to and working with faculty to create student-centered programs.

The first five key positions hired were directors of admissions, financial aid and scholarships, residence and student life, the Center for Educational Partnerships, and a project manager for a student information system. Three of these had been part of the UC Center in Fresno. Our first director of admissions had been representing the University of California to high schools and community colleges in the San Joaquin Valley for over fifteen years. Having grown up in the valley, he understood the socioeconomic, cultural, financial, and educational challenges facing students and parents as they contemplated the prospect of higher education. A second talented young professional became our founding director of financial aid and scholarships. She immediately began the process of trying to figure out how we were going to award state and federal financial aid as an unaccredited institution. She also had to prepare for our initial group of graduate students who arrived in fall 2004, before the campus was even open. A third young

professional became director of our newly created Center for Educational Partnerships. The center is evidence that the University of California has taken seriously its commitment to providing access to students from all types of backgrounds. Thus, the center's role is, in part, to offer programs designed to support K-12 teachers and students in developing students' collegiate-level skills through special curricula and programming. The center oversees our work with K-12 throughout the San Joaquin Valley.

Recruiting students to a brand-new campus that was still a closed construction site turned out to be more challenging than any of us had anticipated. Before we opened, we oscillated between thinking that no one would choose to come to UC Merced and the belief that "if we build it, they will come." Our enrollment goals, set years earlier, had been 1,000 students in our first year and 1,800 in year two. Instead, we opened in 2005 with 875 students and grew to 1,285 in 2006.

A whole chapter could be written on what we have learned and are continuing to learn about recruiting students to a new campus. A small number of majors, inability to guarantee housing, few student amenities, serious competition from other campuses throughout California, and inadequate scholarship funding have been challenges that we are beginning to overcome.

Among the many initial challenges was planning residence halls, dining, and student life programs from scratch. When I arrived, the university had received approval to build six hundred beds and a dining commons near a small lake on campus, but an architect had not been hired, and no decisions had been made as to the type of facilities to be constructed. In addition, the university had expected to hire a company to run campus dining and possibly part of the housing operation. Politics required us to run these operations ourselves, in retrospect, the better choice.

A search for a director of residence and student life netted us an outstanding professional from UC Irvine who had years of experience in housing and residence life, including overseeing academic-themed housing. She writes about the challenges of creating a residence and student life program from scratch in Chapter Eight.

Anyone working in higher education today knows that information technology (IT) suffuses almost every aspect of the educational, student, and administrative process. Another major challenge for us was implementing a student information system. These systems are costly, complex, and staff intensive. We had very little money and almost no IT staff. In addition, because regional accreditation is granted only after several years of operation, all of our financial aid had to be awarded under the auspices of another campus.

The implementation of our student information system is an example of the advantage of starting a new campus within a system. One of the other UC campuses, UC Davis, agreed to work with us to award financial aid and suggested we temporarily hire one of their IT staff to direct the student

information system deployment. Within twelve months, we had ensured IT compatibility by implementing the SCT Banner student information system used by UC Davis and convinced the talented IT staff member to become our founding registrar and the associate chief information officer for student services. This was another critical appointment since the registrar is a member of the academic senate and has frequent contacts with faculty around courses and academic policies. In addition, because of this individual's extensive IT experience, he was able to lead our efforts to deploy housing, bookstore, dining, and medical records systems.

Development of a Student Affairs Mission Statement

With a few directors in place, one of our priorities was to begin creating a culture within student affairs that made supporting student success the highest priority. One way we did that was through the creation of a mission statement. We wanted to create a statement that we could use to help chart our course and define for the rest of the campus what role student affairs hoped to play. The work of writing a mission statement drew us into thoughtful conversations about goals, values, and expectations for both ourselves and our future students. Because we are now on our third mission statement, it is interesting to look back on our initial effort to see what priorities we thought important to convey in fall 2004, a year before the campus opened:

The Division of Student Affairs at UC Merced is committed to the success of every student. As a partner in creating a dynamic educational environment on campus, Student Affairs seeks to prepare, recruit and retain a diverse community, provide each student with the services needed to reach his/her potential, and engage students in carefully-designed programs and opportunities that foster intellectual growth, psycho-social development, curiosity, commitment to a healthy life-style, creativity, multicultural appreciation, environmental sensitivity, leadership ability, and civic engagement.

In retrospect, what stands out for me when I reread this statement are the phrases: “commitment to the success of every student,” “partner in creating a dynamic educational environment,” “carefully-designed programs,” and “opportunities that foster intellectual growth.” In the three years since, we have tried to create a culture, programs, and services to achieve these goals. The challenge is to help academic affairs see student affairs as a partner in the educational process.

Advising and Academic Support

Much research has been done about the importance of advising and its relationship to academic success and retention. In 2004, I successfully proposed

to the provost and deans an advising strategy that used professional as well as faculty advisers, supported by a student advising and learning center that would be responsible for advising undeclared students, tutoring and academic support services, orientation, and coordination of advising across and between schools. We hired advisers prior to opening, and tutors began once we had students and could identify and train them.

New student orientation the summer before the campus opened was a learning experience for everyone. Faculty and deans, advisers, and student affairs staff participated. We held five orientations in four different locations—none of them on campus—with presentations, process, and details changing after each session. It was exhausting, stressful, and exciting to meet our first students and their families. Orientation sessions during the first summer focused on academic advising, registration, and helping prepare students for being pioneers at a new campus. Our first year provided faculty and student affairs staff with greater insight into the academic challenges of a predominantly first-generation student population. By our second summer, we had reorganized the orientation sessions to better prepare parents and students for the academic rigors of a University of California campus. For example, student affairs staff helped faculty teaching first-year introductory courses to organize a mandatory session on academic expectations and support prior to the second academic year.

Another important initiative was a three-year pilot of midsemester grades for all lower-division courses. The motivation was twofold: to provide positive reinforcement to students who were doing well academically and to have a mechanism to identify students who were struggling academically. A component of the pilot was mandatory attendance at a student success workshop by any student with one grade of D+ or lower. Over seven hundred students have participated in a success workshop during our first three semesters. The student data and feedback from the workshops have resulted not only in conference presentations and articles, but, most important, changes in how we support our students.

Midsemester grades are one way that student affairs connects with academic affairs. Reports from the success workshops have been shared with faculty, especially faculty teaching lower-division courses. Student affairs professionals now participate in teaching assistant training to present what we have learned about our first-generation, often academically at-risk, students. In addition, as we work with students in advising sessions, in the residence halls, and through tutoring, we often hear information about courses that we can then pass along to the deans and assistant deans to help them make pedagogical changes to support student success.

Unexpected Allies: The Librarians

One of the most successful collaborations with the academic side of the university has been with the library. The university librarian, a man of vision,

creativity, and good humor, made me a partner in the planning for the building that would house primarily the library and many student services units. As Chapter Nine makes clear, this was to be a different type of research library, best captured in their motto: “Not what research libraries are . . . what they will be.”

Before the campus opened, the library and student affairs staff met to plan the use of the spaces on the first floor of the Kolligian Library. Because we were not opening with a student union, the library was the de facto student union on campus. Student affairs has most of its service units (admissions, registration, financial aid, career services, and student life) in both wings of the first floor, connected by one large great room that serves as a multipurpose student lounge. We worked through design of spaces, space use policies, staff training, creation of a small bookstore, and strategies for holding classes in the library during the first semester when the classroom building was still being completed.

Although there have been a few bumps over the past two years, our very different functions—a serious research library and student affairs departments—have coexisted positively and collegially in one building, thanks to openness, a genuine commitment to students, and flexibility on both sides.

Lessons Learned: Two Years After Opening

Silos exist for a reason in research universities. Faculty are evaluated and promoted on the basis of research and publications. Teaching is important and often valued, but interacting with students outside the classroom is generally not a priority. In addition, the special circumstances of UC Merced’s development often worked against collaboration. This was not for lack of interest or desire for the most part on both sides; it was just the reality of our existence.

During the two years prior to opening, everyone seemed to be working night and day just to have the basics available by September 2005. There was little time to slow down long enough for the kinds of discussions that would have led to closer connections.

As this chapter has demonstrated, progress in linking student affairs and academic affairs was made in a number of areas. Interestingly now that we are open, there has been a growing recognition of our interconnectedness. The reality of educating a largely first-generation, underrepresented, and academically at-risk student population at an elite research university has forced academic and student affairs professionals to think creatively how best to support these students.

An external process, accreditation, has encouraged us to talk together across divisions about what we have learned about our students, how best to respond to their needs, and how to measure our success and theirs. Our rhetoric about being a student-centered research university, which outside

of a few stellar examples occasionally felt hollow, is being challenged in a way that allows us to think more concretely about how to do just that.

UC Merced is still a work in progress, but the efforts we are undertaking today are building the foundation of the nation's first twenty-first century research university. Finding a way to create a seamless culture across academic and student affairs to support students' academic success would be our greatest contribution to this millennium.

JANE FIORI LAWRENCE is founding vice chancellor for student affairs at UC Merced. Previously she held administrative positions at the University of Maryland, Washington State University, and the University of Vermont.

8

A carefully constructed combination of services, programs, mentoring, interventions, opportunities, and celebrations brought the campus to life.

Student and Residence Life: Planning a Campus Around Students

Valery Oehler

This chapter details the challenges that UC Merced faced in building up the critical areas of student and residence life. A new institution held great promise for achieving the ideal of a student-centered university, but two bedrock problems could not be overcome. The first was that at the beginning, both top administration and faculty saw academic development as the sole priority for investment of all-too-scarce dollars. Even with administrative enthusiasm for the unique programs we proposed, endowed chairs trumped cocurricular opportunities in the competition for donor dollars. However, membership in the UC system proved to be an avenue for beginning to build the staff and programs we needed to support student life. Both students and student affairs professionals at the other UC campuses supported our planning and stepped in when we needed expert help. Even while funding and staffing continued to fall short of our needs, we shared the excitement of opening a brand-new university and greeting a brand-new generation of students.

Utopia University

As graduate students studying student affairs administration at Michigan State University in the 1980s, my classmates and I would often talk about the “ideal” or “utopian” university. When I first learned about the opportunity to be part of the founding team of administrators for the tenth University of California campus, I wondered: Was this my chance to contribute to

Utopia University? To build something right, unhindered by those who came before, unburdened by tradition and “this is how it’s always been done” thinking? At a new campus, everyone would be there for the same reasons, working toward the same goals. And as we agreed in graduate school and the years beyond, the most important ingredient to Utopia University would be the right people, the right attitudes, and a belief that students always come first.

I knew from my research that UC Merced hoped to serve the underserved students of the San Joaquin Valley and that it had hopes of becoming a designated Hispanic-serving institution. I read with great enthusiasm the report *Planning in Future Tense*, written by some of my most respected UC colleagues and mentors, about the opportunity to create unique experiences for students outside the classroom at UC Merced. And I looked online at the real estate options, the performance of the schools my children might attend, and the distance to the closest airport. Not everything I learned was reassuring, but in the end it did not matter. I had caught the “Utopia” bug.

Mercedes Estudiante

Part of the selection process for the director of residence and student life was a formal presentation to the interview committee. Candidates were to address the question of how to create experiences that would best position students for success at UC Merced. Liking the play on words, I created a fictitious student called “Mercedes Estudiante,” and through her eyes I responded to the selection committee’s questions.

First was the firm conviction that students, represented in the presentation by Mercedes, would ground their experiences with the highest-quality academic opportunities, starting with summer orientation, a general education core course, a first-year seminar, and an emphasis on both science and writing. To assist Mercedes in understanding her new experiences, she would be assigned a staff or faculty mentor who would meet with her informally, connecting her to campus resources such as financial aid advisers, internship opportunities in the national parks, and the process for starting a campus premed club.

Mercedes was a pioneer, an accomplished young woman eager for new opportunities to test and improve her leadership skills. Each week of her experience at UC Merced revealed more opportunities to connect with faculty, staff, and fellow students; to benefit from and contribute to the nearby national parks; and to become fully immersed in her own intellectual and social development.

What I shared with the committee during that dusty spring day in 2002 was indeed a road map. We followed that map more closely than I could have hoped and encountered more detours and potholes than I could have imagined. Nonetheless, we worked hard to bring the concepts to life, to

provide for UC Merced students an opportunity to not only excel academically but to develop as young adults and future leaders.

The Founding Principles

Before the first buildings went “vertical” and before the first application for admission was received, we sought to reach a common understanding of what student success might look like. Despite the rosy glow of our utopian-tinted glasses, we all knew that creating a new university—building it from the ground up—would be a lot of work. We brainstormed together, visited other UC campuses, visited non-UC campuses, and prepared and revised—and revised again—countless plans and proposals.

Reality versus Rhetoric

My first day on the job, I joined the housing project manager in making a presentation to the faculty Senate Task Force on UC Merced. We were tasked with describing what student life might look like on the new campus. The questions that lingered, unspoken but visible when the lights came back up, were, “Who are you?” and “Why did you make this presentation?” The University of California is a research university, after all. Most faculty will admit, when questioned, that they have little idea of what goes into the day-to-day administration and operation of nonacademic campus services and programs. And so it started: the collision of big ideas and utopian idealism with the cold, hard facts of creating a research university in an environment rife with budget constraints and political pressures. Academic planning did not jibe with most of the items on my to-do list. The deans, academic planners, and even my own boss were absorbed in faculty interviews, the shaping of general education, and the writing of the catalogue and policies it contained. It became clear early on that there were too many challenges and priorities for everyone, and not enough time, money, or people to do the job the way we all wanted to do it.

Guaranteed Experiences

Given these challenges, I determined that I must convince my colleagues that by contributing to a vibrant and healthy campus community and student life program, their academic programs would be more successful. I needed them to see that their long hours would be eased and their goals supported by investing just a bit of time and money into the larger student life picture. I recommended that UC Merced follow the recommendations of the *Future Tense* report and offer something that the other UC campuses were unable to because of their size: individualized experiences that would be guaranteed for every single student. We proposed a four-year leadership development program, an intercultural center that would serve as the heart

of the campus's commitment to diversity, a K-12-oriented community service initiative, and a commitment to holistic wellness that would be infused in the curriculum, facilities, and student activities on campus. Unfortunately, when it came to next steps, we fell short. The donor dollars did not materialize for the leadership program, the provost needed the space targeted for the intercultural center for the general education office, and our community service concept seemed to compete with the academically centered service learning program. I was losing a bit of the rosy tint in my utopia-colored glasses.

LESSON 1. Student life programs, services, and facilities will not receive financial support at a research university unless they are lobbied for at the highest levels of the university by individuals with ability and authority to influence budget and space allocation processes. Voices from internal to student affairs are not enough.

Back to the Basics

When the technical difficulties started to surface, it was simple enough to set aside the idealism for the time being, roll up our sleeves, and figure out how much residence hall furniture we needed to buy. Healthy, successful students also require student services, not just support for leadership development and academic success. So off I went to hire health insurance brokers, argue against outsourcing various auxiliary services, seek child care options and partnerships to meet student and employee needs, discover the fine line between recreational and competition basketball courts, and calculate complex debt-ratios and bed-space income-expense counts for centralized University of California reports that were due and someone—me, it turned out—needed to produce. Working with UC colleagues from other campuses and a respected kitchen designer, I learned more about pizza ovens, walk-in coolers, air-handling systems, and grease traps than I ever wanted to know.

After one particularly excruciating session related to the need to provide for student health needs, the government relations director showed up at my office. “This is for you,” he said, with a playful smile. “I thought it might be helpful.” It was a package of plastic bandages that he had decorated with an image of the University of California seal. He had written in black ink on the cover: “UC Merced Health Center.” It did not turn out quite that dire. During the first year, UC Merced's health center was in fact two rooms next to the residence life offices.

This tangible, technical, facility, and finance-centered phase of our early years was also rife with opportunity squelched by resource limitations. The design of the first student housing, for example, met the requirement of tight construction budgets but overlooked the essential components for cost-effective daily operations and maintenance. Programmatically the

facility did not address the living-learning potential of residential student communities.

Still, there was no benefit to wallowing in could-have-beens. Instead we charged forward with imagining what would really be and began to take personal ownership of the student community that would emerge in just a little over a year. Under the vice chancellor's guidance, an eclectic group of folks participated in a committee to name the first student housing, a fun and creative exercise that resulted in UC Merced's Valley Terraces, with each hall named after a valley county, from Calaveras to Madera to Tulare.

With the kitchen design under way, the health insurance plan in place, and the residence halls appropriately named and under construction, I returned to that early graduate school truism: we needed people to run this place. Good people.

Money (Which Pays Salaries) Makes the World Go Round

We returned to the only certain revenue sources: rents and fees. I built budgets based on housing rental income, dining income, campus-based fee income, and UC registration fee income. The supply, travel, and operating expense needs were not large. People to run the programs, staff the services, and bring the campus to life did cost real money.

In the auxiliary units where facilities had to be managed along with programs and student services, we used projected rental, food service, and bookstore revenues to budget for the staff needed to manage the residence life programs and housing, dining, and bookstore operations. No state funds or registration fee monies are allocated to auxiliaries, so we needed to be self-supporting. We did not completely realize that goal but came close.

For the nonauxiliaries, we were completely dependent on registration fees, and they were in short supply. The end result: student life: 2.5 positions; student judicial affairs: 0.5 position; and recreation: 1 position. Intercultural and diversity programs, leadership development, student activities, clubs and organizations, student government, community service, gay/lesbian/bisexual/transgender programs, women's and men's issues, alcohol education, and sexual assault prevention and response all had to be addressed (or not addressed) in the 2.5 full-time-equivalent positions in student life.

The original vision had been to make student affairs more cohesive with the academic core of the university. This well-intentioned approach, however, did not create an impetus for hiring nonacademic subject matter experts. The real need for hands-on, frontline student life and student services experience was underestimated. The individuals who were hired worked hard to cover all the bases and continue to do an admirable job. But they know more than anybody else how unwieldy the task before them continues to be.

LESSON 2. Hire enough people, and hire early. Do not skip the entry and midlevel professionals, do not overlook the critical need for student affairs–focused business services, and do not overlook the value of getting frontline staff on board early enough to prepare for student inquiries, early campus visits, and summer orientation.

The Maclise Student Think Tank

Merced is home to beautiful sunsets that span the vast farmlands, countless cows and orchards, excellent strawberry stands along the roadside from April until October, and, in recent years, far too many homes for sale. In 2004–2005, the only “of interest to students” options were a community college with tennis courts, two or three Starbucks, two movie theaters, a live theater, and a mall anchored by JC Penney and Sears (no Abercrombie, no Old Navy, no Gap), and not much else. My conviction that students might need something beyond Yosemite (two hours away) or Starbucks (it is just coffee, after all) rang true to many colleagues.

Having no staff to problem-solve on the issue of what students will do during the twelve to sixteen hours of each day when they are awake but not in class, I turned to my UC colleagues on the other nine campuses for help. A small pot of money, the Maclise fund, had been donated with the goal of fostering intercampus cooperation and interaction. I put together a successful proposal for a systemwide effort focused on creating the student life experience at UC Merced. With representatives from four other UC campuses and a few dedicated UC Merced staff, we pulled together the first UC systemwide student think tank. We planned a carefully orchestrated opportunity for current UC students to provide guidance and input to the key student life elements at the first new UC campus in thirty years. In November 2004, twenty-five UC students, selected for their significant involvement and success on their own campuses, traveled to Merced to participate in the student think tank. The students were provided background material on UC Merced, asked to come prepared to make presentations on the best student life practices on their own campuses, and told to expect hard work as well as a chance to build intercampus relationships during their time as a consultant to the UC Merced planning process.

The excitement of bringing UC students to Merced was infectious, and our chancellor, provost, and other administrators were gracious hosts. In the context of group presentations, a tour of Merced, including interviews with town residents, work group sessions with each other, and conversations with administrators and faculty, the twenty-five students provided final recommendations to UC Merced in four areas: student and campus traditions, student involvement in campus decision making, recreation and things to do, and cultural issues and campus climate.

The students were broken into cross-campus teams that debated, collaborated, and compromised to reach consensus on their recommendations.

We provided laptops, late-night snacks, plenty of space, and facilitators, one of them the current UC student regent, to help them clarify and crystallize their thoughts. The final recommendations were thoughtful, emphatic, and thorough. They ranged from specific welcome week activities and the importance of faculty in the cocurricular lives of students to student government and intramural sports. There were recommendations about town-gown relationships; student internships; a campus fairy shrimp carnival named, tongue-in-cheek, to recognize the campus's most notorious endangered species; monthly luncheons with the chancellor; a "principles of community" statement; themed residence halls; and a multicultural center. Students underscored the importance of student government and student involvement in the decision-making process on campus and emphasized the need for places to socialize, hang out, and relax with their friends.

The student think tank was by all accounts a meaningful and worthwhile event. The feeling of UC family and connectedness among that group of twenty-five students and fifteen staff was real. Most students, faculty, and staff feel loyalty to their own UC campus but do not necessarily feel part of the larger University of California. On that weekend, with representation from around the state, the connection became real and human. To a person, we gained a greater understanding and pride in the power and strength of our numbers and ideas, our interconnectivity, and our interdependence. We saw that weekend that we were in fact one large university: the University of California.

The Student Affairs Fellowship

In my first year in the planning of UC Merced, we were lucky enough to have a postgraduate fellow, recently graduated from a midwestern liberal arts college. She took on the challenge of discovering and understanding California's central valley with enthusiasm and tenacity. For her student affairs assignment, she created our first campus life Web site, researched cultural and recreational opportunities in the area, found resources related to local housing options, and spent a good deal of time gathering useful resources regarding child care. She also created many of the preliminary documents, time lines, and logistics that we later used in our implementation of the student think tank.

One day the admissions director introduced me to three young professionals, all recent graduates from various UC campuses, who had just signed on to contract positions as admissions and outreach officers. They were youthful, energetic, and intelligent and came from diverse backgrounds. I had an idea, a recipe in fact: postgraduate fellow concept + recent UC graduate + significant undergraduate student life experience = the answer to my puzzle. And so was born the concept of the student affairs fellowship.

Figuring out who to hire for the first resident assistant positions had been an unresolved dilemma. I had rejected using transfer students, who

lack experience with four-year residential campuses, and seeking current UC students on other campuses with student leader-mentor experience, owing to logistical problems in meeting their academic needs and facilitating such an unusual change in student status. Hiring just-graduated students from other UC campuses solved these problems.

I shared the idea of the student affairs fellowship with my colleagues and with the UC students who came for the think tank. Although the support for the concept was strong on all fronts, in the end it was the students' resounding approval that resulted in the funding necessary to make the idea real. The think tank "consultants" repeatedly stated that the fellows concept would be ideal for providing more seasoned but student-like mentors for the first UC Merced students. The student affairs fellowship idea was included as one of the most enthusiastic recommendations from the think tank, and indeed we hired three of the think tank attendees as fellows.

The job description for student affairs fellows turned out to be 50 percent resident assistant and 50 percent fellowship. We projected, as do many other campuses, that the resident assistant (RA) hours would average about twenty hours per week, with another twenty hours per week available to work. We placed students in "daytime" positions in campus recreation, student life, health education, Students First Center, residence life (beyond the RA work), academic advising, and the career center.

The fellows were the first residents of UC Merced. They moved in with no cable or telephone service, and in some cases, spotty electricity. A water pipe burst shortly after they arrived for training, and they had to relocate to the local motel. A mountain lion was seen roaming the exterior walkways around the residence halls, and the fellows had to stay inside at night or walk in groups. These early bonding experiences on a campus not yet open to the public and crawling with construction workers prepared them well for providing empathy and support to UC Merced's first students. Indeed, the magic of the fellowship idea was their youthful capacity to relate to students, so recently having been students themselves while also being in a position to contribute as professionals. This combination that we were so eager to have on campus also created challenges for some of the fellows, who felt that campus administrators saw them as students rather than professionals.

The fellows program was certainly not perfect; nevertheless, these dynamic individuals brought a special brand of late-night, personal-connection, we-can-make-it-happen commitment and caring to their work. Their personal interest in UC Merced's first students provided the support and mentoring we were hoping for in both the residence halls and the various student affairs functions throughout the campus. In their year at the new UC campus in the San Joaquin Valley, the fellows learned something about themselves, contributed significantly to the successful start-up of the tenth UC campus, and touched the lives of many UC students.

LESSON 3. Include students and student affairs professionals in the early planning of a campus, and then maintain those same voices and experts as consultants throughout the entire process. Include their voices not only in the early visioning but also in the intermediate planning steps and the implementation phases.

The Final Countdown

I spent much of late 2004 and early 2005 recruiting, interviewing, and hiring. Early on, the dining, housing, and residence life managers, the administrative assistant, and the student life coordinator arrived. Later came the assistant director for student life, a residence life coordinator, and the recreation director. At the same time, other student affairs staff were arriving to start up the services described in Chapter Seven. We were beginning to walk and talk like a student affairs division.

Finally I had a semicritical mass of like-minded colleagues! We moved to makeshift office space in what was once the warehouse portion of the former Castle Air Force Base: this was our “warehouse start-up phase,” much like Hewlett and Packard starting their enterprise in a garage. I credit those few months with the camaraderie and esprit de corps that kept everyone going through the unbelievably long hours and unimagined detours in the weeks immediately prior to campus opening.

We sponsored student affairs potlucks and set up a “beach scene” on April Fool’s Day in our less than picturesque parking lot. We enjoyed the surprise and delight of our vice chancellor and other passers-by who shook their heads and muttered under their breath that we obviously did not have enough work to do. Not true! We had as much work as anyone else, but we also knew that in student affairs, taking time to enjoy students and one another makes us better at what we do.

It was not, of course, all fun and games. Six months before UC Merced opened, I remember feeling completely overwhelmed by paper and projects. It was not unusual to work late Mondays through Fridays and dedicate weekend days to catching up in the office. Caught between certain drowning at work and certain disappointment from my family, I told my husband I needed a few hours to shop, read, and relax in a bookstore up the road. Being the supportive spouse that he is, he gladly agreed to stay with the our children. Instead, I surreptitiously pulled into the office parking lot, keyed into the dark offices, and started organizing and cleaning.

With a team with energy, additional ideas, and their own set of utopia-colored glasses, we had a fresh supply of hope and excitement. An enormous amount of work was getting done. A residential student database was programmed and brought online; a student housing resident contract was written and approved by legal counsel; a student government planning committee peopled by eager soon-to-be transfer students prepared for the first phases of student government; brochures and Web site content were

prepared, designed, and published; the first student policies were written; an ambitious welcome week was planned; and the second layer of staff was recruited and hired. In between these not insubstantial projects, the campus pulled together for its first-ever student yield event: Bobcat Day, named for our campus mascot. Staged in the park next to the still-under-construction campus, the event was well attended and the information tables mobbed by curious students and their families. The most popular attraction of the day was the carefully guided tour into one of few completed residence hall suites. It was the first tangible glimpse into what UC Merced would be as a physical place.

Although we were accomplishing a great deal by any standard, we did not get to it all. The student housing project, a subject that merits an entire book of its own, had changes in project management, changes in delivery methods, changes in construction firms, changes in architects, and inconsistent attention from me and later my small staff. We benefited from an eleventh-hour consultation from a UC housing facility manager who advised us on the technical and mechanical items that you know only from maintaining these kinds of building for years: Which shower heads will not break? Which toilets are low flow but still flush? How do you find attractive and durable window coverings? In the end, we once again took a deep breath and accepted that which we could not do or could not address.

LESSON 4. Invest the time and energy to include practicing student housing residence life and student housing operations professionals in the design and construction of new student housing. Do not rely solely on architects, engineers, project managers, and campus planners.

Student housing was just one of many critical, pressing priorities. We had been managing by crisis for some months already—giving attention to that which was urgent, attending to the day’s current flare-up, and being pulled away by new crises that flared even brighter. Everything was both urgent and important. Will we have enough students? Will they want to live on campus? Then the problem became where to put all of these students who want to live on campus but we do not have space for. The chancellor starting talking to local developers and apartment managers, and I came along to close the deals. What if the residence halls are not finished in time for moving in? In the end, the residence halls, the dining commons, and the library were ready enough, if not perfect, and the campus opened on time.

It was during the UC Merced spring information meetings for admitted students that it became clear to our chancellor that although the students were coming for a UC education, before they actually signed on the dotted line, they and their parents were concerned about housing, recreation, exercise, food, parking and transportation, and a cornucopia of other similar nonacademic issues. The parents were adamant, in fact, that without satisfactory answers to these questions, their children might not enroll.

As a result of this straightforward input from parents, we were suddenly, albeit briefly, center stage. The chancellor took the reins to be sure we had enough housing. She met local housing developers to explain our dilemma. She was in large part the reason we were able to arrange a one-year contract for UC Merced freshmen and transfers in two adjacent apartment complexes just a few miles from campus. We were granted additional staff to coordinate the administration of this off-campus program, including emergency response, roommate mediation, and community development activities. In a similar vein, we were granted chancellor's funds to underwrite the cost of subsidizing student memberships at the local health club since our recreation center was still a year away from completion. The transportation and parking staff changed their shuttle routes to include the new off-campus housing and the local health club. In the final weeks before opening, we even got a grassy field on which students could play and exercise.

LESSON 5. Don't dream quite so big. Any start-up requires imagination and vision, but insist on an accurate accounting of what resources you have, how many people you can hire, and how much time is available to you.

The First Students Arrive: Move-In Day

Move-in day—the first day UC Merced students arrived on the brand-new campus—was all we could have hoped for and more. And we did not do it alone. Prior to move-in, a crew of UC Santa Cruz housing operations folks drove over to Merced and assisted us with our punch-list walk-through of the new buildings. The housing facilities manager from UC Davis brought a truck filled with moving carts for the UC Merced students to borrow. The night before opening, the housing director from UC San Diego arrived to help and found himself installing shower curtains in residence hall bathrooms. A large contingent from UCLA arrived and said, “Put us to work. We'll do anything you need.” Some of them delivered vacuum cleaners to suites, and others helped set up heat shades and signage for the next day.

On move-in day, we had a carefully mapped-out plan that included over a hundred volunteers, at least thirty of them from other campuses: UC Santa Barbara, UC San Diego, UC Santa Cruz, and UCLA all sent staff to help. Not all campuses could send people, but UC Irvine sent supplies and equipment, UC Riverside sent flowers and a complementary membership to the regional housing professional association, and UC Santa Cruz topped off the generosity fest by providing a large-screen television for the community center as a gift to the new UC Merced students. We were overwhelmed by this generosity on all fronts, and humbled. How proud and honored we were to be part of this family! This was UC student affairs, a system that serves over 200,000 students across the state of California, coming together to help one of their own in a time of excitement but also dire need.

In addition to our UC systemwide colleagues, we were joined by UC Merced deans, vice chancellors, faculty, administrative staff, managers, spouses, children, and our local state senator. The music was upbeat, the laughter plenty, and the traffic flow (ultimately) smooth. It was a celebration. Sure, there were accidental fire alarms, and I spent time calming agitated parents, but that is all in a day's work. In all my years of student housing openings, it was one of the smoothest. We needed to exhale for a moment and bask in our own pleasurable surprise at the success of the first large-scale event on UC Merced's campus: move-in day.

LESSON 6. Remember you are part of a larger family of student affairs professionals whose careers have been dedicated to helping others succeed. Ask for help, and accept the help when it is offered. Someday you will be able to return the favor.

And We're Off and Running

What move-in day meant was that the students had arrived, their families had left, and UC Merced was in business. Welcome week was a series of events and activities ranging from UCM Idol night and a parent coffee hour to a bus trip to Yosemite National Park and a staff-faculty-student talent show. Students went from one event to the next, initiated new friendships, and started attending classes and exploring the beautiful new library. Responding to the concern that students needed something to do, the student and residence life staff, anchored by the fellows and other UC Merced volunteers, pulled off a series of events that would have taken four times that many staff in a normal circumstance. Many folks worked twenty-one days straight during that opening stretch, and the days themselves always stretched far beyond eight hours.

Were staff exhausted and delirious? Yes. But did we find new sources of energy with the arrival of the students? Absolutely. It was like breaking through to water after drilling deep in the dry soil for so long. We still needed to finish building the well, but we had reached the payoff. The students were here. This is what we had been working for.

Behind the scenes, the unglamorous inner workings of the university were far from smooth and well oiled. None of us anticipated that purchasing or administrative systems would top the list of challenges that first year. Procurement cards were distributed, but only to one individual in the entire student affairs division. The processes for approvals were cumbersome, special exceptions were required for standard student life needs, and reimbursement took months. Vendors were not getting paid in a timely manner, and many student affairs staff had thousands of dollars of purchases on their own personal credit cards without even the comfort of timely reimbursement. These challenges and others in the same vein will be addressed over time, but do take their toll on the individuals who are caught in early quagmire.

LESSON 7. Student-centered professionals will do all you ask of them and more. Reward this commitment with fair compensation, genuine opportunities for advancement, institutional recognition of the essential roles they play in the campus community, and resources to do their jobs. In the end, the payoff for the students and the university will far surpass the investment.

Challenges and hurdles aside, we were off and running. The residence life staff kicked off their first-year student success programming, initiated the on-call duty system, stepped right into roommate mediations, and, sadly but not surprisingly, were called on in short order for first-response crisis counseling and referral. UC Merced students were like any other college students, complete with outstanding academic achievements, a plethora of talents and interests, and varied cultural backgrounds. As college freshmen are likely to do, they tested the limits in their first away-from-home community and in that process revealed that they were human: some students experimented with alcohol and drugs, others panicked in their unfamiliar homesickness, and still others made poor choices and ended up hurting themselves or others. The vice chancellor for student affairs received a number of late-night telephone calls from me during those first few months, but in the end the actual crises or significant judicial cases that first year were quite minimal.

In this rich fabric that is student life, we could already see the involvement, connectivity, and individual growth of UC Merced's first enrolled students. By year's end, fifty-four student clubs and organizations were created, the first student government constitution was written, and nearly 80 percent of UC Merced students voted in the first student government election. The campus experienced its first student leadership conference, its first family weekend, a multicultural rainbow festival, the fairy shrimp festival, and a series of dances, including a winter formal. Less tangible but perhaps more meaningful events occurred too: student growth and development, cross-cultural exchanges and insight, the establishment of what will be lifelong friendships, and a gentle, constant buzz that was the establishment of campus community. One notable accomplishment among many was the completion of *The Pioneer*, UC Merced's first student yearbook. The hundred-page full-color publication was created in just under a month, and only because of the unrelenting work of two more-than-dedicated student affairs fellows. This yearbook will serve as an irreplaceable historical chronicle of Merced's first year of student life: a snapshot in time of the campus's first pioneers, when all was new and they were shaping the future for generations to come.

The student life and residence life programs at UC Merced, while not yet fully formed, have already become what they are at other college campuses around the nation: a complex combination of relationships, interactions, social development, and personal growth. The carefully constructed combination of services, programs, mentoring, interventions, opportunities,

and celebrations brought the campus to life. Despite the discussions of utopia I remember from graduate school, I am now convinced that there is no way to achieve an ideal organization—in higher education or anywhere else. I have permanently set aside my utopia-tinted glasses. But I also have cemented my conviction that committed, seasoned, student-centered professionals—and enough of them—are the key to success for any student affairs endeavor.

VALERY OEHLER came from UC Irvine to UC Merced as founding executive director for residence and student life, having previously held student affairs positions at California State Polytechnic University, Pomona, and Ithaca College in New York. She is now on the staff of the University of California's Office of the President and is working on campus life issues and initiatives from a systemwide ten-campus perspective.

9

The UC Merced library is not wed to any particular technology and will abandon any technology when its time has passed.

Creating an Academic Library for the Twenty-First Century

Donald A. Barclay

Back in the early 1990s, so the story goes, academic planners, deluded by visions of a paperless online world, tried and failed to open California State University, Monterey Bay with no library. The story is pure urban legend. CSU Monterey Bay had a traditional academic library when the first students arrived in August 1995 and has one to this day.

By the time Bruce Miller took up his position as the founding university librarian for the University of California, Merced early in 2001, the notion of an entirely on-line academic library was not completely delusional. The world of electronic information had advanced remarkably since 1995, with perhaps the most significant advance for the future UC Merced Library being the launch of the California Digital Library (CDL) in 1997. Because CDL negotiates UC systemwide licenses for electronic information resources, UC Merced faculty and students would—without any librarian lifting a finger—have on their desktops some fifteen thousand full-text journals, 250 bibliographic databases, and a collection of electronic books numbering in the tens of thousands (and growing). In addition, the University of California's consortial borrowing system meant that UC Merced faculty and students could enjoy courier-service delivery of any of the 34 million volumes held in the libraries and remote-storage facilities of the other nine UC campuses.

Having such a large volume of information resources as a safety net made for a liberating planning experience. Even if the plans for creating UC Merced's library turned out to be all wrong, faculty and students would still



be able to conduct their research and pursue their educations at a very high level. The idea, though, was to use the UC system's rich base of support as a launching pad for something great and extraordinary: to create a model academic research library for the twenty-first century. Surveying a campus site that was nothing more than a swath of well-grazed rangeland, the founding university librarian was faced with many questions and no precedents. Should a twenty-first-century academic research library be organized along the lines of public services, technical services, special collections, and all the other traditional library divisions, or should its organization take some new form? Should the new research library have books or truly be an online operation? What form should the library building itself take? What kind and how many staff would be needed? How would staff provide reference services? If there were to be a physical collection, who would build it, and how? Was it possible to plan a research library when the majors the university would offer were still unknown and the first faculty were not going to arrive for at least another two years?

Some of these early questions were resolved by force of circumstances; some ate up many hours of thought, research, and soul searching; some remain unanswered to this day. Yet the following were clear:

- The new academic research library was going to be a physical space on campus.
- The new academic research library was going to provide information resources in one form or another to UC Merced's scholarly community.

The Library as Physical Space

As with any other building project on any campus, old and new, no single person had the power or privilege of deciding every aspect of how the library building would look or function. The final result would be a collaboration of campus administrators, architects, engineers, and building tenants, all of whom had to work within the constraints of an inflexible budget and a merciless time line. While the UC Merced library was to be the principal tenant of the library building, other tenants included campus administration and the Division of Student Affairs. Joint tenancy mandated a great many compromises but also brought opportunities. Most important, jointly occupying a building with the Division of Student Affairs laid the foundation for a close collaboration between the library and student affairs, two superficially diverse organizations that nonetheless share a commitment to student success. For example, in the spirit of collaboration, the university librarian configured the library's main entry space so that it could function as the campus's de facto student union. The payoff for collaboration and compromise is a building that houses so many essential student services and provides such good gathering places that UC Merced students not only spend a lot of time in the library, they can hardly avoid it.

Understanding the UC Merced Library Building

UC Merced's Leo and Dottie Kolligian Library building is composed of three sections: the three-story west wing, the four-story lantern, and the four-story east wing. These sections break down as follows:

West Wing

First floor	Student Affairs offices, including Career Center, Counseling Center, Students First Center, Cashier's Office, Registrar, and Admissions
Second floor	Chancellor's Conference Room, classroom-like spaces (managed by the library), instructional technology offices, and offices for the World Cultures Institute
Third floor	Campus administration, including office space for the chancellor and vice chancellors

The Lantern

First floor	Main entrance to the building, the Kashian Reading Room, a student union-like space, coffee kiosk, library service desk, book security gate
Second floor	Main entrance to the library proper, library service desk, book security gates
Third floor	Casual reading room
Fourth floor	McFadden-Willis Reading Room, a classic reading room

East Wing

First floor	Bookstore retail space, textbook distribution room, student government offices, tutoring and advising offices, library technical services, library server room, mailroom, loading dock
Second floor	Library books stacks, library instruction room, assorted group study and meeting rooms, open seating areas, library administrative offices
Third floor	Library books stacks, assorted group study and meeting rooms, open seating areas
Fourth floor	Library books stacks, assorted group study and meeting rooms, open seating areas, archives, digital assets workrooms.

The total area of the Kolligian Library building is 170,922 square feet, of which 120,000 are assignable. The library proper occupies about 87,181 assignable square feet. As configured, the library's book stacks can comfortably hold 250,000 volumes.

One notable aspect of the library building is that it was designed to be a green building capable of achieving Leadership in Energy and Environmental Design (LEED) Green Building Rating System silver certification. The entire campus was being built to meet criteria for LEED silver certification.

One part of achieving such a high level of certification involves construction practices that are more or less invisible to users of the building. For example, using construction materials that are available locally instead of materials that need to be shipped great distances counts toward LEED certification. Using recycled materials or materials that do not give off gas also counts. There are, in addition, a number of green design elements that are highly visible. One example is the fact that virtually all areas of the building receive natural light, thus reducing the use of electricity. Some other easily observable green features are waterless urinals, automatic lavatory sinks and toilets, motion-detecting lights, and a highly efficient heating and cooling system that uses water—hot in winter, cold in summer—piped from the campus's central 2 million gallon storage tank.

Designing Spaces. When it came to designing spaces for the library portions of the building, one of the guiding principles was the notion that people use libraries for many different purposes, and so there is no one kind of library space. Library spaces are analogous to public lands. Some people want to drill for oil on public lands, some to raise cattle, some to ride their off-road vehicles, and some to enjoy a complete wilderness experience. None of these endeavors is inherently wrong, yet you cannot do all of them on the same piece of land at the same time; as a compromise, managers of public lands designate different lands for different uses. In the academic library, some people want total quiet, some want group study rooms, some want social interaction, and some want a place to sleep between classes. As managers of the spaces in the UC Merced library, we tried to create flexible spaces that meet a variety of needs. These spaces can be broken down into four general types.

Space Type 1: Collaborative Work Rooms and Seminar Rooms. The library offers seventeen collaborative workrooms plus twelve seminar rooms, the largest of which can accommodate more than fifty people. The collaborative workrooms, which accommodate up to either six or twelve people, are furnished and equipped like office spaces rather than traditional library study rooms. The chairs swivel and roll, and they are fully adjustable. The laminate-top tables can be easily rearranged for various working configurations. Each collaborative workroom has a large whiteboard and is equipped for a large-screen monitor to facilitate collaboration using laptops. The larger seminar rooms are variously configured, although most have large screens for computer-based presentations. One of the seminar rooms, the Gonella Discovery Room, is the library's primary instruction space and is configured with multiple displays as well as an advanced touch-screen board. Because of a permanent endowment from the Gonella Family, the library can continually upgrade the instructional technology used in this room.

Space Type 2: Open Seating. The second, third, and fourth floors of the library's east wing are home to both the book stacks and generous open seating areas. Some of this open seating takes the form of classic wooden library tables and chairs, and carrels line the stairwells. Each open seating area also

includes soft seating—love seats and club chairs—along with occasional tables. Students constantly rearrange the soft seating to form ad hoc social and study groups, but putting the furniture back at the end of the day is easily done. Because the library's classic wooden tables are spacious (forty-eight by thirty inches of tabletop per seat) and free of clutter, students regularly take over a table to form ad hoc study groups.

Space Type 3: Reading Rooms. The UC Merced library has three reading rooms, each with its own distinctive design and effect. The first-floor reading room serves as the campus student union space and is furnished like a café with flip-top tables that can be rolled out of the way for dances and other supremely unlibrary-like events. The third-floor reading room, designed as a casual space, offers funky furniture, floor pillows, popular magazines, and great views of the campus. On the fourth floor is the McFadden-Willis Reading Room, the quietest spot in the library. A modern interpretation of the classic wood-paneled, high-ceilinged, formally furnished reading room, everything about McFadden-Willis communicates the idea that it is a place for contemplation and silence.

In the reading rooms as well as the open seating areas, we carefully chose furniture designs and colors to set a specific tone for each space. Thoughtful design makes it unnecessary to use signs or constant nagging to tell people how a space is intended to be used. Traditional wooden library tables and chairs say, "Spread out your stuff and study." Rolling office chairs and laminate tables say, "Let's get to work." Floor pillows and funky furniture say, "Relax and have some fun." Durability was another key furniture criterion: the library needed furniture robust enough to last for decades coupled with designs that would not look hopelessly dated in five years. Comfort and ergonomics were perhaps the most important selection criteria. The library furniture includes a number of handsome faux-leather pieces but, out of consideration for the sensibilities of animal-rights advocates as well as for adherents of certain religions, no actual animal products.

Space Type 4: Computing Spaces. Because the entire UC Merced library building can be used as computing space, the library does not provide any computer laboratories or clusters. A scant handful of stand-up workstations near the library's second-floor service desk comprise the extent of available public access computers. The library has intentionally cultivated a compute-anywhere culture based on the laptop computer. Anyone can bring a laptop into the library to access the library's electronic information resources either wirelessly or by plugging into a hardwired network drop.

The library manages over two hundred tablet-style laptop computers that are available for UC Merced students, faculty, and staff to check out. In the first year of the library's operation, while serving a student body of approximately 850, the library recorded sixteen thousand circulation transactions for laptops. Instead of having to hunt up an available desktop computer, plant themselves wherever that machine happens to be, and stay seated there for fear of losing their spot in front of a computer, students take laptops wherever

they want to be: in a group study room, on a café-style table next to the coffee kiosk, on a pillow on the floor, or stretched out on a couch.

Signage. Early on we decided that digital signage would play a key role in how the library communicates with users. Our vision was a highly interactive digital signage system providing information on everything from way finding to campus events to information literacy. The system we envisioned was to employ still images, audio and video, and two-way communication with service desks to inform and assist library users. Initial planning called for at least a dozen digital signs located at strategic points in the library. In fact, the building opened with only five working digital signs. Although these signs have proven to be useful tools for communicating information to library users, the inability of the digital signage software backbone to deliver as promised, coupled with construction and technology installation delays, has prevented digital signage from reaching its full potential. We hope to remedy this shortfall and achieve our original vision.

As compromised as it is, the current digital signage has helped the library achieve a separate but related goal: no signs in the library. It is our belief that putting up a sign for the purpose of either telling someone where to go or how to behave is an admission that something is intrinsically wrong with the building or the information-seeking system. With the exception of door number signs and a few handsome donor recognition signs that are more art than signage, the library opened its doors sign free and has managed to remain that way.

Radio Frequency Identification (RFID). We decided long before the building opened that we would use an RFID-based system to manage the library's physical collection. Although RFID systems have a higher initial cost than traditional magnetic security systems, they have the virtue of doing far more than simply keeping books from wandering out the door. RFID automates both shelf reading and locating misplaced books as well as simplifies patron self-check. The RFID system that the library acquired allows us to put DVDs on the shelf in special cases that unlock only after the item has been checked out. This means that the library's DVD copy of *California's Water: Climate Change* sits on the shelf alongside such printed books as *Water and the California Dream* and *Water in the West* instead of being segregated in a distant media collection. The most important thing that RFID allows us to do is readily keep track of books taken off the shelf but not checked out. When the library stacks start to fill at some future date, library managers will be able to generate reports of every book that has not been taken off the shelf in the past n years and send it to off-site storage.

Food Policy. Although we put great store in the importance of how the library building looks, we all along agreed that we would allow food and drink in it. Our thinking was guided by the principle that we want the library to be a welcoming place with as few rules as possible. We were further guided by the reality that students bring food into libraries whether it is against the rules or not. By allowing food and drink, providing sufficient

trash cans, working closely with janitorial staff, and encouraging students to report when something is spilled, we have managed to keep the building clean and looking good. The library's food policy has become so well known that local pizza places now deliver directly to library study rooms.

Construction of the Library Building. Ground was broken for the UC Merced library building on October 7, 2003, with beneficial occupancy of the building (that is, moving in and using the building as intended) scheduled for January 2005, some seven months before classes started. Access to the construction site was strictly limited, and as a result many "value-engineering" (that is, cost-cutting) decisions were made without tenant input. The pace of value engineering picked up considerably when, in 2004, the price of steel shot up 40 percent in less than six months.

Bad weather and bidding problems pushed the projected beneficial occupancy date from January 2005 to March and then June. As the construction wore on, access to the building opened up just a bit, allowing more frequent visits by the university librarian and members of his growing staff. On one visit, the university librarian discovered an interior wall being framed up where no such wall was supposed to go, and members of the library staff repeatedly discovered construction mistakes, such as the omission of power-and-data boxes in reading rooms.

The library staff moved into the building on August 1, 2005, slightly more than one month before the planned first day of classes. The lantern—the central core of the library building—was still under construction and could not be occupied until well into 2006, and hundreds of construction tasks remained to be completed in the rest of the building. The only public entrance to the building was an emergency fire escape, a circumstance that took the library's security system completely out of play and left the book collection vulnerable to theft.

Under such conditions, there was no thought of properly commissioning the building or finishing off the punch list prior to occupancy. As with most other new buildings, there were plenty of unpleasant surprises, both large and small. We discovered a main waterline installed above the compact shelving in the archives workroom, making it impossible to safely use the bulk of the room to store unique materials. Two immense air conditioners were installed in the server room even though revisions to the plans had made the units unnecessary. The roof leaked badly, causing a vast section of drywall to drop from the ceiling during the Christmas break in 2005. Roof leaks plagued the McFadden-Willis Reading Room for more than a year after the lantern was opened for occupancy.

Because the classroom and office building could not be occupied when classes started on September 6, 2005, the campus administration decided that almost all classes would be held in the library for the first semester. The registrar's office designated every large and most of the small meeting rooms in the library as classroom spaces. The installation of stacks on the second floor of the east wing was delayed indefinitely so that the entire floor could

be used as a large lecture hall. The library staff pitched in to make the building work as both a library and a classroom space. It was an interesting way to launch a library, and for that first year, we could say something that perhaps no other academic library in the world could say with confidence: absolutely every student on campus has been in the library.

Providing Information Resources to UC Merced's Scholarly Community

In the years leading up to the opening of UC Merced, the founding university librarian was frequently asked, "Is UC Merced going to be a virtual library?" The answer is, and always was, no. While it was always the intention that the UC Merced library would have a higher ratio of online-to-print information resources than established research libraries, it was never the intention that the printed book would not be present. As the university librarian said time and again, the library would be "container neutral." If an electronic container is the best way to provide a particular information resource, then we provide it electronically. If a print-format container is best, we provide it that way. And if appropriate, we provide the same piece of information in both electronic and print-format containers.

Books: Building a Live Collection. One of the first collection-building activities at UC Merced library was to junk hundreds of useless gift books that had piled up at the campus's warehouse facility. While this action may seem cold-blooded, it defines how this library operates. Putting useless gift books on the shelves would have done nothing to advance research or teaching at UC Merced. Even worse, any money spent putting useless books on a library shelf could not then be spent on adding something useful to the collection. The fact is that the typical research library is filled with books that do not get used. About 20 percent of the books in any given research library account for 80 percent of the circulation. The rest of the books are there just in case. We wanted the UC Merced library to be filled with books that get used, that is, a "live collection." As for just-in-case books, we already had 34 million of them sitting on the shelves of the other University of California libraries.

One part of building a live collection was acquiring significant numbers of online books. Although everyone knows that reading an online book is "just not the same" as reading a printed book, online books have a number of advantages:

- They cannot be stolen, damaged, or monopolized.
- They can be accessed around the clock from almost anywhere.
- They can be simultaneously accessed by multiple users.
- They are searchable.
- They do not take up any space on library shelves and do not have to be handled by library staff.

- Their use can be accurately tracked, with this information used to shape future collection management decisions.
- They are in many cases much less expensive than printed books.

As for printed books, the library issued a request for proposal (RFP) to identify a library services company that could supply the library with new, shelf-ready printed books: when a book arrives in a library, it is already catalogued, labeled, RFID tagged, and property stamped. All library staff need do is take it out of the box and put it on a shelf. The successful bidder on our RFP was the New Hampshire-based YBP Library Services. Before YBP shipped the first book to us, UC Merced librarians met with its representatives to go over what types of books we needed to build a truly live collection. Obviously the library required books that were sufficiently scholarly and written at an academic level, but subject area was the most important selection factor. With this in mind, we adjusted the YPB plan to acquire books that supported the majors being offered at UC Merced. For example, we opened up the pipes for YPB to send us just about anything in nanotechnology, solar power, and Spanish-language literature, while at the same time all but cutting off the flow of books in Russian studies, architecture, and law. As UC Merced has grown and more majors have been added, we have continually adjusted our YPB plan to meet local needs and have supplemented the plan by purchasing books specifically requested by faculty.

By outsourcing most of the book processing, one librarian and one library assistant made it possible to open the UC Merced library with thirty thousand books in the stacks. Processing the same number of books in the same amount of time using a traditional in-house cataloguing operation would have required at least twenty-five full-time-equivalent staff.

Interlibrary Loan. Because the UC Merced library relies heavily on the other UC libraries to supply our faculty and students with just-in-case books, interlibrary loan (ILL) has been a matter of the first importance to us. Most of our ILL requests are made through MELVYL, the UC systemwide library catalogue, and requests for articles are made through UC-eLinks, an SFX-based product. All requests are processed using consortial ILL software and delivered by the consortial courier service, for books and other returnables, or provided online, for almost all journal articles. The UC Merced library does not restrict ILL in any way, and there is no charge to the end user. If a UC Merced library user requests something that other libraries will not lend, our typical response is to buy the requested item whenever practical. We see ILL as a collection development tool and plan to analyze ILL transactions to help guide the building of both book and journal collections.

Periodicals. “No print periodicals” has been one of the library’s mantras from our earliest planning. With access to over fifteen thousand full-text periodicals through CDL, the lack of print periodicals has not been a hardship. The strategic value of not having print periodicals is that our

book stacks will be filled with books instead of long runs of unused bound journals.

Special Collections and Archives. It seemed to us that attempting to build a traditional special collection now is a bit like entering the Daytona 500 after all the other cars have a four-hundred-mile head start. You might get a few thrills, but you are not going to end up in the money. Instead, we decided to create digital special collections in which ownership meant nothing and access meant everything. In 2002 the library was the recipient of the first competitive academic grant awarded to UC Merced—\$250,000 from the Institute of Museum and Library Services—to digitize the art collection of the Clark Center for Japanese Art and Culture located in Hanford, California. The library hired a librarian to be head of digital assets, purchased digitization equipment, contracted with a professional photographer, and set about digitizing over four hundred art objects from the Clark Center collection.

Although our initial thinking was that the library would then go on to digitize other cultural collections in our region, we have since challenged that thinking. Should we really be running an in-house digitization shop when it might be more cost effective to outsource such work? Would digitizing San Joaquin Valley collections further the research and educational goals of the university? Should we refocus our digitization efforts on something more immediately in line with current research at UC Merced, for example, geographic information systems? Should we turn our efforts to digitizing and preserving the intellectual output of UC Merced faculty? At this point, our future direction remains somewhat unfocused, though we feel confident that as the university matures, a role for the library's digital-assets operation will emerge.

As for archives, the library has taken a traditional approach. The library is the archive for the historical documents of the university, and we accept, process, and preserve both documents and, until such time as there is a university museum, artifacts associated with the history of UC Merced.

Reference Service. The UC Merced library has no reference desk and no reference collection. The library does have a service desk staffed by students and, at times, library paraprofessionals. And why are there not librarians sitting at a reference desk? One reason is simply practicality: the UC Merced library does not have enough librarians to staff a reference desk. The other reasons are more philosophical:

- One-on-one interactions between a librarian and a library user are the most expensive way for a library to communicate with its users.
- The reference desk fails to serve library users who do not come into the library.
- The notion that a librarian is ready and waiting almost anytime someone chooses to walk into a library devalues the profession in the eyes of the public.

Does the lack of a reference desk mean that the UC Merced library does not want to provide reference services to users? No. Although we believe that good libraries and good information-finding systems reduce the need for one-on-one consultation with librarians, we provide many avenues for library users to contact someone, quite possibly a librarian, who has the ability to help them fill their information need. These avenues include:

- Triage from the service desk
- Telephone reference
- E-mail reference
- Digital chat reference
- Research consultation by appointment

In the offing are the implementations of text messaging and interactive digital signage as additional means for getting help.

We decided not to have a separate reference collection for two reasons. The first is that the bulk of the ready-reference questions that used to be answered by librarians consulting reference books are now answered by anybody searching Google. The second reason is that many traditional reference resources—encyclopedias, dictionaries, fact books, and so on—are available online. However, the UC Merced library does have reference books, located in the stacks in call-number order with all the other books. So far, all of our reference books circulate, but we hold out the possibility of making a reference book noncirculating if demand warrants.

Reserves. Reserve collections are a time-honored tradition in academic research libraries. We had no hesitation in tossing this tradition out on its ear. Reserve collections are, in effect, a means of rationing access to an information resource, typically a book, so that multiple persons can make use of the resource over a short period of time. Except in those cases where there is little to no demand for the resource, reserve systems have always failed to achieve their intended purpose, most typically because high-demand reserve materials end up being monopolized by a single user or clique.

Instead of a reserve collection, the UC Merced library chose to put its resources into a fully online service called supplemental course resources (SCR). With this service, faculty can request that the library make resources available to their students in digital format. Files are posted on the campus course management system (Sakai), and it is through Sakai that students access the resources. Before posting, the library decides if the use of a particular resource is or is not fair use. In the latter case, the library applies for copyright clearance and pays the permission fees to make a resource available. The library has occasionally turned down a faculty SCR request because the permission fee was exorbitant, but in such cases, we have been able to negotiate a middle-ground solution with the faculty member.

Instruction. In the library, we use the word *instruction* in its broadest sense. Instruction encompasses not only an instructor meeting with a class but also just about any medium, including digital signage, instructional videos, and Web presence, through which the library communicates with its users. In some cases, classes come to the library's own classroom for instruction; in other cases, the instructors go into classrooms located outside the library. One cornerstone of the library's instruction philosophy is the idea that every instruction session does not need to be stretched to fifty minutes. If what a class really needs is fifteen minutes on how to use a particular database, then we are perfectly happy to come by for fifteen minutes, do our instruction, and be on our way. It is our hope that as the campus technology systems improve, some of our drop-in instruction might be done using videoconferencing tools, with a librarian located in the library virtually dropping in to a class in another building for a quick bit of instruction.

Another cornerstone of our instruction philosophy is to avoid beating students over the head with what they already know. The fact is that most databases work a lot like Google, a tool that students know how to use quite well. So instead of focusing on the intricacies of constructing an elaborate search strategy, our focus is on such things as evaluation of information, plagiarism and intellectual property, incorporation of information resources into papers and projects, and the differences between proprietary information resources and what is available on the open Web.

First Principles for Creating a Twenty-First-Century Research Library

Whether the creation of a twenty-first-century research library takes place from the ground up, as it did at UC Merced, or whether it involves recreating an existing library, the details vary according to local circumstances. No two buildings will be exactly alike. The notion of doing away with print format reserves might work on one campus, while on another it would send the faculty into open revolt. Here are first principles to which we did our best to adhere as we created the UC Merced library.

Principle 1: “What Do We Want to Do?” Comes Before “How Do We Do . . . ?” One way to ensure thinking that looks backward instead of forward is to start a planning process by reversing these questions. For example, if we had started by asking, “How do we manage a reserve collection?” we would have ended up with a traditional reserve collection. By instead asking, “What is it we want to do?” we ended up with supplemental course resources.

Principle 2: Be Masters of Technology, Not Slaves to It. Although the point here may be subtle, we always maintained that we would use technology to achieve specific ends but would not use technology for its own sake. We do our best to understand the substance of any given technology

instead of being hypnotized by its shine. We refuse to be wed to any particular technology and will abandon any technology when its time has passed.

Principle 3: Plan Bravely. Planning that is shaped by fear is destined to fail. Plan with courage, take reasonable risks, and be ready to adapt if any of your plans fail to work. If none of your plans fail, you have not really tried.

DONALD A. BARCLAY worked closely with founding university librarian Bruce Miller to shape the library as an information resource and as a physical space. He is currently the deputy university librarian at UC Merced.

10

A unique collaboration between residence life and other student affairs units addressed the need for experienced students on a campus where most students were freshmen.

What Was It Like? Being in the Pioneer Class at UC Merced

Lisa Perry

Being a UCM student, you get to see a camel on Bellevue Road, a white horse on North Lake Road, two flamingos at a ranch and a plethora of bunnies on the campus. What more do you want?!

Julia Zhou, UC Merced undergraduate

Entering the UC Merced campus and turning onto Scholars Lane, students saw, in this order, large cow pastures surrounding the campus, tall chain-link fences enclosing construction materials, orange fences stating “limits of construction,” and across the small road, the residence facilities. Students who were willing to brave this combination of undeveloped land, partially built campus facilities, and small but promising services soon earned a reputation as the pioneers. These pioneers probed the unknown and helped establish much of what UC Merced is today. This chapter provides an insight into the experiences that shaped student careers at UC Merced during that first semester and many of the challenges that UC Merced students, staff, and faculty faced. This is what the campus life was like for a UC Merced pioneer.

Although UC Merced officially opened on September 5, 2005 residents of campus housing were allowed to move in on September 3, move-in weekend. Prior to this, the only people who had set foot on campus were the construction crews, a few staff, and some select VIPs. Orientations for new students were held all over the state of California. Campus tours featured a slide show of campus renderings and a trip to Lake Yosemite County Park, located less than a quarter-mile away, where visitors had a distant but nice



view of the campus. For the 2004–2005 recruitment season, UC Merced received nearly 9,000 applications. Of those, over 6,700 students were admitted. The final result was a total enrollment of 875 students for the fall 2005 semester.

These 875 students were offered an option of living on campus in the Valley Terraces, the university's suite-style residences. The 586 beds available on campus were filled by June 2005, with one hundred students on the wait-list. Student Housing partnered with a community broker to secure off-campus housing options for the additional students. The wait-list was exhausted, and approximately seventy students signed off-campus housing contracts for all-inclusive packages (furnished apartment, with utilities, cable, and Internet included).

All on-campus residents were required to purchase a meal plan at a cost of a thousand dollars per semester. Many students had a difficult time using the full amount. Together with Student Housing/Residence Life, the dining commons opened its doors to welcome residents on Saturday, September 3, 2005, two days prior to the first day of instruction. Serving students, faculty, and staff, the dining commons was run by a four-person management team, twenty-four staff, and forty student employees. Food served the first year included 263,000 smoothies, fountain sodas, bottled drinks, and bottled waters; 90,000 chicken strips, cheeseburgers, burritos, pizza, and sandwiches; and 1,121 pounds of cereal.

Those first steps on campus in September 2005 must have produced mixed feelings among students. It was summer in the San Joaquin Valley, so it was very hot. The campus appeared bare, with no grass or trees. Construction was taking place all around the students, and local TV and other media followed them to and from classes. Only five buildings were in use. The Leo and Dottie Kolligian Library housed administrative and Division of Student Affairs offices, together with library services, but was also pressed into service to provide classroom space; the classroom building was not yet finished and would not be occupied until the spring 2006 semester. The science and engineering building, in which instructional laboratories were located, would not be in use until the 2006–2007 academic year. The library itself was not completed by opening day. The lantern, the midsection connecting the east and west wings of the library, had yet to be completed. With this segment closed, staff, students, and the public had to walk outside to move from one wing to the other. Much confusion arose because of this obstacle. The Office of the Registrar strategically located staff at entrances, exits, and stairwells to help students navigate their way around the construction.

In addition to the library building, residence halls, and dining commons, the central plant and the telecommunications building were in operation. Large lecture halls had not been completed by fall 2005. The largest class was Core 1, a required interdisciplinary general education course entitled "The World at Home," with approximately 210 students enrolled.

In order to accommodate a class of this size, the Office of the Registrar had to borrow a multipurpose room facility located in the Valley Terraces complex. Thus, the California Room was the fall home for most of our large classes. For this arrangement to succeed, chairs were brought in during the day and chained up outside at night, so that residence life staff could continue other programming in this space during evening hours.

A unique collaboration between residence life and other student affairs units addressed the need for experienced students on a campus where most students were freshmen. Without a prior class to pass on a campus legacy, advise about classes to take, and offer residence hall wisdom, student affairs needed to create support to help UC Merced's pioneer students build a campus culture. This gave birth to the UC Merced fellows program, described in Chapter Eight. The fellows became UC Merced's first resident assistants (RAs), offering guidance to the students who lived in campus housing. They helped build and maintain a strong connection between the campus administration and the student community. This aspect of the campus helped students adjust to the chaotic nature of UC Merced. Fellows provided programming for resident students, offered support with transition to university life, and helped build relationships within the Valley Terrace community. Toward the end of the fall semester, campus residents were given the opportunity to assess their RA's performance. The Housing Year End Report noted that 83 to 86 percent of the residents indicated satisfaction with their RA's approachability, availability, sensitivity to diversity, ability to create an environment of mutual respect, and ability to serve as a positive role model.

The unique student population that enrolled at UC Merced in fall 2005 had four significant characteristics: a vast difference between the size of the undergraduate and graduate classes, a very much larger freshman than junior transfer class, a large representation of students who were the first in their families to attend college, and an exceptionally diverse group of undergraduates, echoing the diversity of California's population. In the inaugural class, the 838 undergraduate students constituted 95.8 percent of the total head count, while the 37 graduate students constituted 4.2 percent. Among the graduate students, 13 had begun their graduate careers at UC Merced the previous year, many arriving at the new campus with their faculty advisers. Student life on campus was dominated by the undergraduates, not only owing to their disproportionately large numbers but also because faculty laboratories where graduate students did much of their work remained at the former Castle Air Force Base staging facility several miles away, while the classroom and science and engineering buildings were being completed. Thus, the undergraduates were much more visible in common campus areas.

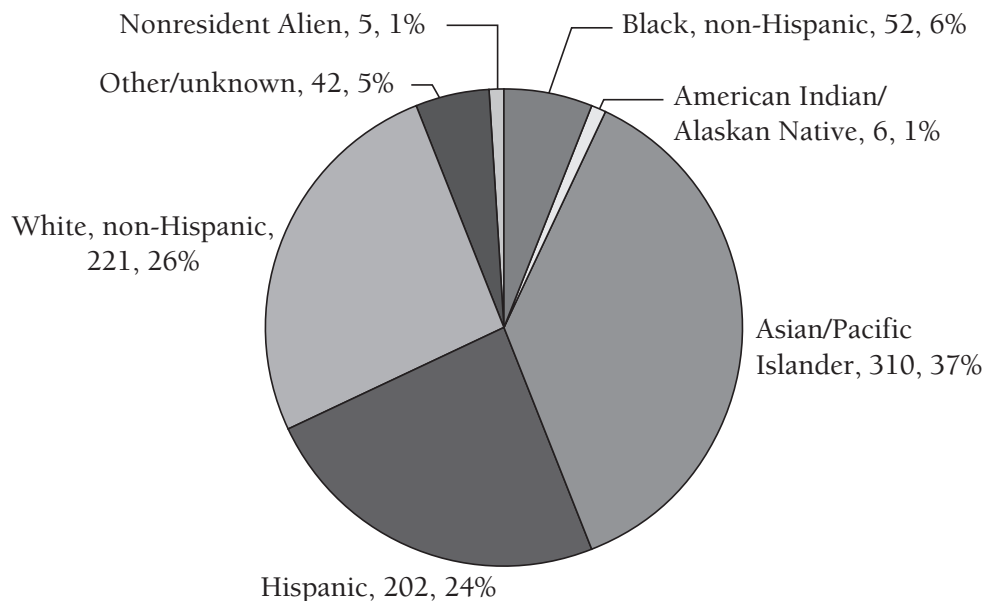
The undergraduate inaugural class also had a considerably larger number of freshmen than transfer students. New freshmen constituted 84 percent of the class—706 students—while the new transfers constituted

16 percent, or 132 students. Much of the campus and its services catered to the freshman students. The students living in the residence facilities were primarily freshmen, and they were highly visible in various campus offices and student clubs or organizations. They typically did not have family obligations or the need to work full time while attending college. Transfer students were likelier to have commitments outside their college career. Services such as day care, night classes, and online classes were not available. Even the ability to attend as a part-time student was a long and cumbersome process, as is the case on all UC campuses.

The most remarkable characteristic of UC Merced's student population in fall 2005 was the extraordinarily large number of first-generation college students. Among freshmen, 318 (45 percent) were first-generation college goers, as were 78 (59 percent) of new transfer students. First-generation college students faced university life with a feeling of uncertainty. After speaking with some of these students, I learned that many of the university processes were confusing to them. Financial aid procedures and paperwork appeared intimidating. A fear of failure plagued some of these students: "What if I don't make it and I have to return home?" Parents were frequent visitors for these students; many came to investigate the school, while others simply came to spend time with their children. UC Merced embraced these new students and their families. We welcomed their questions and curiosity.

A point of great campus pride was the diversity of the inaugural class. In fall 2005 UC Merced had an undergraduate student population of 37 percent Asian/Pacific Islanders, 26 percent white non-Hispanic, 24 percent Hispanic, 6 percent black, and 1 percent American Indian (ethnicity of 5 percent was unknown) (Figure 10.1). In addition to challenges facing first-generation

Figure 10.1. Undergraduate Ethnicity



college goers, we also had questions that stemmed from the ethnic diversity represented in the student population, often owing to language barriers that made it difficult for some families to navigate campus services. It was not uncommon for a staff member to explain a policy or procedure to a student, who would then translate it for the parents, as we saw at the Students First Center during move-in weekend.

UC Merced's undergraduate male-to-female ratio in fall 2005 was remarkably balanced: 435 males and 438 females. The graduate student population consisted of 13 males and 24 females.

As with the campus buildings, the academic program was also under construction. In fall 2005, undergraduates had eighteen majors to choose from or an option of being undeclared (Figure 10.2). Five of these majors had zero enrollment in the first year. Graduate students had seven programs available to them, two of which had zero enrollment in the first year (Figure 10.3). Most students enrolled in their classes using an online portal called MyUCMerced. By the third week of the semester, the date for enrollment census, UC Merced's course registrations were 2,552 Web registrations and 1,133 manual registrations. Most classes were held in the Kolligian Library and the California Room, and laboratory classes were held off-campus at the Castle staging facility. A campus shuttle system, Cat Tracks, was available to take students to and from this location, as well as to off-campus housing and recreation.

The Division of Student Affairs offered UC Merced students a comprehensive support system through the offices outlined in Chapter Seven. A small campus bookstore was also open.

One service especially benefited from UC Merced's start-up status. UC Merced is one of the few schools in the country that offers the convenience of a "one-stop-shop" for student services through the Students First Center

Figure 10.2. Census of Undergraduate School Programs

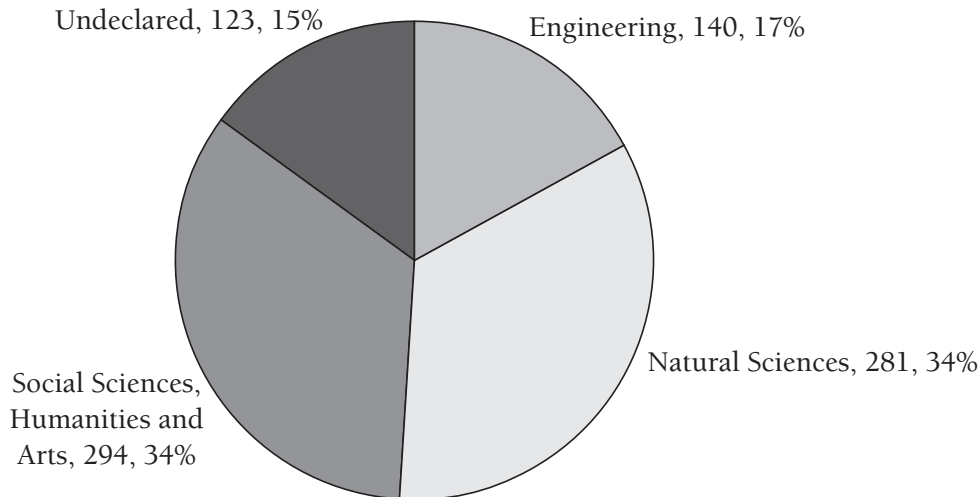
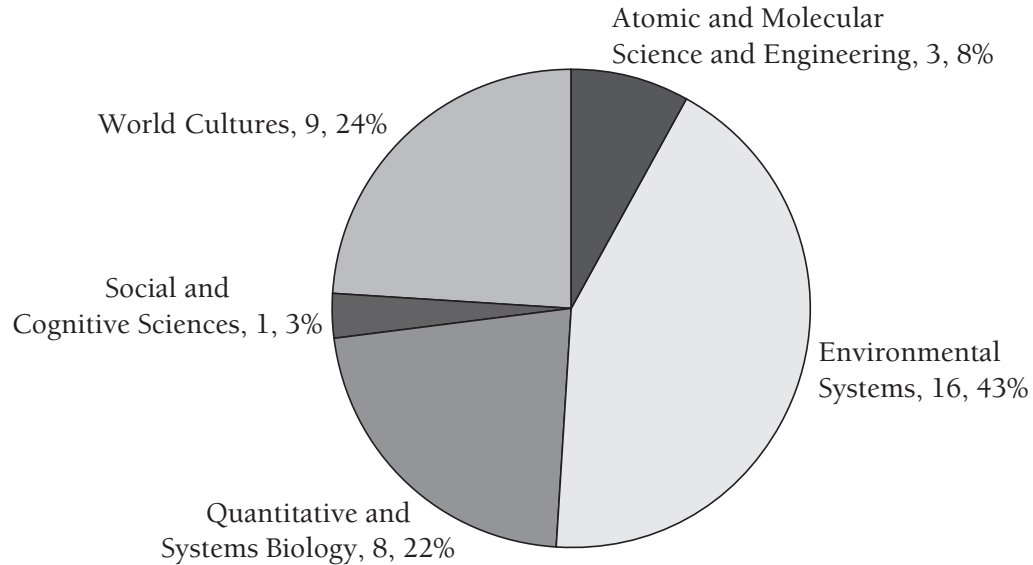


Figure 10.3. Census of Graduate Groups or Programs

(SFC). The SFC assists with enrollment services and is known as the gateway to the offices for admissions, financial aid, and the registrar. On the first day of classes, the SFC provided service to 583 people, including financial aid assistance to 36 students.

The Office of Financial Aid and Scholarships had its work cut out for it. The small staff was responsible for evaluating and disbursing aid for the 875 students. Eighty percent of students received offers of financial aid, and 64 percent of that number qualified for need-based financial assistance. A total of \$74,116,317 was offered for the 2005–2006 academic year.

Another innovative feature of UC Merced's student services was the one-card system. The Cat Card is required for all students, staff, and faculty at UC Merced. UC Merced students are required to present this card at the Students First Center in order to gain access to their personal information. They can also use this card to access money for their meal plan, gain entrance into their residence hall room, operate the laundry machines in the Valley Terraces, check out laptops at the library, and access many other campus services. UC Merced has incorporated a radio frequency identification (RFID) system into each card. The RFID is connected to door readers throughout the entire campus. Doors that are associated with these readers remain locked and will not unlock until a Cat Card with the correct access rights is swiped in front of the reader. The stored value and credit component of the card acts as a form of payment for most campus services. Students and parents have the ability to add money to this card through an online site called epay. Once money has been added to this card, students can use it as a debit system at the campus dining facility, bookstore, and other campus services. For the 2005–2006 academic year, the Cat Card program tracked and administered \$1.341 million of on-campus transactions.

After receiving their Cat Card, attending classes, and organizing their finances, UC Merced students had the opportunity to explore numerous out-of-classroom learning experiences. The Office of Student Life (OSL) helped provide these experiences. In fall 2005 OSL assisted UC Merced students in establishing fifty-four student clubs and organizations. Another unit that provided out-of-classroom learning experiences was the Career Services Center (CSC). One of its major accomplishments in fall 2005 was launching the on-campus student employment program. The program began in August 2005 and successfully processed ninety-four job announcements, representing multiple openings, and 1,942 student applications, resulting in 272 students working on campus during the academic year.

UC Merced students were offered wellness education and recreation through Campus Recreation and Student Health Services. In fall 2005 campus recreation organized intramural sports: flag football, volleyball, grass volleyball, tennis singles, Wiffle ball tournaments, and kickball. Because the campus recreation center was still under construction, UC Merced contracted with a Merced health club to give students the option of reduced-fee memberships. UC Merced students and staff had access to general medical services such as treatment of illness or injury, vaccinations, and wellness education through Student Health Services. In fall 2005 the Student Health Center provided direct medical services and health promotion services to 220 UC Merced students, 25.1 percent of the student population.

In fall 2005 the Bobcat Bookstore operated as part of the OSL located in the Kolligian Library. The bookstore offered merchandise and snack items, and textbooks and course materials were located across the hall in the textbook annex. For additional convenience, the Student Advising and Learning Center (SALC) was located down the corridor from the annex. Students could pick up course materials and visit SALC for tutoring or academic advising. In fall 2005 SALC provided academic advising to 123 undecided freshmen.

UC Merced students had two other specialized services available within the Division of Student Affairs: disability and counseling services. In the 2005–2006 academic year, the counseling services unit saw 112 students—13 percent of the student population—for crisis intervention, individual therapy, and group therapy. The disability services unit had twelve students apply for assistance for the 2005–2006 academic year. The majority of these students had been diagnosed with a learning disability.

UC Merced students were frequently asked to reflect on their experiences and offer advice on improvements, in both individual classes and programs, and on their first year in general. Highlights of their responses to three global surveys follow in the next chapter.

This picture of what a student, staff, faculty member, or visitor might have experienced at UC Merced in fall 2005 gives an idea of the mixture of challenges, a sense of triumph, a little bit of chaos, and many great achievements. Even in the first year, a few students achieved some significant

honors. Two junior transfer students applied for the prestigious Truman Scholarship, and one of these was selected as a finalist. Another junior transfer student was awarded the full amount, ten thousand dollars, for the Donald A. Strauss competitive scholarship. A third junior transfer was among thirty-two students nationwide who were selected to attend UC San Francisco's summer-long Undergraduate Mentorship Program. This program assisted our student in her preparations for applying to dental school. These students, together with the founding staff and faculty, helped pave the way for generations to come. The UC Merced inaugural class definitely lived up to the pioneer spirit.

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11

The newness of the campus helped draw students to the campus, though the comparative disadvantage in terms of breadth of social and recreational activities and academic offerings presented challenges.

UC Merced's Inaugural Class

Nancy Ochsner

It is always important for colleges and universities to obtain student feedback on their undergraduate experience, both academic and cocurricular, and sometimes it is useful to benchmark this student input against student experiences at similar institutions. For a start-up campus, this type of feedback is crucial, not only to administrators and faculty to reflect and make adjustments but also to give assurance to the higher education community, parents, and the students, as well as prospective students, that the campus already is fulfilling its mission.

The ultimate goal is to provide an undergraduate experience that promotes academic success. The impact of the undergraduate experience can be measured in various ways that depend in part on the mission of the institution. For UC Merced undergraduates, this impact is measured by their timely progress in earning a bachelor's degree; their ability to connect disciplines (interdisciplinarity) and integrate information from multiple sources, disciplines, and media; and their ability to apply their knowledge and learning skills to new academic, cultural, and social areas. In the tradition of all other research universities, institutional effectiveness also includes students' development of research skills and their enthusiasm for lifelong learning.

Assessing how well the campus fosters success in these areas requires deliberate and periodic reflection on the impact of key campus components—the academic curriculum as well as campus environment or climate and nonacademic support, such as social and cultural activities and personal development opportunities. The extent to which students are motivated and engaged in their education significantly affects their academic achievement,

personal development, and persistence (Kuh, 2003; Pascarella and Terenzini, 1991, 2005). What UC Merced can learn from the inaugural class and the classes that follow will help form the UC Merced experience.

The Office of Institutional Planning and Analysis (IPA) collaborated with the Division of Student Affairs to launch three undergraduate surveys in the first year: the New Undergraduate Survey (NUS) administered to all new freshmen and transfers in fall 2005; the National Survey of Student Engagement (NSSE) administered in spring 2006 to all undergraduates who were enrolled in fall 2005 and continued in spring 2006; and the University of California Undergraduate Experience Survey (UCUES) administered to all undergraduates enrolled in spring 2006.¹ Because of the small numbers of transfer and upper-division students, the analysis of survey results presented here is based only on the freshmen.

Fall 2005 New Undergraduate Survey

The purpose of the fall survey was to obtain student feedback regarding their reasons for attending UC Merced and their levels of satisfaction with various campus facilities and services, as well as the academic and social aspects of their experiences, their self-evaluation of their skills (academic, general college adjustment, life management, social and cultural, and computer use), use of their time, and their plans for whether to take summer courses at UC Merced or elsewhere.² Over half (51 percent) of the fall 2005 freshman class responded to the survey.³ Almost 80 percent of the freshmen lived in campus housing their first year. About one-quarter said that UC Merced was their first choice, but nearly 40 percent said Merced was their fourth choice or less.

Reasons for Choosing UC Merced. Even if UC Merced was not their first choice originally, 87 percent indicated that wanting to be in the first class and UC Merced's newness were very or somewhat important reasons for their decision to enroll here. Over 80 percent also said that the reputation of the campus and the UC system was important. Clearly, by November, when the inaugural class members were asked to reflect on their reasons for attending UC Merced, they had embraced the idea of being pioneers at the newest research university.

About two-thirds of the class were influenced by the friendliness and helpfulness of staff and faculty they had met. Half were influenced by financial aid offers or their parents or other relatives who wanted them to attend UC Merced. Wanting to be near home was important to 42 percent. Wanting to live near home and financial aid offers were particularly important to students from the San Joaquin Valley.

Satisfaction with Experiences at UC Merced. Although the campus was in various stages of construction in fall 2005, in terms of facilities, academic programs, and recreational and social and cultural programs, almost 90 percent of the freshmen were very or somewhat satisfied with their

overall college experience that first semester. At least 83 percent—and frequently 90 percent—were satisfied with facilities (classrooms, computer, library, housing, and parking), academics (class schedule, frequency and quality of feedback from professors, access to small classes, availability of courses needed, amount of contact with faculty, relevance of course work to everyday life and future career plans, overall quality of instruction), services (advising and tutoring, registration, financial aid, career center, health center, psychological counseling, recreational programs, transportation, helpfulness of staff), and social opportunities (sense of community among students, opportunities to explore the community of Merced, opportunities to make new friends). The only aspects that fell below the 83 percent satisfaction level were meals in student dining facility, with 64 percent satisfied, and organized social and service activities, with 76 percent satisfied.

Skill Ratings. Although UC Merced students were among the top 12.5 percent of California's high schools graduates and therefore eligible to attend UC campuses, they tended to be less well prepared academically compared to freshmen enrolled at the other UC campuses. They tended, on average, to have lower high school GPAs, lower SAT scores, and fewer honors courses, and they tended to come from high schools with lower Academic Performance Index rankings.⁴ By self-assessment, 50 percent or more rated themselves above average for doing basic mathematics, adjusting to being away from home, and understanding diverse viewpoints. Almost 50 percent said they were above average in terms of reading comprehension (46 percent) and thinking critically and analytically (47 percent). One-quarter or fewer felt they were above average in developing effective study skills, getting to know faculty, using campus services, writing effectively, taking tests involving problem sets or short essay answers, and managing their time.

Educational Plans. Only nine majors were offered across the three schools for undergraduates in the 2005–2006 academic years. Of the new freshmen, 17 percent enrolled as undeclared majors their first semester. About one-third of the freshmen were in the School of Natural Sciences and another third in the School of Social Sciences, Humanities and Arts. The School of Engineering was home to 16 percent.

Near the end of their first semester, about one-quarter of the freshmen thought there was a very good chance that they would change their major at some point; almost one-quarter also said that there was a very good chance they would change their career goals. Over 80 percent indicated that they thought their chances were very or somewhat good that they would participate in research activities with a faculty member.

Over 10 percent indicated that they probably would transfer to another college before graduating. Ten to twelve weeks into the semester, just after midsemester grades were distributed, almost 50 percent of the freshmen expected that there was a very good chance they would make at least a B average. Of those, 54 percent actually did so. Overall, 69 percent of the survey respondents made at least a B average for their first term.

Spring 2006 NSSE and UCUES

The NUS told us a lot about the first freshman class, but not much in terms of how their experience compared to their counterparts at other colleges. The NSSE and UCUES surveys provide the comparative context.

The NSSE focuses on student engagement: “a student’s willingness, need, desire and compulsion to participate in, and be successful in, the learning process” (Bomia and others, 1997, p. 1). Actively engaged students devote more time and energy to educationally purposeful activities than do less engaged students. High levels of student engagement have been found to be linked to effective educational practices. In fact, Chickering and Gamson’s seven principles for good practice in undergraduate education (1987) provide the theoretical basis for the NSSE: contact between students and faculty, reciprocity and cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning. Also important to student learning are the institutional environments that support student engagement activities.

Four-year colleges and universities across the country voluntarily participate in NSSE.⁵ They do this to obtain valuable information about their students’ undergraduate experience and also to compare the responses of their institution to similar or peer institutions and to learn from the best practices at these schools. There were 557 colleges and universities, including UC Merced, that participated in the spring 2006 NSSE. Although arguably UC Merced in its first few years of existence would have no true peers, the mission of this campus, as at all other UC campuses, is the same as at most mature research-extensive institutions. For that reason, we elected to benchmark our survey results with the group of public research-extensive institutions that participated in the spring 2006 survey.⁶

Like the NSSE, the UCUES core module also focuses on student engagement, especially academic engagement. This survey was mandated in spring 2006 for all nine UC campuses with undergraduate students. None of the other UC campuses had participated in the spring 2006 NSSE, so it was particularly useful for UC Merced to be able simultaneously to benchmark its first-year students—“first” in terms of both inaugural and freshman—with other UC campuses and research universities across the country. We did not overlap the administration of these surveys, however; the same population of students was invited to participate in both. The NSSE was administered first, from February through early April, and the UCUES from mid-April until final exam week in May. The response rates probably reflected this sequencing of the surveys: 47 percent for NSSE and 37 percent for UCUES.

Strengths. The NSSE generates five benchmarks of effective educational practice, each composed of multiple questions from the NSSE survey that capture many of the most important aspects of the student experience. On four of the five benchmarks, UC Merced freshmen scored significantly

higher than their counterparts at the research-extensive institutions: level of academic challenge, active and collaborative learning, student-faculty interaction, and supportive campus environment. Not surprisingly, they scored lower, although not significantly, on enriching educational environment. This is the benchmark that includes items that either do not exist at UC Merced or were underdeveloped that first year, such as participating in internships or field experiences, community service or volunteer work, foreign language course work, study abroad, independent study or self-designed major, cocurricular activities, and learning communities.

Results from both the NSSE and UCUES, compared to those at research universities and the other nine UC campuses, respectively, revealed substantial, and sometimes significant, strengths in these areas:

- *Collaborative learning.* Both surveys revealed that UC Merced freshmen tended to collaborate with classmates outside class and help classmates better understand course material when studying together more than was true of freshmen at other UC campuses and other research-extensive universities nationwide. For example, 64 percent of Merced's freshmen compared to 43 percent of freshmen at other UC campuses said they worked on class projects or studied with classmates outside class.

- *Student-faculty interaction.* Although measured in different ways by the two surveys, both revealed that UC Merced freshmen experienced significantly more interaction with faculty than counterparts at other UC campuses and research-extensive institutions in other states. The NSSE results showed that Merced's inaugural class more often worked with faculty members on activities other than course work and received prompt feedback from faculty on academic performance. They also tended to rate their relationships with faculty members as more helpful/available/sympathetic. The UCUES revealed that UC Merced freshmen sought academic help from an instructor or tutor more often than did other UC freshmen (51 percent versus 42 percent) and were more satisfied with their access to faculty outside class (94 percent versus 83 percent). Satisfaction with access to small classes (91 percent versus 62 percent) probably explains some or most of these differences between UC Merced student responses and those of students at other research-extensive universities, including the other UC campuses.

- *Diversity.* Compared to other campuses, even within the UC system, UC Merced has a highly diverse student body in terms of race/ethnicity, nationality, and social class. It is not surprising, then, that on both NSSE and UCUES, UC Merced students indicated that on average, they had conversations with students very different from themselves more often than did students at other research-extensive universities. This was especially true for race/ethnicity, nationality, and social class differences. Over 70 percent of Merced freshmen, compared to 60 percent of other UC freshmen, said they often gained a deeper understanding of other perspectives through

conversations with fellow students because they differed in race/ethnicity. Compared to the other research-extensive universities in the NSSE sample, they also had serious conversations with students of a different race or ethnicity significantly more often.

- *Academics.* Both the UCUES and NSSE surveys revealed strengths in academic areas for UC Merced freshmen compared to findings at the other benchmark institutions. UC Merced students studied, on average, more hours per week than students at the other UC campuses (13.1 versus 12.2 hours) and were more likely to use the campus library for research, less often went to class unprepared, and less often skipped classes. (Even so, at least anecdotally, UC Merced faculty tended to complain about absenteeism and students who, when they attended class, were too often unprepared.)

Compared to their counterparts, UC Merced freshmen seemed to have prepared more drafts of a paper or assignment before turning it in and to have more often included diverse perspectives in class discussions or writing assignments. Three particular courses, which most Merced freshmen took during their first year, probably had a lot to do with these two behaviors: Writing 1, Writing 10, and Core 1. Writing 1 and Writing 10 are required writing courses for most Merced undergraduates, and Core 1 is a required general education course. These courses require extensive writing, with opportunities to submit multiple drafts and rewrite after receiving feedback.

Finally, it is interesting to note that the UC Merced freshmen were more likely than the other UC freshmen to plan to go on to graduate school (66 percent versus 57 percent), especially to pursue a doctoral (including medical) degree (45 percent versus 38 percent).

Challenges. The area in which UC Merced seemed to fall short, compared to other research-extensive universities, involved educational enrichment items, such as whether the students had done community service or volunteer work or had taken foreign language course work. There were significant differences in the percentages of freshmen who had participated in these areas compared to the research-extensive universities in the 2006 NSSE administration. Only 15 percent of Merced freshmen, compared to 28 percent at the research-extensive institutions, took foreign language course work in their freshman year. Only Spanish was offered that year at UC Merced, and although two years of a language are required for admission, language courses are not part of the campus's graduation requirements outside the humanities majors. Less of a difference, but still significant, was the participation rate in community service or volunteer work: 28 percent for UC Merced freshmen versus 39 percent for other research-extensive university freshmen. Organized student support activities such as these were available but not plentiful in the inaugural year. It will take some time and more resources for these types of activities to ramp up to levels offered at more mature campuses.

The UCUES results revealed similar challenges with academic offerings. Compared to the other UC campuses, Merced freshmen were much less

likely to be satisfied with the availability of courses for general education or breadth requirements (55 percent versus 70 percent), availability of courses needed for graduation (60 percent versus 75 percent), ability to get into the major they wanted (67 percent versus 82 percent), and the variety of courses in the major (47 percent versus 80 percent).

These challenges had a substantial dampening effect on students' satisfaction with their overall experience at UC Merced. Compared to the NSSE benchmark institutions, UC Merced freshmen rated their entire educational experience significantly lower on average and were much less sure that they would attend UC Merced if they could start over again. Similarly, according to the UCUES survey, UC Merced freshmen were somewhat less likely than other UC freshmen to say they still would choose to enroll at their current campus (77 percent versus 84 percent); however, UC Merced was not the lowest of the nine campuses, and it is clear from all three surveys described here that the newness of the campus helped draw students to the campus, though the comparative disadvantage in terms of breadth of social and recreational activities and academic offerings led some of them to reconsider their pioneering impulses.

Notes

1. All nine UC campuses that enrolled undergraduates were required by the UC Office of the President to participate in the spring 2006 survey. Because of UC Merced's small size, however, we participated only in the first (core) module and only for the questions relating to lower-division students.
2. The information about their plans for taking summer courses helped the registrar plan summer 2006 course offerings.
3. The respondents were generally representative of the population of new freshmen in terms of gender, ethnicity, region, family income, first-generation status, first language, and discipline areas.
4. California's ratings (API) of public high schools are based on test scores (California Standards Tests, California Alternate Performance Assessment, California Achievement Test, and California High School Exit Examination). The Academic Performance Index (API) is a numerical index or scale ranging from a low of 200 to a high of 1000 that reflects the academic performance level of a school. The index is then converted into a ranking, from 1 to 10. See <http://www.cde.ca.gov/ta/ac/ap/documents/infoguide05b.pdf> for more information.
5. NSSE has been implemented annually since 2001. Most institutions participate on a varying schedule: every other year or two years on and then two years off, or whatever else is most useful to them.
6. For information about Carnegie Classifications prior to 2005, see <http://www.carnegiefoundation.org/classifications/index.asp>.

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Faculty and staff who thrive in a new institution are rare individuals, characterized by remarkable flexibility and ability to tolerate an unprecedented level of ambiguity.

Conclusion: Lessons Learned

Karen Merritt, Jane Fiori Lawrence

Planning, opening, and bringing to life a new institution is a challenging undertaking. At UC Merced, it has been a daunting and exhilarating experience for its founding administration, faculty, staff, and students. Campus pioneers had no road map, no playbook to tell them how to plan and build in the twenty-first century a public research university that shares the distinction of the nine established University of California campuses. The thirty-five years that elapsed between the opening of the University of California's most recent campuses and the beginning of planning for the tenth campus have seen sea changes in every aspect of student, faculty, and institutional life. All of these changes created more complexity and greater expectations. To cite a few examples, whereas the state of California had funded student housing and recreation facilities in the 1960s, these and other essential services had to be financed by the university at the end of the century. Whereas administration and faculty hiring might depend to a high degree on telephone calls and informal contacts in the 1960s, fair hiring practices backed by thoroughly detailed data governed hiring in the 1990s. In recent years, *accountability* has become a watchword in all phases of the university enterprise, requiring expert staff, assessment, and record keeping. Campuses have built a deep infrastructure to manage this complexity. The hurdles in replicating this for a new institution are often overwhelming.

As reflected throughout this volume, the availability of too few resources to carry out the ideals implicit in starting fresh was and continues to be the biggest challenge. Yet the frustration felt by elected officials over considerable front-end funding needed to get a new research university started was also evident. Why did UC Merced need faculty two years before opening to

students? To the reply, “We need faculty to plan the curriculum and hire more faculty to teach it,” some legislators would insist, “You already have majors at nine campuses. Why not just use those curricula?” In a word, why couldn’t UC Merced simply adopt what other campuses had done and save a lot of time and money?

These questions went to the heart of what a system of public research universities is. Other systems do indeed standardize some operations, even the curriculum at certain kinds of institutions. Why didn’t UC offer more standardization, which could have made life easier in many ways for UC Merced’s founders?

Part of the answer lies in the research university culture. The world of discovery is fundamentally entrepreneurial, volatile, and creative. A high premium is placed on establishing distinctive areas of excellence and maintaining high standards for identifying excellence. The promise of a research university to its students is that they will be present, even participate in, the birth of new knowledge. The courses they take will reflect the newest knowledge in the field. Added to this, a new institution promises a setting for doing things better, improving on the givens of the current curricula and institutional practices. It was this promise that attracted so many faculty innovators to UC Merced.

At the University of California, the high value placed on independence carries through to other parts of the operation. Although policies are held in common across campuses, procedures to carry them out vary greatly. In essence, this variety offered nine sets of possibilities from which UC Merced might choose. When it could, UC Merced simply adapted procedural approaches from one of the other campuses. For example, it needed to partner with another UC campus in order to give its students access to federal financial aid until the regional accrediting association granted the campus candidacy status. Thus, by partnering with UC Davis for federal financial aid, UC Merced needed to adopt the student information system UC Davis used in order to have compatible student records. Nevertheless, even with nine sets of campus administrative procedures, options were limited, and much reformulating was necessary. An obvious barrier to simple adoption was the fact that other campuses had offices full of staff to carry out their procedures, while UC Merced might have only one person.

President David Gardner made a considered choice in deciding that the tenth campus would grow independently rather than starting as a branch of an existing UC campus. The chapter authors have discussed the pros and cons of this decision. On the one hand, the branch campus option looks very attractive from the point of view of having the procedural infrastructure in place from the start. On the other, faculty at a branch of an established campus would sense an ambiguity in their institutional affiliation. Would their loyalty be to the parent or branch? At which point would the branch stand on its own two feet and the parent let go? How would the branch build its own identity as a research university of distinction?

Some chapter authors believe that it was essential that UC Merced had an independent identity from the beginning; otherwise, the outstanding faculty attracted might not have been interested in coming. But there are trade-offs regardless of the path chosen, and this issue should be investigated early in the process of starting a new campus.

As is evident in many chapters, the UC Merced pioneers were attracted to the thrill of creation. Because of the University of California's status as a research university, expectations were high about the level of resources that would be available. Staff and faculty hired were as a rule from other major research universities, including a few from other UC campuses. Staff brought important experience about how other campuses administered policies; they enjoyed comparing notes on the disparate ways of doing things at their former institutions. But the wealth of resources at established campuses highlighted the scarcity at UC Merced. Like the faculty, staff began to realize how much infrastructure they depended on—and took for granted, since it was so often invisible to them—and would now need to be recreated.

Faculty and staff who thrive in a new institution are rare individuals, characterized by their remarkable flexibility and ability to tolerate an unprecedented level of ambiguity. UC Merced faculty and staff typically report never having worked so hard in their lives and observe that those outside the campus cannot really understand the massive task of starting a new research university. Ideally the interview process would alert candidates to this and would also seek to uncover the temperaments best suited to strong teamwork in constrained settings. This ideal is difficult to achieve, especially during the first hiring rounds, when the scope of what needs to be done is only beginning to unfold. There were inevitable surprises on all sides. Prickly personalities, who had been buffered within a large office or department on their previous campuses, came to the fore when numbers were small and pressures were enormous. Yet miracle workers abounded, as their previous work experiences coalesced into imaginative problem solving at UC Merced.

Unquestionably it is difficult to leave familiar ways of doing things behind, even with the attraction of doing things in a new, better way. As some chapter authors noted, the interdisciplinary ideal was a draw for faculty, but the ambiguity about what constituted the “department” that would look after their professional needs provoked anxiety. Particularly in the school with the most disparate array of disciplines—Social Sciences, Humanities and Arts—finding common ground and interests in a nondepartmentalized structure produced great difficulties. Not surprisingly, this has been the first school to create a quasi-departmental organization.

Students too have come from settings in which services and infrastructure have been a matter of course. Even in low-income regions, students may have experienced amenities at their high schools that they have taken for granted—gymnasiums, swimming pools, playing fields, well-equipped theaters—especially at the newer high schools often found

in the rapidly growing San Joaquin Valley. Our students have not always been patient with a campus still being built around them.

Being part of a public research university system with an outstanding international reputation, rather than starting as a stand-alone institution, has had some drawbacks, as some chapters have made clear. For example, high expectations about UC Merced resources among faculty, administration, and staff have arisen owing to what people know about the University of California as a whole. Nevertheless, being the tenth campus in this system has been a powerful advantage in attracting people to risk careers and personal lives on the unknown. Faculty and staff at the other nine campuses have been true colleagues, reaching out to help with their time, wisdom, and great generosity. Many on the other campuses have been animated by the excitement of a new UC campus and a desire that the new campus avoid mistakes of the old ones. Former colleagues outside UC too have been a valued source of help and advice.

A final lesson from UC Merced's experience is the unique value of the planning period before opening. This is the best time to develop innovations in the curriculum and operations. When the campus opens, the press of doing everything a full-fledged university must do makes finding the time and energy for innovation hard to come by. UC Merced has proven to be the hardest and most rewarding job its founders have ever loved.

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