

Emerging Professional Schools at UCR: Synergies, Needs and Opportunity Costs

UCR 2020 Strategic Planning Working Paper

May 2010 Draft

“Clearly, the presence of a research-intensive medical school has been a great asset to universities in the campus enterprise of creating knowledge. Medical schools ... have not been convenient cash cows for their parent universities, but they have been effective campus rainmakers. Their powerful magnet of funding for research, education, training, construction, and medical practice has pumped lifeblood into universities and their communities, which otherwise have been hard hit by rising costs and falling revenues.”

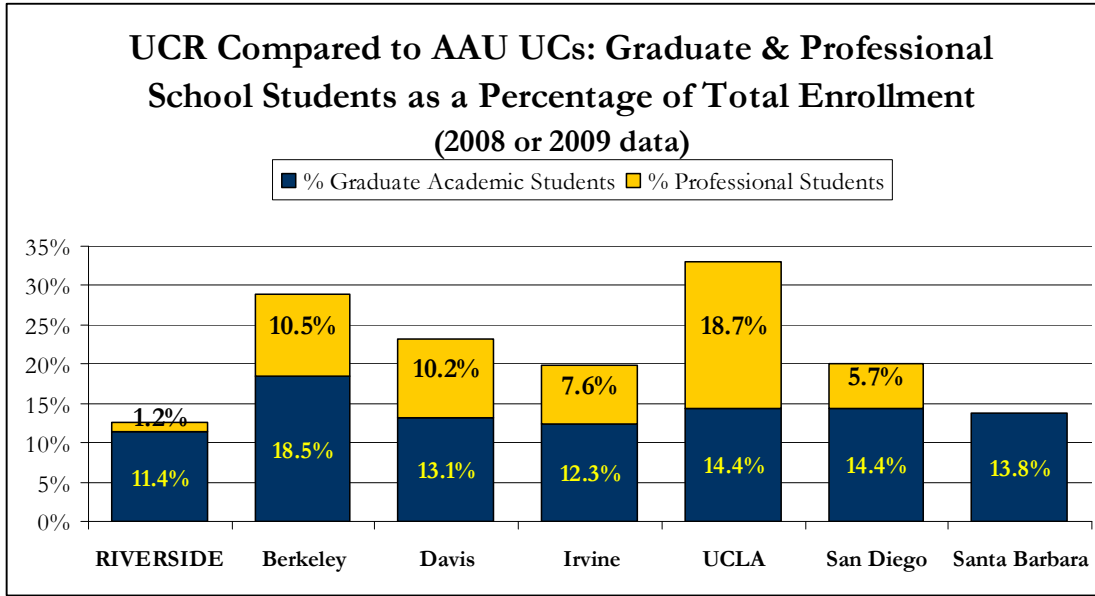
-- *Graham & Diamond, The Rise of American Research Universities (1997)*

I. Introduction

Across the University of California, graduate and professional school enrollments represent about 22 percent of total student enrollment. UC lags a little behind the overall average for AAU public universities (26%) and considerably behind AAU private universities (48%).¹ More generally, in American higher education for every doctoral degree conferred there are 1.5 professional school degrees conferred,² and the growth in professional schools is consistent with the long-term relative growth in interest among undergraduates in the “practical arts” like engineering and business over traditional liberal arts majors.³

Definitions of what counts as a “professional degree” vary somewhat (e.g., UC includes the M.B.A. degree, the U.S. Department of Education does not), so the chart below restricts comparisons to UCR and the six UC campuses in the AAU. This chart reveals two interesting patterns:

- Considerable variation exists in professional school offerings at UC campuses, ranging from zero at UCSB to 18.7% of total enrollment at UCLA. UCR (1.2%) is clearly at the low end of the range. Thus, a corollary question: Are there growth opportunities at UCR that can meet institutional, societal and labor market needs?
- A much more modest variation exists with respect to academic graduate student enrollment among these UC campuses. UCR (11.4%) is at the low end of the range but is within two or three percentage points of five campuses; Berkeley is the high-end outlier (18.5%).



Source: Data adapted from the UCR 2020 EDGE Subcommittee Report, page 8

The set of recommendations in the *Excellence in Delivery of Graduate Education* (EDGE) subcommittee report provides a helpful road map for the issues elaborated in this working paper:

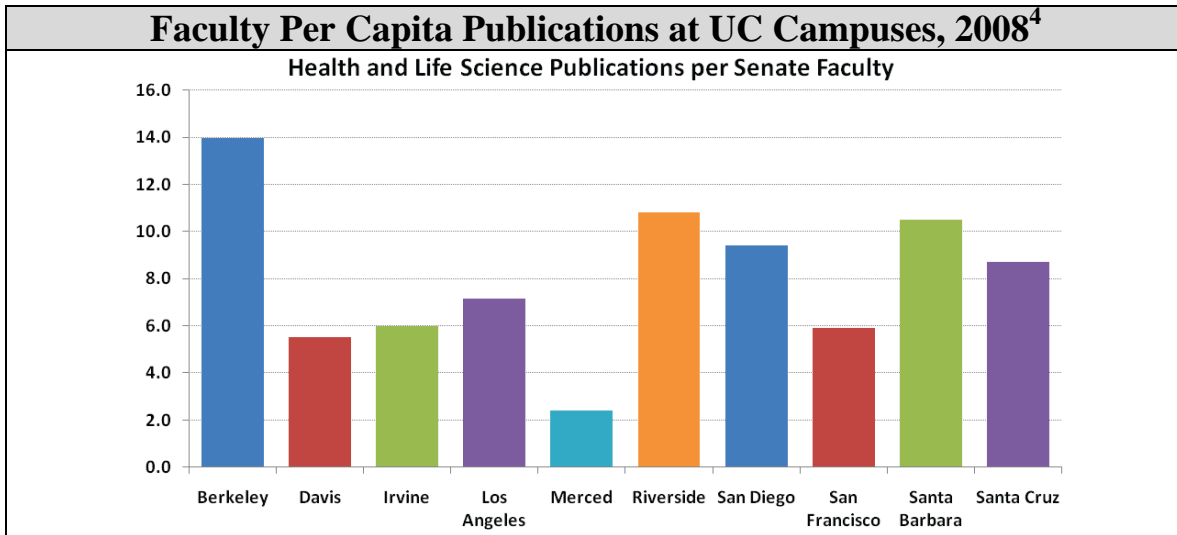
- **“2.2 Expand the number and percentage of professional graduate students at UCR.**
 - 2.2.1. Carry out planned enrollment of **medical students** (400 by 2020).
 - 2.2.2. Establish planned **School of Public Policy**, and achieve expected enrollment of graduate students (120 by 2020).
 - 2.2.3. Evaluate growth plans currently developed by **AGSM and GSOE**, and **expand enrollments** in these schools.
 - 2.2.4. Conduct a needs assessment within the UC system to determine **whether there is an unmet need** for professional education in a particular area. If so, begin **long-term planning** for a 4th professional school at UCR that would fill this need within the UC system.” (pages 8-9)

The EDGE subcommittee also astutely cautioned that “all growth should be based on the excellence of individual programs, and not on preconceived ideas about ‘ideal’ professional/ academic ratios.” This working paper outlines some key considerations when evaluating new professional school programs with an eye toward identifying opportunities for enhancing excellence at UCR.

II. The School of Medicine (Recommendation # 2.2.1)

UCR has thirty-year track record of success with the UCR/UCLA Thomas Haider Program in Biomedical Sciences, in which UCR provides the first two years of medical school training before students complete their M.D. degrees at the UCLA School of Medicine. UCR also has many faculty members working in health-related fields such as

stem cell biology, genomics, nanoscience, health psychology and public health. Both of these factors contributed to a strong foundation for and successful proposal to create a UCR School of Medicine. As the chart below indicates, on a per capita basis there is already considerable academic strength in UCR's health and life sciences, for in these fields our faculty generated more publications per Senate faculty member in 2008 than at eight of the nine other UC campuses.



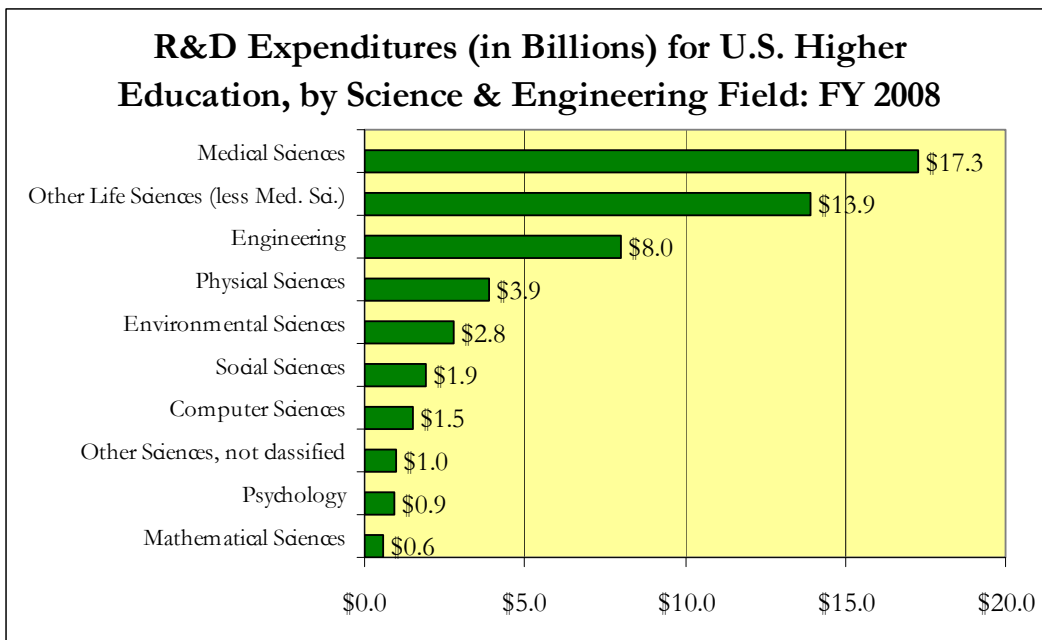
Another critical element of the UCR School of Medicine proposal, as endorsed by the Regents, is the goal of improving the health of the Inland Southern California community, particularly given the diverse and often medically underserved populations in our local community. Inland Southern California has burgeoning Hispanic, African American and Asian American populations, and twenty Native American tribal groups and reservations are located within 50 miles of the UCR campus. In fact, a recent Brookings Institution study of one hundred U.S. metropolitan areas found that between 2000 and 2008 the Riverside-San Bernardino-Ontario area has seen the single largest surge in Hispanics of any metropolitan area in America.⁵ Our local community is also in the top-ten growth areas for Asian Americans.

The UCR School of Medicine will help address the health care needs of the increasingly diverse communities of Inland Southern California because residency programs are the strongest determinant of where physicians end up practicing medicine. Accordingly, the School of Medicine can foster a unique bond between UCR and our local community in an area of vital need. Our local community recognizes this unique opportunity as well, which was clearly evident this month when the Riverside County Board of Supervisors voted unanimously to help identify funds to enable the medical school to open as scheduled. This action to step forward in a time of great economic difficulty demonstrates the Supervisors' prescient understanding of the compelling need to expand access to health care for their constituents and to invest in the future of Riverside County.

Once opened, the School of Medicine not only will help meet the need for physicians in a medically underserved region, but also will:

- provide a pipeline for diversifying the physician workforce;
- facilitate partnerships with community clinics and hospitals;
- increase the potential for attracting start-up companies and venture capital to Inland Southern California;
- transform the local economy.

Apart from the educational and community rationale for the School of Medicine, there is a unique landscape of funding opportunities from governmental and private sources that can be catalyzed by having a School of Medicine. According to the NSF, medical sciences (\$17.3 Billion) accounted for one-third of the \$51.9 Billion in R&D expenditures at American universities and colleges in FY 2008, a larger share than any other discipline (see chart below). By comparison, the combined total R&D expenditures for physical sciences, environmental sciences, social sciences, computer sciences, other (non-classified) sciences, psychology and mathematics is \$12.6 Billion.



SOURCE: UCR 2020 Research & Creative Activity Subcommittee Report, (Table 3 on page 8), citing NSF Survey of Research and Development Expenditures at Universities and Colleges: FY 2008, available at <http://www.nsf.gov/statistics/infbrief/nsf09318/#tab3>.

The point of focusing on research expenditures is that the ability to compete for and acquire research grants is a critical long-term goal of the campus, and one that would be catalyzed with the addition of a School of Medicine. Likewise, health and medical research are major areas of giving by foundations in the U.S.⁶ A relevant comparison is to U.S. medical schools that do not own hospitals, and such medical schools in five other states (including in some economically challenged regions like Detroit, Northern Ohio and Eastern Virginia) have averaged \$20 Million each in private support annually.

The emphasis above on research funding is not to suggest that a School of Medicine would produce funds for the rest of the campus like “manna from heaven” – it will not.

And it is well recognized that medical education is expensive relative to other professional schools.⁷ However, an important limiting factor that differentiates UCR is that at other UC Medical Schools – where the Academic Senate estimates the costs of education to be about \$85,000 per medical student⁸ – a major cost driver is having a teaching hospital. By contrast, UCR’s School of Medicine will not incur the costs associated with a teaching hospital; as CPEC observed in its report supporting our School of Medicine proposal, “The distributed clinical model would eliminate the need for the state to help fund and support a costly teaching hospital.”⁹

A different strategic rationale for opening a School of Medicine is implicated in the recent study by Sweitzer and Volkwein that investigated the correlates of prestige for graduate and professional schools in business, education, engineering, law, and medicine.¹⁰ One set of factors they analyzed was size (graduate student enrollment, number of faculty) and wealth (using school-level tuition as a proxy). Interestingly, while size and wealth explained three-quarters of variance in prestige for business schools and approximately two-fifths of the variance for education, law and engineering, the authors concluded “Medicine is different due to the non-relevance of the foundational measures of size and wealth.”¹¹ This study – along with other evidence presented in this working paper – suggests that with respect to attaining a caliber of excellence commensurate with existing UC professional schools, there is more room for scalability with a School of Medicine. On the other hand, a *large* prestigious faculty is more conspicuous as a threshold requirement for excellence with some other kinds of professional schools such as law. For this reason, and in light of the opportunities to leverage additional research funding and build on our faculty’s existing strengths, the UCR School of Medicine makes sense when weighing opportunity costs.

III. The School of Public Policy (Recommendation # 2.2.2)

The School of Public Policy (SPP) will build on the vast array of policy-related expertise – in areas as diverse as environmental, economic, social, higher education and health policy – already present at UCR. It will also build on UCR’s undergraduate program offering a major and minor in public policy, which was introduced in CHASS three years ago. The SPP can bolster academic strength by creating synergies with the following existing assets on campus (this is a non-exhaustive list):

- GSOE’s focus in higher education policy, including policy related to California’s community colleges;
- In Environmental Sciences, several faculty are engaged in computer modeling of air, water, and soil quality interactions and their implications for human populations and ecosystems;
- The Center for Conservation Biology conducts policy-relevant research on the conservation and restoration of species and ecosystems that form the natural heritage of Southern California;
- A number of faculty members in Political Science, Economics, Sociology, and Anthropology are engaged in related policy research and problem-solving, including providing advice to local, state, national, and international agencies;

- The Blakely Center for Sustainable Suburban Development has as its mission conducting and disseminating research on issues of suburban growth and the impact of this growth on social, environmental, and transport systems;
- The Presley Center for Crime and Justice Studies works with the local criminal justice system on the challenges of youth violence prevention;
- The Air Pollution Research Center conducts basic and applied research into photochemical air pollution and its effects on plants;
- The College of Engineering Center for Environmental Research and Technology (CE-CERT) conducts research that seeks to improve the technical basis for environmental regulations and policy.

Nationwide, there is vigorous and growing student demand for policy programs at the Master's level. Indeed, the MPP/MPA has been one of the fastest growing degree programs in the United States in the last 10 years. The California universities offering MPP degrees all enjoy interest from academically talented applicant pools (the average undergraduate GPA of *applicants* at these schools ranged from 3.2 to 3.6).¹² In Southern California specifically, public policy enrollments have seen strong growth, especially in the last three or four years. This reflects the fact that as the population of Southern California has grown, there has been increasing demand for a range of public services, especially at the local level. This, in turn, has required local and city governments to recruit skilled individuals who have the necessary analytical and management skills to deliver needed social services at the community, city, county and regional levels. Graduates of MPP programs have strong generalist credentials to meet these labor market needs.

Two major themes distinguish the SPP from other public policy schools in the nation. First, the School will focus on a range of social policy issues, particularly those associated with population growth and movement, as they intersect with environmental policy. The few public policy programs in the nation that offer specializations in both environmental and social policy treat them as separate sub-fields. UCR's location in Inland Southern California makes the campus uniquely situated to address such concerns.

The second theme is the importance of regional policy. Increasingly, key policy issues often transcend city, county, or even state boundaries, making a regional approach to common problems far more effective. Yet current public policy structures have not adapted to the needs of regional policymaking. The proposed School will specialize in regional relationships and will be a leader in the development of the field of regional policy analysis and policymaking.

The SPP will offer students four areas of specialization, each building upon existing UCR assets. Consistent with UCR's land-grant tradition, these areas are also of critical importance for Inland Southern California, our state and beyond:

- The first area of specialization will be environmental and sustainable development policies – long an important strength of the campus;

- Policy surrounding health, especially as related to access and diversity, will be another area of emphasis, building upon synergies with our recently-approved UCR School of Medicine;
- A third critical area will be higher education policy, with a focus on issues of access, affordability and diversity;
- Finally, the School will take advantage of its place in the Southern California/Northwestern Mexico region to explore issues related to immigration and population growth.

IV. Expanding Programs at SoBA and GSOE (Recommendation # 2.2.3)

School of Business Administration (SoBA)

Self-supporting degree programs play a larger role at the business/management schools on other UC campuses; self-supporting programs will likewise be critical to the future of SoBA by lessening reliance on state funding. One of the five spires of excellence identified in SoBA's strategic plan is accounting and assurance, and a proposal is under review for a Masters degree in Accounting (MAcc). The goal is for the MAcc program to be self-supporting, to fill a genuine need in the Southern California labor market and to capitalize on existing strengths within SoBA's faculty. The MAcc is intended to be a specialized program focused on the professional skills that are fundamental to the accounting profession. It would therefore target a different population than UCR's traditional MBA. It is already the case that the Accounting Profession requires the equivalent of five years of college education to qualify for CPA certification. Consequently, SoBA believes the MAcc is a true niche with built-in demand for a degree that can be awarded at the conclusion of the fifth year of study. The MAcc degree fits hand-in-glove with the large number of undergraduate business majors at UCR, and it would also cater to professionals with degrees in other fields who want to change careers and transition to the accounting profession.

Another important self-supporting program possibility is the fully employed MBA, or FEMBA. In our region UCLA, UC Irvine and UC San Diego all have very successful FEMBA programs. SoBA has a FEMBA proposal/plan under development now. This does not involve a new degree, but rather an alternative delivery model for UCR's current MBA degree. Our FEMBA proposal is organized around a cohort model with students taking courses in lock-step during weekends and evenings. The FEMBA program will focus on general management and allows working professionals to enroll on a part-time basis and complete the MBA degree in 30 months. In addition to diversifying SoBA's revenue sources, the FEMBA can meet an untapped demand in the higher education market among working professionals in Inland Southern California and adjacent areas like the San Gabriel Valley and northern San Diego County. This region is home to a large and diverse base of businesses, as well as substantial population growth (discussed earlier in connection with the School of Medicine). The program will be targeted to young and mid-career professionals who are looking to advance in their managerial careers. For this reason, the FEMBA has a different market niche and curricular focus than the Executive MBA program. The FEMBA also offers opportunities for blending

synchronous distance education with traditional in-class instruction on the Riverside campus.

GSOE

Heretofore, UCR's Graduate School of Education (GSOE) has not been inclined to offer an Educational doctorate (Ed.D.). However, a decadal transition is underway, and so it is an opportune time to revisit long-term strategies for degree offerings at GSOE, particularly if there are degree programs that might attract excited advocates among our faculty. While not a "professional degree" per se under the UC Regents' definition, the Ed.D. is clearly designed to meet the professional needs of working educators (e.g., K-12 teachers looking to become a principal, community college and other higher education administrators), and so it is appropriate to consider in a broad discussion of professional school opportunities at UCR. Three other UC campuses offer the Ed.D. under different instructional models, including the cohort based, 36-month part-time Educational Leadership Program at UCLA, the joint Ed.D. program UC Davis maintains with Sonoma State University, and the Ed.D. program at UC Santa Cruz which is partly integrated with courses in their Ph.D. program.¹³ Some leading private universities, including the USC and the University of Pennsylvania, also offer the Ed.D.¹⁴

V. Future Possibilities (Recommendation # 2.2.4)

Campus stakeholders may very well decide that no proposal for a fourth professional school at UCR merits consideration by the Regents in the next five to ten years, out of concern that the campus is already stretched too thin. At the same time, the discussion below is intended to provide parameters to such a decision plus provide a framework for making choices about what could potentially be the preferred professional school to go forward. It will be essential, for example, that additional professional schools be self-supporting based on student fees.

For the reasons outlined below, we conclude that another health sciences professional school such as pharmacy would be more strategic for UC Riverside than a law school; pharmacy is more likely to yield a better return on investment in terms of enhancing excellence for the campus through synergies with the School of Medicine and other departments.

Pharmacy: Worth a Closer Look

The UC Commission on the Future's first set of reports in 2010 includes a recommendation about further study of practice doctorates in allied health professions, yet the Commission's observations thus far make clear that allied health profession school programs represent somewhat of a mixed bag and would carry significant risks for UC.¹⁵ In light of UCR's new School of Medicine and the earlier discussion in this working paper about related research opportunities, it is worth considering that new medical schools can serve "as the core of an academic health sciences center that offers a range of academic programs in other health professions."¹⁶ One such affiliated health

four-year professional degree program is the Doctor of Pharmacy (Pharm.D.). For example, the top-ranked UCSF School of Pharmacy routinely garners more NIH research funding than any other pharmacy school in the U.S., and the presence of a pharmacy school is also critical in enabling UCSF to receive more federal funding for chemical research and development than any other American university.

As Californians live longer, their demand for health care services increases, including because of new therapies for managing acute and chronic conditions. Accordingly, a number of studies have identified a pharmacist workforce shortage in California and nationwide.¹⁷ In fact, the Pharmacy Manpower Project estimates that only five other states and the District of Columbia have a more acute unmet demand for pharmacists than California (based on February 2010 data).¹⁸

Not surprisingly, given the acknowledged labor market shortage, a 2004 report by the UC Health Sciences Committee looked at pharmacy education and recommended expanding enrollment at existing UC pharmacy schools as well as examining opportunities for “creation of new joint pharmacy programs with other UC health professions campuses.”¹⁹ The UC report did not, however, expressly recommend opening a new UC pharmacy school (at that time UC San Diego had just opened the second UC pharmacy school two years earlier).

As the table below indicates, evidence indicates that students admitted to Pharm.D. programs in California are quite talented academically: last year in the four Southern California pharmacy schools the average undergraduate GPA of admitted students ranged from 3.39 to 3.60. Typically, pharmacy schools interview a few hundred applicants for entering classes ranging from 75 to 200, but bear in mind that those selected for interviews represent the top layer of much deeper applicant pools (e.g., UCSF typically interviews 275 but has up to 1,200 applicants).

Size of California Pharm.D. Entering Classes and Admits’ Qualifications in 2009

	# Interviewed for Entering Class	Size of Entering Class	Average GPA of Admits
Calif. Northstate College	375	80	3.22
Loma Linda	200	75	3.50
Touro University	450	100	3.42
UC San Diego	280	60	3.60
UC San Francisco	275	122	3.63
Univ. of the Pacific	330	200	3.50
USC	460	190	3.60
Western Univ. Health Sci.	443	120	3.39

Source: Pharmacy College Application Service, <http://www.pharmacas.org/collegesschools/directoryalphastate.htm>
 The number interviewed is displayed because numbers of applicants were not systematically reported.

If UCR is to consider pharmacy in greater depth, the question should be asked about whether our campus is a bit “late in the game” with respect to the growth trend in pharmacy schools (though the discussion above suggests there is still unmet market

demand and the potential for interest among promising students). Out of the eight pharmacy schools in California five opened their doors within the last decade (including two within twenty miles of Riverside): Loma Linda University, Western University Health Sciences (Pomona), UC San Diego, Touro University (Rohnert Park) and California Northstate College (Rancho Cordova). Likewise, nationwide there has been a surge in new pharmacy schools—out of 110 pharmacy schools in the U.S., 18 opened their doors within the past five years.²⁰

Finally, if it turns out that UCR stakeholders have a significant interest in a Pharm.D. program, the campus should give serious consideration to beginning the program in a manner similar to the UCR/UCLA Haider Program in Biomedical Sciences rather than as a stand-alone school of pharmacy in Riverside. UC's Health Sciences Committee has encouraged consideration of new joint pharmacy programs, and UC San Diego with its relatively young Skaggs School of Pharmacy and Pharmaceutical Sciences would be a logical potential partner in such a venture.

Nursing

From labor market and public health perspectives, nursing is an area of critical need in the Golden State. For UCR and its community stakeholders, however, the question is whether another nursing school in Inland Southern California would have significantly more value-added to the community compared to support for existing nursing schools. With the school underway at UC Davis, there will be twenty accredited nursing schools in California that offer Master's degrees -- including three UCs and nine CSUs -- plus nearly forty institutions offering Bachelor's degrees in nursing.²¹ Locally, Loma Linda, California Baptist, CSU San Bernardino and Western University of Health Sciences (Pomona) all offer Bachelor's and/or Master's degrees in nursing. Across California, schools of nursing already have increased educational capacity by 54% since 2004.²² In this light, it is not abundantly clear that a school of nursing at UCR would be leveraging unique strengths that would advance the excellence of the campus.

Law School: A Changing Landscape

Our campus had an earlier proposal before UCOP for a law school (in 1999 and updated in 2006) that was not acted upon by the Regents and is now tabled. More importantly, the economic and political landscape has undoubtedly changed in a significant way by virtue of the fact that the UC Regents made the difficult decision to support the founding of the UC Irvine School of Law (the first new public law school in California since UC Davis in the 1960s) despite opposition from CPEC. In other words, the bar has been substantially raised since our earlier proposal in terms of what it would take to identify a cluster of critical educational and workforce needs that could be addressed by a UC Riverside School of Law.²³

One of CPEC's objections to the UC Irvine School of Law is particularly relevant and weighs against renewed pursuit of a law school at UCR in the decade to come. CPEC found that growth in the number of lawyers who are active members of the California Bar

will likely *exceed the demand* for legal services in the Golden State through 2014 (the end of the projection period) by over 50,000.²⁴ Indeed, CPEC’s earlier projections already understate the current number of active members of California Bar by several thousand.²⁵ Consequently, inadequate labor market demand for lawyers will continue to pose a major barrier to procuring the support of the Regents, CPEC and (especially) lawmakers for another publicly funded law school in California any time in the foreseeable future. A related State funding “danger sign” for a law school is that when there is a budget crisis (early 1990s and today) there are typically threats in Sacramento to eliminate public support for UC Hastings College of the Law in San Francisco, which is highly regarded and has a UC affiliation dating back to 1878.

An alternative model worth mentioning is a public university with a private law school, which was the direction the University of Virginia has headed in, partly in response to a state budget crisis.²⁶ Likewise, UC San Diego is in preliminary discussions about creating a partnership/merger along these lines with California Western School of Law, a private law school in San Diego.²⁷ However, such a public-private law school option does not appear to be a good fit for UCR at the present time. Unlike the UCR School of Medicine, where our campus can build on the Haider program through which we already provide the first two years of medical education, and unlike UC San Diego which can explore a partnership with a nearby law school, none of the thirteen ABA-accredited law schools in Southern California are in Riverside County. Conversely, a start-from-scratch public-private law school would be a major strategic risk for UCR in the decade to come.

Other Professional School Programs

For reasons of space, and in some cases because of a lack of feasibility and/or fit with UCR, a number of other professional degree programs are not discussed in this working paper, including Architecture (e.g., a regionally relevant Master’s degree program like sustainable landscape architecture), Dentistry, Optometry, Podiatry, Chiropractic, Osteopathic Medicine, Theology and Veterinary Medicine.

¹ University of California 2009 Accountability Report, Indicator 6.1, *available at* <http://www.universityofcalifornia.edu/accountability/index/6.1>

² NATIONAL CENTER FOR EDUCATION STATISTICS, THE CONDITION OF EDUCATION 2009, table A-24-1 (2009), U.S. Department of Education, *available at* http://nces.ed.gov/programs/coe/2009/pdf/24_2009.pdf.

³ Steven Brint, *The Rise of the “Practical Arts,”* in THE FUTURE OF THE CITY OF INTELLECT 231 (Steven Brint ed., 2002).

⁴ University of California Annual Accountability Report, Indicator 72 (May 2010), *available at* <http://www.universityofcalifornia.edu/accountability/documents/accountabilityreport10.pdf>.

⁵ WILLIAM H. FREY ET AL., STATE OF METROPOLITAN AMERICA pp. 53-54 (Brookings Institution, May 2010), *available at* http://www.brookings.edu/~media/Files/Programs/Metro/state_of_metro_america/metro_america_report.pdf.

⁶ Foundation Center Statistics on (1) Grants by Field and (2) Top 50 U.S. Foundations Awarding Grants for Medical Research, *available at* http://foundationcenter.org/findfunders/statistics/pdf/05_fund_recip/2007/11_07.pdf
http://foundationcenter.org/findfunders/statistics/pdf/04_fund_sub/2007/50_fund_sub/f_sub_h_07.pdf.

⁷ See e.g., Jane Wellman, Connecting the Dots Between Learning and Resources p. 8 (Jan. 2010), *available at* <http://learningoutcomesassessment.org/documents/Wellman.pdf>.

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- ⁸ UC Committee on Planning and Budget (Systemwide Academic Senate, The Choices Report p. 16 (March 2010), available at <http://www.universityofcalifornia.edu/senate/ucpb.choices.pdf>.
- ⁹ CPEC, Review of a Proposal to Establish a School of Medicine at the University of California, Riverside p. 4 (Sept. 2008), available at <http://www.cpec.ca.gov/completereports/2008reports/08-16.pdf>.
- ¹⁰ Sweitzer and Volkwein, *Prestige Among Graduate and Professional Schools: Comparing the U.S. News' Graduate School Reputation Ratings Between Disciplines*, 50 RESEARCH IN HIGHER EDUCATION 812 (2009).
- ¹¹ *Id.* at 828-31.
- ¹² Association for Public Policy Analysis and Management (APPAM) 2009 Survey data for Cal Poly-SLO, Pepperdine, UC Berkeley and USC, available at <http://www.gopublicservice.org/MastersProgramData.aspx>.
- ¹³ Information available at: <http://www.gseis.ucla.edu/~edd/>; <http://education.ucdavis.edu/academic-programs/edd/>; http://education.ucsc.edu/academic_programs/doctoral/edd/
- ¹⁴ J. Douglas Toma, Legitimacy, Differentiation, and the Promise of the Ed.D. in Higher Education (working paper 2002), available at http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/3d/18/d9.pdf.
- ¹⁵ UC COMMISSION ON THE FUTURE, FIRST ROUND OF RECOMMENDATIONS FROM THE WORKING GROUPS (March 2010), Recommendation #4 of the Size and Shape Working Group at pp. 26-28, available at http://ucfuture.universityofcalifornia.edu/presentations/cotf_wg_first_recs.pdf.
- ¹⁶ MICHAEL E. WHITCOMB, NEW AND DEVELOPING MEDICAL SCHOOLS 11 (Josiah Macy, Jr. Foundation, October 2009), available at http://www.josiahmacyfoundation.org/documents/jmf_whitcomb_medschools_web.pdf.
- ¹⁷ See e.g., Timothy Bates & Susan Chapman, Tracking the Supply of Health Professions Education Programs in California (April 2007), available at http://www.futurehealth.ucsf.edu/Content/29/2007-04_Tracking_the_Supply_of_Health_Professions_Education_Programs_in_California.pdf; U. S. Dept. of Health and Human Services -- Bureau of Health Professions, *The Pharmacist Workforce: A Study of the Supply and Demand for Pharmacists* (2000). Available at: <ftp://ftp.hrsa.gov/bhpr/nationalcenter/pharmacy/pharmstudy.pdf>.
- ¹⁸ Available at <http://www.pharmacymanpower.com/state.html>.
- ¹⁹ UC FINAL REPORT OF THE HEALTH SCIENCES COMMITTEE, PHARMACY EDUCATION AND THE UNIVERSITY OF CALIFORNIA 10 (April 2004), available at <http://www.ucop.edu/hss/documents/pharmacy.pdf>.
- ²⁰ Alaina Scott, *Pharmacy schools: To build or not to build?*, DRUG TOPICS, June 1, 2009.
- ²¹ California Board of Registered Nursing, available at <http://www.rn.ca.gov/schools/rnprograms.shtml>.
- ²² California Institute for Nursing and Health Care, available at http://www.cinhc.org/wordpress/wp-content/uploads/2010/02/New-Grad-Hiring-Dilemma_0209.pdf.
- ²³ For example, the LAO received considerable attention for its recent claim that approval of the UC Irvine Law School “calls into question the ability of the state’s approval process to prevent unnecessary or non-priority programs and schools.” CALIFORNIA LEGISLATIVE ANALYST’S OFFICE, THE MASTER PLAN AT 50: IMPROVING STATE OVERSIGHT OF ACADEMIC EXPANSIONS p. 3 (Dec. 2009), available at http://academicenate.ucdavis.edu/documents/academic_expansions_master%20plan_120209.pdf.
- ²⁴ CPEC, Review of a Proposal to Establish a School of Law at the University of California, Irvine, (March 2007) at p 10, available at <http://www.cpec.ca.gov/completereports/2007reports/07-01.pdf>.
- ²⁵ State Bar of California membership data, available at <http://members.calbar.ca.gov/search/demographics.aspx>.
- ²⁶ KATHERINE C. LYALL & KATHLEEN R. SELL, THE TRUE GENIUS OF AMERICA AT RISK at p. 88 (2006).
- ²⁷ Eleanor Yang Su, *UCSD looking at a law school*, SAN DIEGO UNION-TRIBUNE, January 28, 2010, available at <http://www.signonsandiego.com/news/2010/jan/28/ucsd-looking-law-school/>.