Executive Summary

The Education Innovation Task Force was charged with developing a strategic direction to promote educational excellence at UCLA. To guide the inquiry, the Task Force considered several important trends:

- The landscape of increasing undergraduate enrollment that is challenging teaching, mentoring, and advising.
- The explosion of innovations in pedagogy, especially new and emerging methods to promote active learning that enable deeper and more sustained understanding. Importantly, active learning positively affects all students and addresses the learning gap for women and minorities.
- The increasing importance of metrics, measurement and analytics to support and inform the education enterprise.

The Task Force articulated a future vision for education at UCLA, where UCLA is the established leader in transformative approaches to teaching and learning at scale, and has expanded its impact far beyond the existing footprint of the campus. To achieve this goal, the Task Force proposes the creation of a campus-wide Institute for Innovation and Excellence in Teaching and Learning, which will serve as clearinghouse to amplify and link existing efforts in education. The overarching goal of the Institute is to strategically drive and lead an agenda of change for educational excellence and innovation.

The Institute will focus on five major initiatives. The five specific aims of the Strategic Plan will drive teaching innovation at scale and transform UCLA into a campus community of scholars where education is held as its highest core value. The five aims are:

1. Creating an innovative grants program to transform and modernize teaching practices and programs, with grants of $150-500,000 that are aimed at transforming entire programs, not just courses.
2. Forming a Student Assessments and Analytics Network to serve as a database that informs teaching practices and contributes to the appointment and promotion process.
3. Deepening departmental, programmatic, and faculty level rewards for innovation and teaching excellence, driven by data, with accountability and actionable feedback.
4. Expanding the pool of educators beyond ladder faculty to include undergraduates, postdoctoral fellows, Teaching Professors as well as members of the community.
5. Evaluating the footprint of teaching and learning by assessing the space and calendar of learning, to move education beyond the physical and metaphorical walls of the campus.

Creating the Institute and its associated infrastructure, and driving forward the initiatives proposed here will require a substantial investment over the next 5-10 years. This investment, estimated to be $200 million, would support the Institute, the grants program, the data and analytics infrastructure, and teaching space redesign.
Background

Charge of the Education Innovation Task Force

Chancellor Gene Block and the Executive Vice Chancellor and Provost Scott Waugh initiated the UCLA Strategic Planning efforts to address a range of issues that challenge our collective goal of academic excellence. The UCLA Strategic Plan lead to the development of five strategic themes including Institutional Effectiveness, Global Impact, Civic Engagement/Community Impact, Research Innovation, and Education Innovation. Strategic Task Forces were created to address specific challenges within each theme. On March 2, 2017, the Education Innovation Task Force was charged by the EVC to identify three to five actionable items and initiatives to enhance UCLA’s academic quality and social impact, using a process that embraces inclusivity and transparency. The charge letter included the following questions as a guide for the task force:

1. How do we give students the intellectual, personal, and interpersonal skills that embody UCLA’s commitment to social impact? How do we ensure that UCLA educational programs prepare students for leadership in careers and communities?

2. How do we ensure inclusive classrooms that anticipate and accommodate student needs and enhance student success? What academic and co-curricular programs and services are needed to foster student success and an inclusive campus climate?

3. How can we best foster and support innovative pedagogy and excellence in instruction? How can we enhance student opportunities for research, experiential learning, service learning, internships, education abroad, and more personalized learning? How can technology be best harnessed for education innovation? What support does faculty need to best integrate technology into their classes?

4. How can we accommodate increased enrollment, especially at the undergraduate level, without compromising educational quality, innovation, and social impact? What new models can help UCLA manage growth (e.g. centralized educational hubs on campus serving undergraduates from different units; satellite campuses, partnerships with community colleges)? If UCLA were to develop a satellite campus, what programs might we establish or move there?

5. What new and emerging fields of study might interest students and prepare them for the labor market? Consider as well innovative combinations of majors, minors, summer programs, certificates, and the like. Should UCLA offer some blended 3+2 and 4+1 undergrad-grad program? If so, how can we address the financial and other challenges involved in implementing these models?

6. What is the role and purpose of the academic master’s degree? Should UCLA strive to extend academic Master's programs and, if so, toward what end?

7. Given the tight academic job market in most disciplines and the limited funding available for graduate student support, many departments and schools have decreased the number of doctoral students. This has created a shortage of graduate student teaching assistants. How should UCLA plan and manage doctoral student enrollment? Should UCLA consider new models of instruction that do not depend on secondary sections taught by TAs?

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1 Education Innovation Task Force Charge Letter, March 2, 2017, UCLA Office of the Executive Vice Chancellor and Provost
8. Although UCLA has increased undergraduate enrollment in response to state and system wide mandates, we have not received enough funding to maintain student-faculty ratios, and we rely heavily on non-ladder faculty to teach at the undergraduate level. What challenges does this create for educational quality at UCLA and how should we address them?

The Task Forces were charged with addressing the following elements in the Strategic Plan.

1. **WHAT?** Describe the suggested action/intervention, and the opportunities and challenges it may entail.

2. **WHY?** Why does the task force recommend this proposal? How will the campus benefit, and, more specifically, how will it enhance UCLA’s social impact and academic quality? To your knowledge, has this proposal been successfully implemented in other settings?

3. **HOW?** How should UCLA go about implementing this proposal? What governance, administrative, financial, structural or other organizational issues should be considered in implementation?

4. **WHEN?** What is the proposed timeframe?

**Task Force Committee**

The members of the Education Innovation Task Force (Appendix, Table 1) were selected after a campus-wide nomination process. The committee includes representatives from many units across campus at the faculty, administrative, and student levels, reflecting an intentional effort to include diverse viewpoints and perspectives. The Task Force worked closely with Senior Advisor Yolanda Gorman and Associate Provost Anastasia Loukaitou-Sideris and was assisted by Serge Chekerian (administration) and Ronny Choe (data analytics). The Education Innovation Task Force was also provided with input from many focus groups from students, faculty, and administrative staff that provided guidance.

**Challenging Environment at UCLA**

On March 20, 2017, the Education Innovation Task Force held its first meeting. In this first meeting, we sought to define the context and influences driving the need for education innovation.

**Enrollment growth trends:**

The Task Force discussed the increasing challenge presented by rising enrollment, and how conventional approaches to teaching are beginning to constrain our ability to provide high quality teaching and learning in the face of this growth. We reviewed institutional data and its impact on education from the “Enrollment and Certain Key Ratio Trends” report prepared by the UCLA Office of Academic Planning and Budget. Since 2000, enrollment at the UCLA campus has increased by >5,000 undergraduates (Appendix, Fig. 1). From 2015 to 2016, UCLA experienced the largest ever year-to-year increase of 1,288 undergraduates and there is statewide pressure to maximize enrollment. However, faculty FTEs have grown at a much slower rate relative to undergraduate growth (Appendix, Fig. 2) that has lead to a worsening trend in undergraduate to faculty ratios. Coupled with the increase in undergraduates, the academic graduate student population declined by >15% since 2003, leading to worsening trends in
undergraduate to graduate student Teaching Assistant ratios across all programs (Appendix, Fig. 3). Support and guidance for students has been additionally stressed as the ratio of undergraduates to Student Affairs Officers has increased (Appendix, Fig. 4). The effect of these trends has further limited accessibility of courses needed for graduation, which has lead to an extension of the time to degree. The Task Force created models to assess an increase to 50,000 undergraduates over the next ten to twenty-five years. Our analyses reveal the extreme challenges in teaching infrastructure that will be faced by UCLA as it responds to pressure from the state to expand the undergraduate population (Appendix, Figs. 5 and 6).

These trends have challenged traditional ways to expand the teaching workforce beyond simply adding more ladder faculty or graduate student Teaching Assistants. We simply will not be able to rely on the growth rates of these elements of our teaching workforce to match the rate of student growth, and this furthers the call for innovative solutions. Further, enrollment growth creates physical constraints such as the number and size of classroom spaces, and threatens our reliance on the geographic boundaries of the campus.

The Task Force is continuing further examination of the impact of proposed enrollment growth on the campus. Because this work is ongoing, and because the nature of this report is the broader agenda of transformative drive to excellence and innovation in education, we will share further thoughts on the topic of enrollment thoughts in a separate communication.

Emerging importance of active learning:

A second trend that the Task Force explored concerned the explosion of innovations in pedagogy, especially new and emerging methods to promote active learning. By active learning, we mean teaching strategies whereby learners engage in activities that promote application, analysis, or synthesis of concepts and content that enable deeper and more sustained learning. Many examples exist, such as case-based methods, problem-based learning, team-based learning, and more. Active learning stands in distinct contrast to traditional, more passive methods seen in primarily lecture-based teaching. The education literature is rich with emerging evidence of the profound importance of active learning and its positive impacts on short- and long-term learning outcomes. A recent meta-analysis of 225 papers studying the impact of active learning methods on learning outcomes found strong evidence that active learning is superior to lecture-based approaches in STEM education.2 Importantly, active learning eliminates the gap in learning gains for women and minority students, thereby creating equity in the classroom. In a recent Nature article3, Evergreen State College Professor and co-chair of the US National Academies Scientific Teaching Alliance Clarissa Dirks states:

“At this point it is unethical to teach any other way.”

One development that has become an important tool in the area of active learning has been the rise of online and other digital technologies. These methods have great promise in efforts to support active learning, such as when online content can be viewed outside the classroom, reserving face-to-face time between teachers and learners for activities that engage learners in application, synthesis, and discovery.

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3 Waldrop, M.M. Why we are teaching science wrong, and how to make it right” Nature. 2015 Jul 16;523:272-4.
Digital platforms also have the potential to move instruction out of physical footprint of the university, enabling instruction to happen in different locations and at different times, even asynchronously.

As faculty become energized and empowered to change their methods of instruction to promote active learning, we need to have the infrastructure capacity to support these changes. Our teaching spaces, however, were largely designed for more traditional lecture based instruction, which makes the availability of unique spaces quite limited and limiting. While we have campus entities that can support some efforts in instructional innovation, the current capacity of these entities in finite, also limiting the pace of potential change.

*Rising emphasis on assessment of important learning outcomes:*

The role of teaching and teaching quality by our faculty will become increasing important as we seek to drive excellence through innovation and equity in education across the campus. We have traditionally relied on quantification of teaching activity and student evaluations as the primary metrics by which to evaluate our educational programs. As new forms of assessment are developed, and as we recognize the limitations of these traditional metrics to adequately inform judgments about the value of instruction, the need for innovation in this area seems clear. In many ways, the inadequacies of existing metrics have led to a relative undervaluing of teaching in the faculty appointment and promotion process. As long as faculty demonstrate sufficient quantity of teaching, and have generally positive ratings by students, advancement in step or rank tends to occur. These measures do not give us the ability to examine the impact of teaching on important learning goals and outcomes. They also do not provide robust mechanisms to identify true exemplars in teaching and learning, nor provide faculty with useful formative guidance for professional growth as a teacher.

While the pressures and trends articulated here present very significant challenges, there are also opportunities to reconsider the university’s approach to education and to reevaluate the university’s effectiveness in achieving student success. The Education Innovation Task Force identified three important areas of focus including: 1) teaching effectiveness, 2) scaling instruction, and 3) inclusivity and community engagement. The Task Force divided into three subcommittees to focus on each area, and to additionally consider the crosscutting themes of innovation, technology, emerging disciplines, and culture change. The recommendations from each subcommittee were presented to the entire Task Force for discussion and refinement of the Strategic Plan.
**Overarching Vision: Innovation at Scale**

In articulating an overarching goal for education innovation at UCLA, the Task Force adopted the “history of the future” approach. In this method, one imagines a time in the future, and seeks to make a definitive statement that characterizes the desired future state. For our Task Force, our future statement, five to ten years in the future, would be:

*UCLA is the established leader in transformative approaches to teaching and learning at scale, and has expanded its impact far beyond the existing footprint of the campus.*

Based on this vision, the Task Force developed an Education Innovation Strategic Plan focused on transforming UCLA into an educational leader with the following qualities.

- A culture that demands and strives for teaching excellence.
- A campus of education innovators creating new approaches to student learning.
- An awardee of large competitive grants to advance active learning.
- A partner of impactful, philanthropic donors to support education.
- A producer of students with knowledge and skills to act as world citizens.

**Strategic Plan**

In the Education Innovation Strategic Plan, these questions are addressed within each Aim of the proposal.

*Proposal: Establish a campus-wide entity that provides strategic leadership to drive educational excellence across the campus.* This newly created campus entity serves as a clearinghouse to amplify and link existing efforts in education. We propose that this entity be called the **UCLA Institute for Innovation and Excellence in Teaching and Learning**. In the remainder of this report, we shall refer to this proposed new entity as “the Institute.” The overarching goal of the Institute is to drive and lead an agenda of change for educational excellence and innovation for the future. The leadership of the Institute thinks tactically and strategically to address education needs on campus. The Institute would promote best practices in teaching that have been demonstrated to improve student learning. The Institute would leverage and expand existing campus resources to create a network of expertise in pedagogy, assessments, learning technologies, and course development to assist faculty and instructors. The Institute would lead new initiatives that bring in new kinds of teachers, new kinds of teaching spaces, and expanding instruction beyond traditional walls. It will function to:

1. Provide strategic guidance on how best to serve our growing undergraduate population, while elevating our already rigorous standards in education.
2. Partner with the Office of Equity, Diversity, and Inclusion and other units to build equity in all UCLA classrooms by encouraging the embrace of evidence-based teaching.
3. Develop and disseminate metrics for educational outcomes and infrastructure to support innovation.
4. Collaborate with Academic Personnel Office (APO) and other units on campus to synergize efforts in more effectively promoting and recognizing teaching excellence.
5. Expand resources and expertise for course development and assessments with a responsive infrastructure.

The Institute would have as its scope the entire campus, and as such would need a charter that defines the mission and goals. The leadership of the Institute would need a clearly defined leadership mandate that encompasses all the dimensions of teaching and learning excellence for the campus. Specifically, the scope should extend beyond undergraduate education and include graduate, professional, and continuing education. The leader of the Institute should have the vision and energy to drive institutional change in education across campus while also embracing knowledge of evidence-based teaching and equity in the classroom. The leader should inspire the campus’ transformation to educational excellence. Given the breadth of this scope, we believe that the leadership of this new Institute should be at the level of Vice Provost or equivalent.

The infrastructure for the Institute would need to include individuals with a broad set of skills and abilities, including but not limited to instructional design, course development, digital methods, evaluation and assessment, and data management and analytics. The size and scope of what is proposed is unprecedented, and as such would require significant investments of resources over time, as will be described further in this report. For the Institute as imagined here to have the kind of impact needed, the Task Force recommends a 5-10 year commitment of $200 million to support the range of activities we will describe.

There should be broad stakeholder engagement in shaping the work of the Institute, preferably with the creation of an internal advisory council. In addition, an external Advisory Board would enable connections to other campuses in the UC system and other university campuses engaged in similar work. Experts from beyond education, in sectors such as business and technology, could help inform emerging thinking about skills and abilities our learners need in an ever-changing world.

There is recognition that students and Teaching Assistants are our partners in the educational process that that our Strategic Plan will fail without their active participation in the journey to transform. An internal Student Advisory Board composed of invested undergraduate, graduate, and professional students as well as postdoctoral fellows will be created and will be a component within the Institute. Their perspectives, coupled with those from additional stakeholders, will influence decisions and directions of the Institute.

There would need to be formal connections to other entities already on campus, such as the Office for Instructional Development (OID) and the Office of Equity, Diversity, and Inclusion as well as Graduate Division (to name a few). Prior work by education leaders on campus should be embraced and integrated into this work, such as those articulated in the 2014 report from the Steering Committee for Online Teaching and Learning (SCOTL). By creating a consortium of centers and offices that are currently doing some of this important work, the Institute can preserve, leverage and amplify current good practices, and allow the campus to better coordinate and strategically align all efforts to common goals. Examples of such units include, but are not limited to, the Center for Education Innovation and Learning in the Sciences (CEILS) and the Excellence in Pedagogy and Innovative Classrooms program (EPIC).

This new Institute would have a broad set of activities designed to promote excellence in teaching and learning across the campus, as follows:

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Specific Aims

Aim 1: Development of a teaching and learning grants program to transform education at UCLA and to connect UCLA with the broader community of education innovators.

**WHAT?** This element of the proposal is focused on development of a transformative **Education Innovation Initiative Grants Program** to promote active experimentation and to expand active learning practices. The Task Force strongly views the pressures faced by UCLA as an opportunity for institutional implementation of best practices in education where face-to-face classroom time is used for evidence-based teaching approaches that include active learning. At the same time, implementation of engaging, effective teaching practices will expand the campus’ reach to address the increasing undergraduate population. For instance, grant proposals focused on hybrid or online formats specifically for impacted courses will be prioritized as an approach to increase student access to large service courses or other identified courses that present barriers to graduation. Proposals will be solicited to foster the growth of innovations in education, including leveraging of technology in the classroom. Grant applications to develop experiential learning ‘courses’ where students have the opportunity to address real world challenges by engaging their skills and expertise will be encouraged. Partnerships with community colleges will be encouraged as a mechanism to expand reach and to facilitate transfers. In order to boldly advance the vision of education at UCLA, grants will be substantial to provide the resources and expertise for transformation.

We acknowledge that some efforts to provide seed grants to support teaching innovations by faculty already exist, and have had a positive though modest influence on teaching and learning. These activities have not been of sufficient size and scope to transform teaching and learning at the level of programs, entire academic units, or departments. For these reasons, the Education Innovation Initiative Grants Program will be on a much larger scale and scope than existing efforts. Rather than $2,000-15,000, these grants would be $150-500,000; rather than from individual faculty, these grants would be from academic departments or units; and rather than introducing innovation into one course, these grants would transform entire majors or degree programs.

Grants will continue to be encouraged from individual faculty, but in this new approach we will actively seek proposals from departments and interdepartmental programs with the realization that addressing teaching effectiveness and issues of scale should be specifically tailored to meet discipline and programmatic needs. Proposals that are supported in meaningful ways by Department Chairs or Program Directors will be prioritized with the realization that ownership and investment are required for transformative educational change. Because the proposals envisioned here will catalyze innovation at the level of departments and programs, they will be larger in size and scope than current innovation grants offered by OID and others. Proposals will be supported by infrastructure in instructional design, technology, and assessments. Experts in these areas will be available to assist in development and implementation of proposals as part of a team based approach.

**WHY?** The proposal to create a campus-wide teaching and learning initiative has been successfully implemented at many universities with evidence of improved student learning outcomes. One example is Cornell University’s “Active Learning Initiative” that is focused on promoting and advancing a culture of educational excellence by providing resources to support innovations and to address the impact in large service courses. Another example is the University of Michigan’s “Academic Innovation” program,

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5 [http://as.cornell.edu/active-learning-initiative](http://as.cornell.edu/active-learning-initiative)
6 [http://ai.umich.edu](http://ai.umich.edu)
which is “partnering to design and develop a range of initiatives at the intersection of academic excellence, inclusion and innovation.” It is expected that this element of the Strategic Plan will increase the academic quality of UCLA’s education instruction while also meeting the needs of our growing, diverse student population and accommodating the increasing undergraduate enrollment. The proposal addresses the teaching effectiveness by promoting active teaching methods while creating a culture of educational excellence and equity. Also, by promoting innovations that can move some of the content delivery out of the classroom, large service courses and highly impacted courses can be addressed by reducing face-to-face classroom time while simultaneously increasing the teaching effectiveness of classroom time. Active teaching approaches also rely on the expertise of the instructor in more meaningful ways, which will increase satisfaction and engagement of educators.

**HOW?** The Institute will solicit campus-wide applications that address course bottlenecks and encourage active teaching, growth of innovation, development of experiential learning, education technology, and partnerships with community college. The program is designed to empower programs and departments to identify areas of need and use discipline-specific approaches to best serve students’ learning and development. Timelines, deliverables, and detailed budgets will be requested as components of the grant application. A statement of how the proposal addresses educational excellence and education at scale will be required. Assessments of learning gains and outcomes as a measure of student learning will be components of successful proposals. Applications will be rigorously reviewed, scored, and ranked by a panel of experts from campus as well as selected external reviewers that serve on the Advisory Board. Inclusion of external reviewers who visit campus as part of the review process will promote UCLA’s connection to the network of universities across the country that are transforming education. All applications will receive reviewer comments and a summary of the review panel’s discussion to promote transparency and to provide applicants with needed information for revised proposals. Successfully funded applicants will provide annual progress reports and will participate in an annual workshop to report on successes and challenges as a mechanism to foster cross-campus conversations and build a community of engaged educators. External reviewers will participate in workshops to provide oversight of progress and contribute to the success of the proposed plans.

**WHEN?** The request for applications (RFA) will include guidelines for proposals that are five years in duration with an annual project budget in the range of $150,000 to $500,000. It is anticipated that approximately three to five proposals will be funded each year over the course of ten to fifteen years. Funded projects will be lead by a Principal Investigator and will include a team of experts (e.g. faculty, course designers, instructors, Teaching Assistants). The budget for this element will constitute a major portion of the combined estimated $200 million in resources needed to support the Institute over 5 to 10 years, and to actualize the Strategic Plan. This investment aligns with efforts by the National Institutes of Health, National Science Foundation, Howard Hughes Medical Institute, Andrew W. Mellon Foundation as well as many other institutes and universities across the country that are working to transform education and educational opportunities that reach all students. With institutional investment and formation of the Institute, this Aim could be implemented within one year with continued grant funding over ten to fifteen years.

**Aim 2:** Creation of a data analytics network and repository to provide meaningful learning outcomes as a tool to evaluate progress.

**WHAT?** The Task Force recommendations include a campus-wide embrace of evidence-based teaching methods and an informed decision-making process during course development. A critical component of
the Teaching and Learning initiative will be the development of a “learning outcomes and data repository” that will provide the opportunity to utilize data analytics, institutional data, and assessments to evaluate and refine teaching practices. The database will be available to educators, Department Chairs, and Program Directors to better understand teaching practices on campus and to evaluate the campus’ progress on transforming education.

Several such efforts are ongoing across campus and are creating opportunities for educational change. For example, the recently developed Course Dashboard publishes a searchable database of course analytics that provides information on student grades. This program provides educators with demographic data on student performance within individual courses and across courses. Information from the database reveals how grading practices affect student populations, including, but not limited to, community college transfers and Pell grant recipients. By comparing teaching and grading practices across courses and programs, educators will be empowered to identify and define successful teaching strategies. This type of data analytics has been used by campus leaders to reveal how competitive grading practices negatively impact inclusivity and performance of minority students across our campus.7

Another example is the emerging ‘Virtual Facility’ plan for a learning outcomes assessment database developed by the Division of Undergraduate Education in UCLA’s College of Letters and Science. This database will serve as a repository for student work products including assignments, papers, examination items, recorded performances, and images. The repository will enable documentation of student learning and will be available campus-wide. Using existing licenses of project management and data visualization software, educators will be able to investigate existing formative and summative assessments and determine whether they are aligned with programmatically defined learning objectives and core competencies.

**WHY?** The repository and data analytics will support the growth of teaching methods that promote active learning and will provide a mechanism to acquire and analyze longitudinal data to assess and refine effectiveness of teaching practices at scale. The data analysis will expand the resources and expertise for course development and assessments with a responsive infrastructure. Recipients of a grant award from the Education Innovation Initiative (Aim 1) will utilize and contribute to the databases. Additionally, such metrics will enable campus leadership to address emerging expectations from accreditors, which will benefit the campus as a whole. The database provides a level of accountability that will best serve our students and guide our campus transformation.

**HOW?** There are ongoing efforts such as the Course Dashboard and the Virtual Facility databases that will be coordinated through the creation of a Student Assessments and Analytics Network within the Institute. Existing campus experts and representatives from various disciplines across campus will be networked into a cohesive working group to identify relevant metrics for student learning outcomes. It is recognized that metrics for learning are discipline specific and thus, educators from across campus will contribute to the identification of relevant analytics. The UCLA Office of Academic Planning and Budget (APB), the Student Affairs Information and Research Office (SAIRO), The Division of Undergraduate Education, and the Office of Instructional Development (OID) will contribute expertise on existing and emerging institutional databases, including student surveys. The Student Assessments and Analytics network will connect the data analytics experts with educators as part of an infrastructure to develop relevant new databases to serve the campus. The databases will be searchable with available software tools to facilitate analysis. In addition, assessment experts will work with individual faculty, programs, and departments to develop student surveys and evaluations of core competencies that address

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discipline specific needs. The selection of databases to be developed within the network will be prioritized according to campus needs. The activities and conversations within the network will be linked to outcomes from the Teaching Portfolio (Aim 3) to inform teaching practices that will be connected to learning outcomes. Investments in the data platform and analytics infrastructure to realize this goal are another major component of the $200 million commitment over 5-10 years.

WHEN? Creation of the Student Assessments and Analytics Network under the broad umbrella of the Institute can be accomplished within one year and the network will evolve as the campus transforms. The network will include existing campus expertise from multiple units and invested partners such as CEILS, EPIC, SCOTL, and OID. Identification of gaps in expertise and infrastructure will be conducted by the participating units within the network and in collaboration with the Institute leadership, followed by recruitment of experts to address needs in technology development and beyond. Once the network is in place, database projects will be prioritized and progress will be reported to the network community and Institute leadership, including the Advisory Board, on an ongoing basis. The network will have the capacity to respond to and support campus needs for learning analytics and the databases that they generate will benefit the entire campus. Information learned from data analytics will contribute to the ongoing nationwide conversation on best practices in undergraduate education.

Aim 3: Revamp departmental and programmatic- and faculty-level rewards for innovation and teaching excellence.

WHAT? Using the analytics capacity described in Aim 2, we will create a more meaningful method to recognize and incentivize innovation and teaching excellence, as relates to the A&P process and 8-year programmatic reviews for faculty, and to inform strategic commitment to teaching and learning at the level of the department, program, or academic unit. Critical to this effort will be the need for enhanced metrics by which faculty teaching effort and quality can be evaluated that transcend traditional reliance on merely the quantity of teaching and student evaluations. These traditional “instructor evaluations” have been shown to undervalue some groups (including women and minorities). These metrics can be used in a dynamic way to provide formative feedback for faculty, with which they can seek focused coaching or teaching improvement activities that will also be offered by the Institute. With the kind of strong data management and analytics infrastructure described above, we can develop a dataset of learning outcomes linked to teachers and learners. The dashboard that can be created will enable faculty feedback to not only be more robust, but also be compared across the campus or across sub-populations of similar faculty. In addition to metrics and incentives at the faculty level, we need a similar set of metrics to evaluate the overall impact of teaching within academic units, majors, departments, programs, or other academic units. The existence of these metrics will enable a re-emphasis in the appointment and promotion process on linking such decisions more purposefully to teaching performance. Other established best practices can be added as evidence of the quality of teaching performance. For example, do the syllabus materials clearly state specific learning objectives and anticipated learning outcomes? Are methods of teaching maximally promoting active learning? Being able to answer these and other process and outcome questions will require the capacity for assembly and review of teaching products. To this end, the use of the Teaching Portfolio as a component of the academic dossier will be essential. The Teaching Portfolio has emerged in higher education as a valuable tool, in which the faculty member can articulate their goals and philosophy of teaching, as well as catalogue the products and accomplishments as a teacher. Teaching Portfolios can be submitted for peer review by education experts and or teaching exemplars. One example of the Teaching Portfolio is in use at Rutgers University Center for Teaching Advancement & Assessment Research.8

8 https://ctaar.rutgers.edu/teaching/portfolios.html
In addition to more explicit measures of teaching performance, there should be more clear-cut ways to recognize and promote those faculty whose academic work is primarily in teaching, such as the establishment of the Teaching Professor. A number of institutions, including several within the UC system, have such ladder faculty tracks to enable faculty with extensive teaching involvement to be recognized, evaluated, and promoted based almost exclusively on their body of work as a teacher. The Teaching Professor is discussed further in Aim 4. One example of this is the non-tenure Line Teaching faculty series at Stanford University. Some institutions have also created accelerated promotion or merit review as a mechanism to add additional recognition to faculty who meet usual promotion criteria but have excelled in mission-critical domains. One example of such a mechanism is the “Step Plus” approach in use at some UC campuses, such as UC Davis.

WHY? A comprehensive set of learning outcome metrics can support a system that sends a clear signal to faculty and academic units broadly about how we value teaching excellence. It can also support a more reliable and fair reward system for faculty, including those faculty whose academic activities are dominated by teaching, and for whom academic advancement is often challenging. Setting criterion-based levels of performance will enable a new era of accountability and reward in the domain of teaching and learning. The proposed metrics and analytics at the level of the academic program will be essential to provide accountability and incentives for departments and programs, to promote collaborative efforts to improve educational excellence across campus. By creating a system of measurement and accountability at this level, we can more effectively address significant challenges in transforming courses, entire majors, or large academic programs, and promote widespread emphasis on active learning and other strategic goals.

Teaching Portfolios, Teaching Faculty, and accelerated promotion are desirable because they provide additional tools within the academic personnel domain to evaluate and recognize exceptional contributions to teaching. It also communicates to faculty that teaching is valued, not just as an extension of other parts of academic work, but also as bona fide activities that exemplify academic excellence.

HOW? A multi-stakeholder body will review and interpret existing education literature and promising practices in the arena of evaluation of teaching quality and identification of meaningful learning outcomes. The Advisory Council can also set criterion-based thresholds for teaching performance, so academic units can more readily identify faculty exemplars for recognition, as well as underperformers who can benefit from focused coaching and teaching improvement activities. Peer assessment of teaching will be enhanced by providing more structured and evidence-based frameworks for observation of effective teaching practices.

The Institute will need to work with the Vice Chancellor for Academic Personnel and the Academic Personnel Office to align these new efforts with existing academic policies. Further, the Institute will need to develop the capacity to familiarize faculty with the metrics framework, including how to interpret data reports and use them for formative growth as a teacher. The Institute will need to cultivate a cadre of “master teachers,” exemplars and/or experts in pedagogy who can provide structured peer review of Teaching Portfolios as well as coaching and mentorship for faculty seeking teaching improvement opportunities.

WHEN? Initial conversations with APO and the Vice Chancellor for Academic Affairs to implement or amplify existing elements of the Academic Personnel Manual can begin almost immediately. Over the

9 https://med.stanford.edu/academicaffairs/administrators/handbook/chapt2/chapt2_2.6new.html#_Toc245041420
10 http://academicaffairs.ucdavis.edu/policies/step-plus/
next year, it will be necessary to launch a focused communication campaign aimed at academic leaders, rank-and-file faculty, and Committees for Appointment and Promotion. Initiative such as Teaching Portfolio and peer review of teaching will require a period of planning prior to widespread implementation, which could begin within two years.

**Aim 4. Expand the pool of educators to create a knowledge resource and culture that embraces and strives for educational excellence and innovation at scale.**

**WHAT?** The Task Force recommendations include the implementation of the UC approved *Teaching Professor* series, which is a security of employment-track lecturer. This series parallels the standard, research-focused series, but the emphasis is on excellence in teaching. Teaching Professors are exceptionally qualified teachers with knowledge of evidence-based teaching practices. Their professional advancement is aligned with their teaching activities, integration within the larger education community, and leadership. They contribute to the development and dissemination of course materials, curriculum development, instructional technology implementation, as well as the development and training of effective teaching assistants. The Teaching Professors are expected to engage in departmental and programmatic activities, in addition to serving as educational leaders by representing the campus at national conferences and education workshops. In addition to allowing departments and programs to expand course offerings, the Teaching Professors will contribute in meaningful ways to transforming education innovation within their home departments and on the campus as a whole. They will bring knowledge of best practices in teaching to their home departments and thus, will raise the collective understanding of active teaching and classroom equity across the campus and set a standard and example to encourage improvements in teaching from ladder faculty. They will partner with ladder faculty to create improvements in existing and newly created courses to encourage active teaching. They will contribute in positive and meaningful ways to departments. It is expected that ladder faculty will recognize their engagement as an invaluable resource. The Teaching Professor series has been successfully implemented at other campuses within the UC system.

In addition to Teaching Professors, the Task Force recommendations include expanding programs for postdoctoral fellows that allow them to contribute to the teaching mission at UCLA, learn active teaching methods, and gain much needed teaching experience for their future careers. Creation of discipline-based *Teaching Scholars* programs will engage postdoctoral fellows in the education community at UCLA, which is not a typical component of traditional research focused training. Building a teacher training component into the postdoctoral experience will improve post-graduate education and make UCLA postdoctoral fellows more competitive on the job market. Teaching Scholars will receive stipends to support their teaching efforts and they will partner with faculty and instructors to facilitate their transition to teaching or to share teaching responsibilities.

There are many successful examples of engaging our talented pool of undergraduates in the teaching process and the positive impact of peer-to-peer learning is well documented. We propose an expansion of the use of undergraduates as part of a discipline-based *Consortium of Undergraduate Teaching* that could occur both in informal settings and in more formalized learning spaces across campus that would be created as part of the Institute’s initiative. This concept has been successfully employed in many departments and provides undergraduate peer teachers with additional professional skills to advance their future careers and to create a cooperative network of learning. Data from our own classrooms, particularly in the STEM majors, reveals that a competitive environment is discouraging to many UCLA undergraduates. Encouraging the process of peer learning will contribute to a cooperative, collaborative learning environment that is part of the cultural change envisioned by the Task Force.

Graduate students typically serve in the role of Teaching Assistants to lead lessons and promote active learning in small group settings that are part of discussion sections. Discussion sections are components
of most courses at UCLA, and the classroom time is used to focus on problem solving, practicing skills, and clarifying complex concepts. Teaching Assistants are on the front lines of the teaching efforts at UCLA. Expansion of Masters and Ph.D. programs and providing mechanisms to thoughtfully allow graduate students to increase their participation as teaching assistants without detriment to progress in their graduate programs should be considered. The decline in graduate students at UCLA reflects a national trend in reduced funding for research programs, which provide graduate students with stipends and tuition support. The proposed investment in graduate education synergizes with the Strategic Plan developed by the Research Innovation Task Force.

With expansion and increased reliance on Teaching Assistants, we will need to invest in more formal preparation of TAs for these roles. The Task Force reiterates recommendations from prior reports from SCOTL and others to develop a formal Teaching Assistant Training Program that is aligned with and connected to relevant national programs such as the Center for the Integration of Research, Teaching and Learning (CIRTL) Network.

The Task Force also embraced the idea of non-traditional teachers such as members of the Los Angeles community at large. In many industries, community members are able to provide unique perspectives to enhance student learning. The Institute will encourage the involvement of the community in our educational transformation. This community partnership will be particularly valuable as departments and programs consider experiential learning courses as proposed in Aim 1. This element integrates with the Strategic Plan put forth by the Civic Engagement/Community Impact Strategic Plan.

WHY? The trends in faculty recruitment and the declining graduate student population reveal the need to expand the thinking of the traditional faculty member as the primary educator. There is also a recognition that the demands on faculty time, especially in the current fiscal crisis that challenges federal, state, and private funding for research programs, limit the time that faculty can devote to creating and engaging in new courses. It is also unreasonable to expect that faculty hires will keep pace with the rapid increases in student enrollment. Aim 4 is focused on new measures to address the need for educators and Teaching Assistants by drawing on successes from the campus and the UC system. A TA training program would enable a more consistent set of knowledge and skills in teaching and learning among TA’s, thereby standardizing the quality of TA teaching, and providing for a strong foundation in principles of teaching and learning, which will prove useful to them in their future careers. Investment in graduate student recruitment will additionally benefit existing and future faculty in their research endeavors. In particular, training of STEM majors will address the nationwide projected shortfalls in these industries.

HOW? In order to accommodate the projected growth in undergraduates, a significant increase in faculty hires is needed in order to maintain the already strained ratio of undergraduates to faculty. The proposed workforce to address this needed expansion will come from many sources. The campus will need to hire Teaching Professors and new ladder faculty, in addition to improving the efficiency of the classroom (Aim 1) and expanding the education footprint (Aim 5). The UC system has approved the Teaching Professor series and the Task Force proposes the hire of new security of employment educators in this title. The entity will work with units across campus to develop programs to support the use of existing Postdoctoral Fellows as teachers and to develop Consortia of Undergraduate Teaching. Resources to support the recruitment, stipends, and tuition of graduate students will be another element of the $200 million investment in the Institute and the Strategic Plan.

WHEN? The data analytics of undergraduate enrollment reveal that the growth of this population is outpacing the number of educators from all categories (Appendix). The need to recruit additional educators and to create teacher-focused programs, such as the Postdoctoral Scholars Program, is pressing. The Task Force believes that the educational excellence of UCLA is being significantly compromised and
views expanding the teaching workforce as an immediate action item. Thus, the Task Force is recommending immediate and phased recruitment of Teaching Professors in close collaboration with Deans and Department Chairs to identify areas of greatest need. Even while campus leaders work to refine enrollment projections, it is clear that additional educators are needed to address the exponential growth in recent years (that has occurred without corresponding increases in teaching FTEs). In order to understand areas of need and refine projections for FTE hires, the campus leadership should collaborate with Academic Planning and Budget to create a plan for FTE growth (with the understanding that some expertise in modeling will be needed for this effort). The Task Force recommends an analysis of, and financial investment in, existing Postdoctoral Scholars Programs across campus as another immediate action item, coupled with expansion of these programs to serve additional departments in a phased manner. **This component of the proposal has the potential to add significantly to the budget and thus, refinements of FTE projections to guide strategic hires of the teaching workforce are paramount.**

**Aim 5. Expand the Footprint of Teaching and Learning by Evaluating the Space and Calendar of Learning**

**WHAT?** As stated in the opening, the current physical and figurative footprint of the campus is increasingly constraining the attainment of teaching excellence. Several specific tactics were identified by the Task Force as ways of expanding this metaphorical footprint. First, creating an agenda for strategic teaching space redesign, to take existing spaces and make them more flexible and adaptable to active forms of teaching and learning. An example is in the School of Engineering, which is repurposing traditional manufacturing shops into “maker spaces,” physical spaces created to promote rapid innovation prototyping using devices such as 3D printers. The David Geffen School of Medicine created a “Learning Studio” in its new building, Geffen Hall. This large, flat-floored classroom accommodates the entire medical school class of 175 for literally dozens of different configurations, including highly active modalities such as Team-Based Learning. Many of the campus dormitories have created learning spaces for residences, and we propose broader expansion of such spaces to additionally serve non-resident students across campus. This recommendation is further supported by the SCOTL findings. The Task Force also saw the calendar as part of the “footprint,” recognizing the potential to take advantage of off-hours and weekends to expand learning to accommodate both increasing enrollment and students with more diverse schedules and obligations. The Department of Chemistry and Biochemistry has successfully offered laboratory classes on the weekends to give students an opportunity to take these required courses outside of the constraints of traditional classroom time. Similarly, the development of other sites into which UCLA could expand, such as downtown Los Angeles, further stretches the footprint and makes education innovation possible.

**WHY?** Traditional classroom designs limit flexibility with new methods of instruction designed to promote active learning. Evenings and weekends, though seldom in the past seen as potential times for instruction, are becoming increasingly attractive times for diverse populations of learners, especially for asynchronous learning activities. In an increasingly digitally connected society, the ability to interact in meaningful ways across distance makes even geography seem a surmountable obstacle to teaching innovation. For these reasons, the Task Force sees the “footprint” as a profound metaphor as a driver of innovation.

**HOW?** The new Institute should initiate an inventory of teaching spaces across the campus, along the way developing a taxonomy of the kinds of pedagogy and teaching innovations that can be supported. In this way, it will produce a gap analysis that can guide strategic investment in classroom renovation or
development of new spaces. The Institute would produce a roadmap for classroom space development, in collaboration with Capital Programs and other appropriate stakeholders. The Task Force suggests that a significant portion of the $200 million commitment would go to support these enhancements in teaching spaces. Furthermore, such an inventory will enable better and broader use of those spaces that can more easily accommodate active learning approaches. Physical space redesign would be accompanied by investment in digital connectivity and other enhancements to increase the value and flexibility for these new or renovated spaces. Incentives could be created to encourage faculty to teach evening or weekend course, and to expand instruction into a true Summer Quarter, and facilities support and campus security services would need to be expanded to support these off-hours activities.

**WHEN?** Planning and budgeting for evening and weekend classes component of the Strategic Plan would likely take one year, with the launch of evening and weekend instruction beginning in academic year 2018-19. The inventory and gap analysis described above could be accomplished within one year. The learning space renovation and development plan could then begin, supported by the investment of funds outlined earlier in this report.
Conclusion

In this report, the Task Force has outlined a bold plan for a program educational excellence and innovation, taking into account projections of growth in the undergraduate population to 50,000 over a period of ten years and emphasizing active learning and new ways to think about both the teacher and the classroom. The plan rests on emerging evidence and promising trends in the science of teaching and learning, and a renewed focus on outcome metrics of educational quality. A key pillar is the proposal of a new entity, the Institute for Innovation and Excellence in Teaching and Learning to transform the campus into an educational leader that innovates and embraces teaching practices that benefit our diverse and cherished student population. The Institute’s work is outlined in the Education Innovation Strategic Plan synergizes with the plans developed by the other Task Forces and was developed as part of an open process in partnership with many representatives across campus. We have put forth five specific aims to drive this transformation while simultaneously increasing the quality of teaching. The Strategic Plan aspires to a vision of a campus community of scholars where education is held as its highest core value.
APPENDIX
Tables and Figures
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<tr>
<th>Task Force Member</th>
<th>Department or Program Affiliation</th>
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Table 1. Committee Members of The Education Innovation Task Force
Figure 1. Trends in undergraduate enrollment at UCLA reveal rapid growth. Annual undergraduate enrollment data is provided for the last seventeen years. An increase in the rate of undergraduate growth is evident in 2005, which has lead to a steady increase in the total undergraduate population. The Education Innovation Task Force was charged with considering strategies to increase growth to 50,000 undergraduates while maintaining our educational excellence. In Fall 2016, the campus experienced the largest ever year-to-year increase of 1,288 undergraduates (data provided by UCLA Academic Planning and Budget).
Figure 2. Faculty growth at UCLA has not kept pace with undergraduate enrollment.
Annual academic ladder faculty FTE data is provided for the last seventeen years. The rate of growth in faculty has not kept pace with the increase in undergraduate enrollment, which has strained undergraduate to faculty ratios. In 1999-2000, the undergraduate student to faculty ratio was 20.9:1, which has increased to 24.1:1 in the 2015-2016 academic year (data derived from values provided by UCLA Academic Planning and Budget).
The decline in graduate student enrollment has negatively impacted support for undergraduate education. Annual academic graduate student enrollment is plotted as a ratio per 100 undergraduate enrolled. For the last ten to twelve years, the enrollment in academic doctoral students has declined dramatically due to many factors including the recent U.S. recession and resulting decline in state and federal funding to support research projects (that provide stipends and tuition support for some graduate students). This decline has reduced the pool of available graduate students who serve as Teaching Assistants in undergraduate courses (data provided by UCLA Academic Planning and Budget).
Figure 4. Undergraduate enrollment has increased burden on student affairs officers. Undergraduate enrollment is plotted as a ratio to the number of student affairs officers (SAO) ratios. Data from the last seventeen years is shown (data provided by UCLA Academic Planning and Budget).
Figure 5. Increasing undergraduate population to 50,000 challenges faculty to student ratios. Undergraduate enrollment and faculty FTE data from 1999 to 2016 are plotted. The growth rate in faculty FTE hires was determined by analyzing the data from 1999 to 2016. We modeled a scenario whereby the total number of undergraduates reached 50,000 by 2042 (red circles) using the faculty growth rate that was determined by analyzing the trends from 1999 to 2016. Under these conditions, the undergraduate to faculty ratio will be increased to 35:1 (black squares). The faculty growth rates that would be needed to maintain more favorable undergraduate to faculty ratios, including 30:1 (beige circles), 27:1 (green squares), 24:1 (blue circles), 22:1 (purple squares), and 20:1 (green circles) are illustrated. Dashed lines mark the year 2016, which separates past data (left hand side) from projected data (right hand side).
Figure 6. Increasing undergraduate population to 50,000 over a twenty-five year period allows for more faculty growth to address the challenging faculty to student ratios. The undergraduate students to faculty ratios from 1999 to 2016 are plotted. Using the growth rate in faculty FTE hires that determined by analyzing the data from 1999 to 2016 (Fig. 5), projections were modeled in which the total number of undergraduates reached 50,000 in ten years (2027, green squares), fifteen years (2032, beige circles), twenty years (2037, black squares), and twenty-five years (2042, red circles). The predicted undergraduate to faculty ratio for each projection is provided. Dashed lines mark the year 2016, which separates past data (left hand side) from projected data (right hand side).