# Online Education

*A statement by President Christopher L. Eisgruber and Provost David S. Lee*

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Few issues have captured more attention in reports and prognostications about trends in higher education during recent years than technology. Much has been said not only about the potential for technology to reshape teaching and learning but the likelihood that it would transform the sector itself. Technology indeed holds great promise for student learning, not as an end in itself, but as an effective tool used judiciously to foster new forms of interaction, discovery, and materials.

At Princeton, our challenge is to consider how technology can improve the pedagogical practice of a great residential liberal arts university. Our strategic framework, published in January 2016, reaffirmed that "Princeton's distinctive model and mission are today more vibrant, valuable, and relevant to the world's problems than ever." Building on that judgment, we at Princeton look to technology to leverage rather than replace the powerful, life-changing personal interactions among students and between students and faculty that form the heart of this University's teaching inside and outside the classroom.

The Faculty Council on Teaching and Learning completed a year-long strategic review of online education to survey the rapidly changing landscape of online instruction and provide recommendations about paths forward for Princeton. The resulting report provides a useful blueprint to make sense of a complex landscape and to chart a course shaped by Princeton's distinctive sensibilities.

As the Council notes, Princeton has been active in online education for several years through its involvement with Coursera and other platforms, as well as flipped courses and other attempts to integrate technology into teaching, primarily at the individual faculty and course-specific levels. Princeton faculty have offered 24 distinct Massive Open Online Courses (MOOCs) since 2012, accounting for 55 sessions and registering more than 2.4 million students worldwide. Closer to home, faculty have developed 14 flipped or "blended" courses, offered a total of 28 times and spanning 11 different disciplines. The Council notes that this level of activity places us in the middle of the pack relative to our peers, certainly behind the volume and intensity of online options found at those institutions with professional schools.

We applaud the Council's careful review of the broader landscape in general and Princeton's initiatives in particular. Through its surveys and discussions, the Council found a wide range of often diverging opinions on the use of online teaching methods. The Council notes several benefits from our current efforts, including the dissemination of free education materials consistent with the University's mission, improved global visibility for Princeton, opportunities to connect with alumni, and a laboratory for pedagogical experimentation. Our current work, however, also raises critical challenges associated with online teaching, none unique to Princeton. The Council's review usefully frames some core concerns that must be

addressed to foster an environment of experimentation and measured implementation of online learning at Princeton.

- First, integrating technology into one's teaching requires careful consideration, as well as considerable time and effort, in order to do it well. Opportunity costs should be considered, highlighting the importance of effective and available support and infrastructure.

- Next, providing materials online asynchronously may diminish class attendance and student interactions with one another and the faculty member.

- Finally, the Council notes the challenges inherent in managing the flow of information and logistics associated with online education.

*The Council offers four principles to guide Princeton's efforts in online teaching:*

The first posits that our strategy be informed by the pervasive uncertainty about its effectiveness. We share the Council's view that a deliberate yet cautious pace seems reasonable for Princeton, with no apparent "first mover" advantage. While we should ensure fertile ground for our faculty to innovate and rethink their courses, much might be gained from the experiences of others. To that end, we endorse the Council's recommendation that we must strengthen our capacity to assess the impact of our own projects and to develop systematic means to capture, understand, and translate the experiences at other institutions to our own benefit.

That said, the most meaningful data on hybrid courses and strategies will likely come from larger studies at major public universities. It will be essential to have someone monitor assessment efforts elsewhere and think about their implications for us. We will appoint a small working group, including representatives from the McGraw Center staff, the Office of the Dean of the College, the Office of the Provost, and the Council on Teaching and Learning to develop specific recommendations in this area.

We also generally agree with the second principle, which asserts that Princeton should prioritize those online strategies that "build upon our strengths as a residential learning community and that will enhance and complement—not supplant—time-tested modes of teaching and faculty-student interaction." We will, of course, remain open to new opportunities to use online technology as they present themselves.

The Council's third guiding principle holds that Princeton should limit public dissemination of online course materials to those instances in which they "yield clear benefits to Princeton students." We hope to expand discussion of this issue in the months ahead, seeking counsel on opportunities to provide content and modules more broadly and deliberately to benefit students beyond Princeton. This discussion should be informed by a review of similar initiatives at peer universities, such as the "openyalecourses" project.

The Council's fourth principle, advocating broad consultation with faculty regarding online strategies, is critical. We must strike an effective balance among supporting individual faculty projects, fostering multiple pathways for integrating online strategies into courses, and sparking forums for collective discussion about the overall direction and position of online strategies at Princeton. We believe that the Council should continue to play a pivotal role in fostering and organizing forums for this dialogue. We agree with the report's recommendation that CTL provide counsel on priorities in this area and review the use of on-line materials and their effect on quality of faculty-student interaction.

While the evidence provides good reason for skepticism and caution about some of the claims made for technology's capacity to transform higher education, Princeton should nevertheless seize opportunities to investigate questions about how technology can advance our distinctive model of teaching. For example, how might we select those areas for which we want to take a back seat, those for which we are curious but uncertain, and those for which we should seize opportunity, experiment, and gain advantage? Where is Princeton well-positioned to be more aggressive, such as developing small private online courses and modules, fostering institutional collaborations, networking around critical research issues, or developing partnerships to infuse the campus environment with non-traditional partners (practitioners, *etc.*) around entrepreneurship and other emerging initiatives?

The Council's report and recommendations provide an initial set of compelling answers to these questions. In response, we propose the following next steps, in addition to the actions noted above.

*For immediate action:*

1. We agree with the task force that important opportunities exist to use supplemental online instructional materials in selected fields, such as STEM. We will establish a targeted initiative in the McGraw Center to (a) assist faculty efforts to integrate such materials into their courses or sequences of courses; (b) convene a faculty working group to advise on the general pedagogical strategy to ensure that the resulting projects fit together effectively; (c) fund and support faculty and departmental projects to develop and disseminate materials as small private online courses or in other forms as appropriate; and (d) ensure assessment and evaluation of our efforts to encourage adjustments and shared knowledge of what works. As we engage in the important work of revising courses and creating new ones, we must remain focused on how best to advance student learning, rather than merely incorporating technology for its own sake.

2. Acknowledging the existing barriers and the opportunity costs for faculty investment in these initiatives, we endorse the task force's recommendation to increase funding to the 250th Fund for Innovation in Undergraduate Education to support additional experimentation with online teaching. We hope that such funding can be structured to provide support for both individual faculty projects

as well as joint projects focused on sequences or clusters of similar courses and modules within courses.  We believe that augmenting the 250$^{th}$ Fund makes more sense than creating a new separate fund.  Ideally, the same group should evaluate a broad swath of curricular and pedagogical innovation proposals, regardless of whether they involve technology.  This underscores the point that the end goal is student learning and great teaching.

3.  The task force recognized an important opportunity to enhance our communications with faculty about online education.  We will charge the McGraw Center to develop a web-based clearinghouse and in-person opportunities (visitors, colloquia, forums, etc.) in which to share interesting projects and lessons learned at Princeton and elsewhere, as well as to foster ongoing dialogue and faculty community around online teaching.

*For further consideration:*

1.  The task force's recommendation to offer additional AI support to courses with significant online components may offer an opportunity to enhance the preparation of our graduate students.  The Dean of the College and Dean of the Graduate School will consult with a group of faculty to develop a proposed structure for such a program, including (a) the criteria to identify courses warranting additional support; (b) a description of the types of distinctive support AIs might provide for these courses; and (c) opportunities for involving graduate students in the design phase of the course rather than simply supporting it after the fact.

2.  We are intrigued by the possibilities raised by the task force for potential collaborations with partner universities around large courses and less-commonly-taught languages.  This recommendation dovetails with those issued in the report of the Task Force on Regional Studies.  Moreover, other universities (including partnerships of Virginia-Duke-Vanderbilt and of the Big Ten universities) have already begun to experiment with such partnerships.  We request that the Princeton Center for Language Study, in close consultation with the Dean of the College, further explore (a) the lessons learned from others' experiences; (b) priorities for collaboration with other universities, targeting the confluence of where we would most benefit from and have considerable value to offer to our partners; and (c) preferred partner universities in each proposed area.

3.  The Council rightfully recognized that faculty time is a critical ingredient and limiting factor to the effective integration of online components into courses. Recognizing the essential need to release faculty capacity for this important work, we are also mindful of the inherent tension in taking faculty out of the classroom to develop courses.  With that in mind, we ask that the Dean of Faculty and Dean of College review options for how best to support and recognize faculty effort in this area.  The options will also focus on other types

of resources and infrastructure necessary to target and optimize the use of faculty time in this arena.

We are grateful to the Council on Teaching and Learning and the many faculty and students who contributed to their work. The report presents specific actionable strategies to ensure that our investment of time, talent, and treasure in online teaching and learning is guided by our institutional values, addresses head-on some of the barriers to faculty engagement, and provides a means to build upon effective practices. The report and associated recommendations establish a compelling framework from which Princeton can develop a targeted, tailored strategy in online education.