

PRESIDENTIAL INNOVATION LAB

{WHITE PAPER SERIES}

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This series of Presidential Innovation Papers is edited by Cathy A. Sandeen, the American Council on Education's vice president for education attainment and innovation.

As part of a grant from the Bill & Melinda Gates Foundation, the American Council on Education convened a group called the Presidential Innovation Laboratory (PIL).

The purpose of this effort was to examine and explore new models inspired by the disruptive potential of new educational innovations—technological, pedagogical, organizational, and structural—especially those that could increase the number of Americans able to earn a post-secondary degree, certificate, or credential.

Fourteen chief executive officers from a diverse group of colleges and universities participated in the PIL, which provided an opportunity for higher education leaders to engage in proactive thinking about the evolving dynamics of higher education and guide a national dialogue that will help colleges and universities serve students—and close persistent student attainment gaps—in the years ahead. Two-day convenings took place—one in July 2013, and one in October 2013—facilitated by the Institute for the Future, an independent, nonprofit research organization located in Palo Alto, California.

The goal was not to issue a series of recommendations, which is not really possible, the group agreed, given the vast diversity of higher education institutions in the United States. Instead, the goal was to engage in a robust and wide-ranging conversation about the various drivers of change and potential reactions to those drivers.

This series is a reflection of some of the important conversations of the group, with a focus on four somewhat overlapping areas: major drivers and signals of change; business model innovation; the changing faculty role; and the students of the future. We are pleased to be able to share some of this thinking with a wider audience.

This paper, *Unbundling Versus Designing Faculty Roles*, explores current conversations about the changing role of college and university faculty, the so-called “unbundling” or “disaggregation” of the faculty role. Several PIL participants were interviewed for this paper. The editor acknowledges and thanks Adrianna Kezar, Sean Gehrke, and Daniel Maxey for their contributions toward this paper.

PRESIDENTIAL INNOVATION LAB

Unbundling Versus Designing Faculty Roles

Under the oft-touted mantle of disruptive change, we hear a lot about the trend toward “unbundling” the traditional faculty role. What does this really mean? Is it a new idea? How might unbundling be operationalized at our institutions today? This paper explores both the historic evolution and current thoughts on unbundling.

UNBUNDLING DEFINED

Generically, unbundling is the differentiation of tasks and services that were once offered by a single provider or individual (i.e., bundled) and their subsequent distribution among multiple providers and individuals. As it relates to the faculty role, we generally refer to the differentiation of tasks and services in three distinct areas—institutional, professional, and instructional.

Institutional unbundling refers to separating services within the college or university into distinct silos, such as teaching, advising, assessment, enrollment management, or admissions. For example, faculty were once responsible for many higher education tasks (e.g., students’ development and advising) that are now performed by other institutional professionals in student affairs, academic advising, or auxiliary services.

Professional unbundling refers to the separation of professional responsibilities among faculty. Instead of a “complete” scholar who is responsible for teaching, research, and service, for example, this work may be spread among academic professionals who each specialize in just one of these roles. Non-tenure-track faculty who hold teaching-only appointments are a common example.

Instructional unbundling refers to dispersing—often with technology’s help—the different roles associated with teaching, including course design, delivery, assessment, and advising. As faculty had less expertise in technology and instructional design of online courses, some providers began to unbundle certain roles that could be better conducted by other professionals with specific expertise.

Changes in the faculty role are related to all three of these contexts in which unbundling occurs. However, when scholars describe unbundling, they are rarely speaking of the effects of multiple and varied types. By looking at all three types together, we can better see the interplay among them, and gauge how this interplay has shaped change in the academy in fundamental ways, and assess its impact (Smith 2008; Troutt 1979).

THE UNBUNDLING/REBUNDLING CYCLE

Although increased attention has been given to unbundling in recent years, the phenomenon has occurred in American higher education since its beginning (Schuster and Finkelstein 2006). In the eighteenth and early nineteenth centuries, faculty members were tutors who largely received contingent appointments. Work as a tutor was not considered to be a lifelong career, and was typically an early step toward another career, typically in the clergy. The tutors provided general instruction in many different areas,

working with students across their four years in the degree. They also provided “co-curricular” content related to their students’ moral development. An early form of unbundling occurred in the early 1800s as faculty members began to be hired to fill more permanent positions, often with responsibility for a particular area of specialization such as natural philosophy, divinity, or ancient languages. Faculty members began to focus mostly on their topic area, rather than working with students across the four years of the curriculum, but they continued working with students on moral development.

FACULTY PROFESSIONALIZATION

When the university model became dominant in the late 1800s, the faculty role continued to increasingly focus on the specialization of knowledge, and research came to be seen as a major part of faculty work as the faculty became professionalized (e.g., involved in campus governance). The more professional model that emerged unbundled the advising, student development, and moral development components that were seen as core attributes of the earlier tutor role and the early permanent-faculty role. This led to an emerging student services movement. Although faculty members were doing less of the day-to-day administrative work of their institutions (e.g., registration), they began to have greater involvement with institutional governance, research, and public service. As faculty became professionalized, they felt it was important to have input into institutional matters related to the curriculum, educational policy, faculty personnel decisions, and the selection of academic administrators. The addition of these new tasks represented a rebundling of the faculty role.

ACCOMMODATING INCREASING DEMAND FOR HIGHER EDUCATION

After World War II, the influx of many veterans on college and university campuses fueled unprecedented enrollment growth. New institutions were developed, such as community colleges, technical colleges, and urban institutions. These new or expanded institutions had less emphasis on conducting research, prioritizing teaching instead. In the 1970s, the connection between research and teaching was further weakened. As the numbers of part-time faculty members grew throughout higher education sectors, it became the norm that tenure-track faculty increasingly taught the upper division and specialized courses; part-time faculty members were assigned to teach introductory and developmental education courses.

Larger universities began to experiment with using teaching assistants to provide some aspects of course delivery and assessment. The current concern about the role of technology in subsuming faculty involvement in grading, delivering course material, and other aspects of teaching may be seen as an extension of a long-standing precedent for non-faculty members assuming responsibility for such functions. Our twenty-first century technology is not solely responsible for introducing this notion of unbundling faculty teaching responsibilities among a number of individuals with differing levels of expertise.

EDUCATIONAL TECHNOLOGY AND ONLINE EDUCATION

Instructional unbundling is facilitated by the rapid evolution of information and communication technologies, declining public funding for higher education, and the continued need to provide greater access to higher education. Amid periods of constrained resources, the new technologies are assumed to be able to improve access and decrease costs, prompting a renewed focus on faculty roles. The assumption is that some teaching-related functions might be accomplished more cheaply by other individuals with specialized expertise. Thus, rather than hire faculty members to develop and deliver entire courses, the range of functions asso-

ciated with providing instruction has been unbundled. In one scenario, a few faculty members would be hired to design a course curriculum, while the delivery of content, advisement, and assessment of students is often left to other professionals who are paid less and have less access to institutional support. These other professionals may not have the same content expertise or specialized training as traditional faculty members do. In addition, faculty are often hired on a contingent and part-time basis and have little if any ongoing connection to the institution or to the broader higher education enterprise.

Vernon C. Smith (2008) provides an overview of this new model, the *virtual assembly line production*, in which online teaching is disaggregated into eight different functions, each with its own specialist. These include the subject matter or curriculum design (faculty members); instructional design (technology and graphics experts); interface development (graphic designers, web designers, web programmers, and editors); content delivery (networking, technology, and learning help desks); student interaction (faculty, although often outsourced to tutors); grading (peers, tutors); improvement (instructional design team, faculty); and advising (student services, tutors, specialist leads). So, increasingly the component tasks associated with providing instruction are becoming differentiated and distributed among individuals with varying levels of expertise in an attempt to create the best online courses. Yet, Smith's work also demonstrates that rebundling is occurring; many campuses are discovering there are benefits associated with rejoining some of these tasks after experiencing problems with the extensive fragmentation of the teaching role.

It is important to note that instructional unbundling has taken on different forms. The University of Phoenix uses faculty to design courses and hires teaching professionals, who may not be faculty members, to deliver and assess courses. Western Governors University (WGU) uses external service providers for course development, and faculty for mentoring and support regarding content; it has separate faculty for mentoring across the whole program and advising. Evaluation of courses is conducted by a group of part-time faculty. It has three different types of faculty associated with specific tasks. It also hires paraprofessionals to conduct assessment and technology (see page 4 for more details).

At many institutions, a key area where unbundling has occurred is in large introductory courses. Carol A. Twigg and Clifford Adelman demonstrate that up to half of the credit hours produced at the lower-division level at American colleges and universities are concentrated in approximately 25 course titles. Rather than having each individual instructor take responsibility for developing such courses, costs could be cut by allowing a few faculty to design lower-division courses for multiple institutions. The instructors could then give their attention to advising and grading students. The National Center for Academic Transformation (NCAT), led by Twigg, has designed a number of such courses, and institutions are signing up to use them. The NCAT model contains six elements: whole course redesign (typically among a small group of faculty), integration of active learning, computer-based learning resources, mastery learning, on-demand help, and alternative staffing. Faculty roles are unbundled from the instructional design, advising/support, and lecture/content roles.

Massive open online courses (MOOCs) are yet another model in which a small number of faculty members are designing and developing courses, similarly to the NCAT model, and assessment and advising are handled by tutors or peers. In MOOCs, the faculty members associated with a course have little if any role in tasks such as answering students' questions or grading assignments. The important point to take away from these examples is that the

WESTERN GOVERNORS UNIVERSITY

Leaders at WGU began by asking what the essential faculty role is. They determined that it is applying and synthesizing content (through discussion, answering questions, and project work, for example), rather than delivering that content. They also consider mentoring and one-to-one student contact a central role of faculty. As a result, WGU's content is delivered through technology, and its faculty focus their efforts on guiding students through coursework. Course faculty or mentors focus on helping students with individual coursework, and a different set of faculty (called student faculty or mentors) are assigned to students over the course of their entire program to advise them, mentor them about program goals, and motivate them when they hit roadblocks. WGU leaders also worried about whether faculty were experts in assessment and technology, which are key components of their model. Leaders decided that faculty could not master the skills well enough, and unbundled these roles. They also believe that students will communicate more

with faculty who are not grading them, and so have hired faculty on a part-time basis to do grading. Most of their course faculty are full-time with benefits; they recognize that having faculty mentors requires a more full-time model.

But WGU President Robert W. Mendenhall recognizes that WGU started as an innovative institution, and that shifting faculty roles in traditional institutions will be a significant challenge: "Institutions that try to add on mentoring, technology, and robust assessment individually without revising the educational model will be more likely to add on costs rather than to reduce them." To unbundle the faculty role and reduce costs requires very systematic, rarely implemented changes within an institution. But Mendenhall suggests there may be some opportunities if changes are introduced gradually; while cost savings might be elusive, perhaps they can be garnered over time. One could approach unbundling slowly, starting with shifting the grading to a standardized assessment and moving content online; later, one

could add in instructional design and move toward having just a few faculty members create the curriculum. In general, Mendenhall believes, technology can serve as a lever for rethinking faculty roles.

Leaders at WGU also note the dearth of research on the unbundling of faculty roles. They do suggest that the research on the importance of mentoring and more individualized learning indicates that their approach is promising, but admit that very little research supports the experiments in faculty roles. They worry less about the common criticisms of unbundling because their model builds in an overall assessment for the program that connects learning between each course, and their addition of a faculty member to follow a student throughout their entire program also adds integration. So in many ways, they recognize the problems that have already been identified in studies of unbundling and have made alterations to address some of these emerging problems.

RIO SALADO COLLEGE

Rio Salado College (AZ) is a similarly innovative institution. As an online institution (with some hybrid courses), it relies mostly on a part-time faculty model. There is a small group of about 25 full-time faculty who provide leadership for the overall curriculum and whose work is interdisciplinary. There is only one faculty member in each core discipline/field who helps provide support by managing the part-time faculty within each area. Technology, student advising, testing, and assessment have been unbundled into separate divisions. The faculty's role is narrowly focused on course development and teaching the curriculum, along with some content delivery and applying knowledge in courses. They place a strong emphasis on creating collaboration across the various units—technology, assessment, faculty, advising, and support. Leaders at Rio Salado acknowledge that this level

of collaboration is quite unusual in higher education and would be hard to export to other institutions: The institution was structured and designed to be collaborative. The student population is largely composed of women over 30 who are returning to get degrees or certifications. Most of them work full time and have a family and are trying to manage multiple responsibilities.

Linda M. Thor, former president of the college, describes how this unbundling model is perhaps limited in scalability and may not be easily aligned with the goals of many higher education institutions: "This model works for a particular type of institution among a particular group of students, but this model of learning and faculty would not likely work for everywhere." Thor notes how the new faculty coming into the academy are much more versed in technology, predictive

analytics, and diversity, and have a hunger for innovation. She wonders whether unbundling will be necessary with a new set of faculty with skills more aligned to the new learning environment. She also sees a lot of opportunity in traditional institutions such as Foothill–De Anza Community College District (CA), where she is currently chancellor. Thor sees institutions as being open to trying new technologies and experimenting with ways to encourage robust faculty support of student learning. Therefore, she notes the importance of not "merely adopting innovations from other institutions, but designing faculty roles that best fit an institution's mission and goals." Like Mendenhall, she notes the importance of full-time faculty, and says administrators should be hiring more full-time faculty on campuses, but are constrained by budgets.

unbundling of instruction is occurring in many different ways; there is no single model. New approaches are also emerging quite rapidly, particularly as technology allows for many different configurations of the faculty role to be imagined.

COMMON CONCERNS

Two influential critiques of unbundling include John Henry Newman's *The Idea of a University* and Ernest L. Boyer's *Scholarship Reconsidered*. Newman argued that increasing specialization discourages faculty from developing general knowledge of many different curricular areas in order to educate the whole student and to facilitate interdisciplinarity.

Boyer's *Scholarship Reconsidered* supports the importance of the "complete scholar" encompassing the triad of teaching, research, and service, but suggests making the model flexible to address different institutional needs and emphasis. Boyer argues that while all faculty should be scholars and versant in the research in their specialization, community college faculty might focus more on the scholarship of teaching, and faculty in comprehensive or metropolitan universities might focus more on the application of knowledge. Higher education has long been differentiated with multiple institutional types, and Boyer reminds us that today, the larger university segment serves a smaller number of students than community colleges, technical colleges, liberal arts colleges, and non-university forms of postsecondary education do.

Lessons from history show that changes in faculty roles:

- Have largely occurred as a result of philosophical/ideological shifts or external influences and forces (e.g., the emergence of new types of institutions, the need to increase access or enrollment capacity, or resource constraints and cost controls)
- Have almost never been an intentional effort to redesign faculty roles in a way that is focused on student learning or serving institutional missions, an exception being efforts to address the influx of veterans enrolling after World War II
- Have elicited concerns among faculty that they will no longer be able to provide career advice in their fields of expertise, lose a broader connection to the general education curriculum, get caught in the tensions between the teaching and research roles, or lose the rich feedback on assignments from faculty when assessment is handled by peers
- Have not been the focus of empirical research to better understand all of the advantages and disadvantages of unbundling/rebundling

INTEGRATING TEACHING AND RESEARCH

Vincent Price, provost of the University of Pennsylvania, describes how technology and changes in faculty roles may create a greater connection between research and teaching. He sees the potential for technology to make teaching a more inquiry-based process, focused more on coaching and mentoring and less on content delivery. Rather than unbundling teaching and research, this approach makes teaching more like research and is likely, over the long run, to further align these roles at research institutions such as Penn. In fact, he sees undergraduate education potentially becoming more like the doctoral experience, involving students in inquiry-based teaching that is more like the Oxford tutorial model of personalized education. Faculty are increasingly going to see teaching as a research process, with information coming from data analytics and learning management systems; in this way, the shift to technology and data analytics can result in more bundling rather than an unbundling of faculty roles.

At the same time, he supposes that some institutions will continue to shift to more full-time non-tenure-track faculty and part-time faculty who focus on teaching (even though their part-time status will necessarily limit their ability to contribute to long-term governance and curriculum planning).

Unbundling appears to not be inherently problematic in principle, but in practice, challenges have emerged because institutions are unlikely to redesign policies and practices to ensure that the range of new positions are properly integrated and supported. History suggests that when tasks such as advising or supporting student development are taken away from faculty, consideration is not given to the ways that faculty can and should still have involvement, such as in providing advice about careers and graduate school. Similarly, when the teaching role is disaggregated, forms of support that are important for providing high-quality instruction are not provided. Unbundling does not have to have a negative impact, but historically it has been implemented without being carefully designed and considered in conjunction with the learning process and outcomes for students.

- Institutional unbundling, related to removing faculty involvement in advising and providing student support, can be problematic for student learning.
- There is nothing inherently positive about the joining of teaching and research for most faculty when it comes to supporting student learning.
- There are pressures that make it difficult for faculty to be both good teachers and scholars, but changes in institutional policy to support both aspects of the role have never been executed and studied.
- Teaching-only positions, such as those of non-tenure-track faculty, need support similar to that provided for tenure-track faculty to be effective, but this does not occur in practice.
- Limited research suggests that there may be student productivity gains created by implementing models of unbundling and using technology, but it is unclear whether the gains are from robust use of technology or unbundling the faculty role, or both.
- It is not clear whether unbundling the teaching role produces meaningful cost savings or whether any differences in outcomes are worth any savings that are realized, but future studies with more robust designs may provide more precise information.
- Unbundling the teaching role appears to compromise outcomes in configurations that have been tried out thus far.

FUTURE RESEARCH AND POLICY IMPLICATIONS

1. ***Study unbundling directly:*** There are very few studies that have examined the unbundling of the faculty role—professional unbundling, institutional unbundling, or instructional unbundling. Therefore, currently we must infer probable impacts from studies of different phenomena in order to understand what has occurred and what the consequences are. Unbundling models that more or less divide the faculty role should be examined for effectiveness and outcomes.
2. ***Examine impacts/outcomes:*** Research should also seek to examine the extent to which unbundling impacts a number of outcomes related to the student experience and student learning. Traditional institutions that value shared governance or academic freedom should also note that research on the unbundling of the faculty

role has not examined the impact on these institutional processes. Furthermore, little attention has been given to the potential effects unbundling has on knowledge development and dissemination in academic disciplines.

3. **Instructional unbundling:** There are few studies that have utilized robust research methods to support claims of cost savings from instructional unbundling. In order for research to be advanced in this area, scholars should first focus on honing methods to assign and assess the cost of instruction in a variety of settings, both online and in traditional brick-and-mortar classrooms.
4. **Impact of institutional environment on unbundling:** Some studies suggest that unbundling is shaped by different campus cultures, institutional types, reward structures, and policies. Studying the factors that support and foster successful unbundling in one case and stifle it in another can help us to better understand how to implement these changes properly, exposing various support systems and structures that can be put in place.
5. **Vehicle or organization for policy development related to faculty roles:** To define faculty roles, we may need a policy mechanism that utilizes existing research and that is based on intentional design rather than powerful interest groups, ideology, or external pressures alone. The history of redefinition of faculty roles suggests that clear and intentional design is often missing, and that it can result in problematic outcomes. Historically, no vehicle has existed to manage the differing external pressures/forces and differing interests, and the enterprise would benefit from a policy structure to help to define faculty roles in the future. Such a body might look like certification or licensure for other professional groups such as doctors or lawyers.

A PIVOT IN TERMINOLOGY: REDESIGNING FACULTY ROLES

Based on this analysis, we invite institutions to consider *redesigning* faculty roles to ensure that institutional missions—and particularly students—are being served. For example, campuses such as The Evergreen State College (WA), Hampshire College (MA), and The University of Texas of the Permian Basin have redesigned their faculty roles with new contracts, responsibilities, and appointments; these institutions have never had a form of tenure in place. Some of these campuses have created full-time non-tenure-track faculty positions focused on and rewarded for teaching with long-term contracts after a probationary period. Others are examining ways to create more flexible faculty roles to meet institutional goals regarding teaching, service, leadership, and community engagement by allowing for more flexible faculty appointments that are renegotiated yearly based on whether a faculty member will focus more on teaching, scholarship, or service/leadership. These thoughtful experiments were typically driven by evolving thinking about faculty work (e.g., to be more interdisciplinary or to focus more on teaching).

None of these early pilots was designed with the assumption that unbundling faculty roles was the solution; they instead started with questions about the type of education the institutions were attempting to provide, and which faculty role was best suited to meet each institution's goals. In general, experiments such as these have not been used to inform any major projects aimed at rethinking faculty roles beyond those within a single institution. The time may have come for a greater national dialogue and exchange about redesigning faculty roles for the future.

FINAL THOUGHTS

The long history of the unbundling-rebundling cycle suggests the practice is well entrenched. Intentional design or research has never been used to construct faculty roles. We need to move beyond the anecdotal and beyond extrapolating the virtues or pitfalls of a major transformation to the academic workforce. It is time for both academic and administrative leaders to consider not only how the faculty roles might be unbundled, but also how they might be designed with a sense of care and integrity to address the unique learning mission of higher education institutions.

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