INSTITUTIONAL COMMITMENT TO TEACHING EXCELLENCE:

Assessing the Impacts and Outcomes of Faculty Development

EDITED BY: Catherine Haras, Steven C. Taylor, Mary Deane Sorcinelli, and Linda von Hoene

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“High-quality instruction has been the backbone of an American higher education system that remains the envy of the world. But how to measure effective teaching and gauge its impact on an ever more diverse population of students is vital if we are to dramatically increase the number of Americans able to earn a college degree.”

—Molly Corbett Broad, president emerita, American Council on Education

FOREWORD

Higher education is undergoing an important sea change, where student success and learning is a primary focus. The mission of campuses has always been educating, but measuring and demonstrating that students are indeed learning is new. Additionally, providing support so that students succeed, rather than sink or swim, is also new.

Alongside this new philosophy toward postsecondary education is also a needed change in our structures and cultures to support student success and a value-added learning experience. One area that remains unexplored in this landscape is the faculty's role in student success, and the role faculty development/developers can play. One of the primary goals of the work I have been engaged in for the last decade (the Delphi Project on the Changing Faculty and Student Success) has been to highlight the connection between faculty and student success, which has largely been overlooked in efforts to support student success that typically focus on advising, mentoring, and out-of-classroom experiences and supports. Moreover, while these are important, study after study demonstrates that students' experiences in the classroom and with faculty are one of the most important factors in student outcomes ranging from persistence, graduation, sense of belonging, and academic self-efficacy to other important psychosocial outcomes associated with learning and graduation.

However, without institutional leadership to provide appropriate incentives and rewards for teaching excellence and faculty development to help faculty learn about new evidence-based teaching approaches, faculty are unable to play this important role in assisting in student success. Creating the appropriate environment for teaching excellence requires overall support from the institution. Projects such as the Association of American Universities (AAU) STEM Initiative demonstrate the importance of institutionalizing a culture of teaching excellence, which requires leadership commitment, resource reallocations toward instructional processes, alteration of incentives and rewards, development of teaching infrastructure such as centers for teaching and learning, improved classroom spaces and more robust technology, and encouragement for faculty to create student learning outcomes, adopt evidence-based teaching practices, alter curriculum, and engage in the process of continuous improvement around teaching.

To support the institutionalization of a culture of teaching excellence, faculty developers need to define how they can support such a culture, create benchmarks of activities that connect with a culture of teaching excellence, and demonstrate through assessment how they are contributing to such efforts.

This publication provides a compelling articulation of the standards and activities faculty developers should engage with to enhance the teaching and learning environment on campus; reviews approaches to assessment that demonstrate whether they are meeting these goals and objectives; and argues for ways that institutional leaders need to collaborate with centers for teaching and learning in a mutual effort to create a culture of teaching excellence. Only through a shared leadership effort of many stakeholders across campus can this important objective be met. No one office, unit, or individual can create an environment of teaching excellence.

Centers for teaching and learning and their directors are well-positioned to play a pivotal role in advancing this new culture. However, as this paper outlines, centers for teaching and learning historically did not conceptualize their role as contributing to an overall culture of

teaching excellence but instead focused on individual faculty development. While supporting the goals of individual faculty is important, to scale efforts and reach more faculty and support an overall changing culture, faculty developers have begun to rethink their role, activities, and engagement with different campus stakeholders. The well-respected authors of this paper challenge the profession of faculty development to further establish standards of excellence for their work that can then amplify their efforts to improve teaching on campus.

In the end, faculty developers have a significant opportunity to make an even larger impact on the improvement of teaching than in the past. This paper is a call to embrace this more comprehensive identity and describes a set of actions to realize this new identity. I look forward to seeing the results.

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PREFACE

Quality instruction yields benefits that extend far beyond the classroom into students' co-curricular experiences and contribute to students' achievement—retention, persistence, and success—ultimately leading to improved institutional efficiency. Institutions of higher education must leverage their unique assets (e.g., faculty, instructional expertise, educational technologies) to design and implement student-centered, attainment-focused instructional approaches and practices that can lead to improved student outcomes and timelier postsecondary credential completion.

This publication is part of ACE's work to elevate the important role that teaching plays in helping students, and institutions, succeed, and that faculty development plays in improving teaching practice by identifying connections between instructional quality, student outcomes, and institutional efficiency. These connections are explored throughout this publication, backed by scholarly inquiry and research, and intended for multiple audiences—faculty developers, deans, provosts, and presidents—each of which will take something different away. For faculty developers, it might be new assessment practices to implement; for a dean, it could be a better understanding of the impact of faculty development; and for a provost or president, it might raise awareness of the work of faculty development and the need for an increased investment in instructional quality efforts that can be grounded in assessment and evidence. To achieve this, I assembled a team of respected teaching and learning scholars and practitioners from two- and four-year, public and private institutions, and different academic backgrounds and experiences, which contributed to the depth and breadth of this work.

Improving the quality of instruction is an institutional imperative, as better teaching leads to better student outcomes, which is good for the institution. Better student outcomes impact attrition, the number of courses repeated, and time to graduation. Therefore, there is a financial incentive for the institution to invest in preparing its faculty. As with any organization, faculty need support, guidance, and resources to achieve and maintain high levels of teaching effectiveness. Faculty developers are well positioned to provide that support if provided with resources necessary to sustain that effort at the institution. That said, faculty developers need to meet institutional leadership halfway. Institutional leadership needs evidence of effectiveness to justify the expenditure of scant resources. Faculty developers would never suggest a faculty member give a high grade to a student because the student read the chapter and claimed they learned from the material. Faculty developers are very effective in designing assessment strategies so that faculty can demonstrate students know or can do something before a grade is awarded. Why should the efforts of faculty developers be any different? Institutional leaders require information about the effectiveness of investments before committing continuing or additional funding. Of note, though, is that expected outcomes must be commensurate with the resources allocated to the effort, and at least initially, a teaching and learning center may not have the resources or expertise to prove return on investment at the deeper levels of impact such as on student learning.

Using assessment of and data on the impact of faculty development activities on teaching practice, student learning, and on the institution more broadly will provide evidence to make a case for resources. In its simplest form, "you have to show more to get more."

As we set out to write this paper—to tell the story of how faculty development came to be and the intersection of faculty development and higher education—I knew there would be academic discourse or tension; I would be remiss if I did not acknowledge these tensions and

explain the need for such tension to move the field forward and create actionable change.

Let me explain briefly about this tension. Peter Senge, a senior lecturer in Leadership and Sustainability at the Massachusetts Institute of Technology Sloan School of Management and founding chair of the Society for Organizational Learning, introduced the concept of creative tension nearly three decades ago. He explains that creative tension comes from "seeing clearly where we want to be, the vision, and telling the truth about where we are, current reality."[1] Throughout this process, 14 bright minds examined the past, current, and future states of faculty development. Thus it is inevitable that we would experience some level of creative tension in the writing of this paper.

Senge goes on to note that creative tension can be resolved in two ways: "by raising current reality toward the vision, or by lowering the vision toward current reality." Throughout this work, we not only worked to craft an aspirational vision for the field but also grappled with painting an accurate picture of the current reality, because faculty development at one institution can be vastly different than at another institution. However, out of the tension came this energy for change and a desire to offer practices and goals that the field might adopt to move toward further professionalization and demonstrating the significant impact that faculty development can have on an institution.

I would argue that faculty development is at an inflection point. The time is now to adopt new ways of thinking about the field and move toward adopting professional standards of practice, along with more carefully documenting the work accomplished and resulting impact through assessment. Institutional leaders are increasingly looking to data to make decisions about resources, about strategy, and about investments.

My hope is for faculty development to flourish, to be a major voice in the conversation around student learning and outcomes, and to be seen as a strategic asset to the institution; without data to prove its effectiveness and impact, faculty development will likely never have a regular seat at the table of institutional leaders. It is with this regard for the promise and potential of faculty development that I led this collaborative project.

I am extremely humbled and grateful to have worked alongside three co-editors and lead section authors, Catherine Haras, Mary Deane Sorcinelli, and Linda von Hoene, who helped shape what I hope will be a valuable contribution to the field for many years to come. My gratitude extends to the 10 co-authors on this project: James J. Berg, Helen Bond, Eva Férnandez, Margery Ginsberg, Jake Glover, Emily Daniell Magruder, Linda B. Nilson, Greg Siering, C. Edward Watson, and Todd Zakrajsek. Each of these dedicated individuals brought a unique perspective to this work and challenged our collective thinking. My appreciation goes to Brice Struthers at ACE, who managed the many competing deliverables and kept the project on schedule. Finally, this work would not have been possible without the generous support of Strada Education Network and our program officer, Lorenzo L. Esters, vice president of philanthropy at Strada.

To all involved in this project, *thank you*.

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1 Senge, Peter M. 1990. "The Leader's New Work: Building Learning Organizations." *Sloan Management Review* 32 (1): 7–23.

INTRODUCTION

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Seismic changes in student demographics underscore the urgent need to evolve mindful teaching practices across American colleges and universities. Although increasing numbers of students of color enroll in postsecondary institutions, gaps by race and ethnicity in college completion remain unchanged. Further, low-income, first-generation, adult students and those with disabilities strive for college, but with mixed results. College attainment will not be possible for millions of Americans if these achievement gaps persist, especially as the nation's population becomes increasingly diverse (Nelson 2014; Seidman 2012).

Increasingly diverse student demographics make it crucial that faculty are attuned to culturally responsive teaching. In higher education, teaching practices that promote inclusive and deep learning within and across cultural and linguistic groups is ever more important to supporting students along their educational journey. Given the inseparability of motivation and culture, instruction that supports educational attainment of students within and across cultural groups is a highly nuanced and urgently needed endeavor (Adams, Bell, and Griffin 2007; Kitayama and Markus 1994; Geertz 1973). Colleges and universities cannot graduate this emerging student majority without earnest attention to revisiting teaching development, including questioning basic assumptions about these learners, many of whom enter college with deficits (Lundquist, Spalding, and Landrum 2002). Inclusion stands as the largest barrier to college attainment (Orfield, Marin, and Horn 2005).

In recent years, faculty development centers have served a crucial role in updating instructional practices in campus departments for conventional courses and innovative program

formats. At the forefront of change, these centers can foster equitable and inclusive practices for students and faculty, mitigating existing educational gaps and stereotype threats that jeopardize how students see themselves (Steele and Aronson 1995; Steele 2010) and implicit biases that prevent faculty from an objective student assessment (Jacoby-Senghor, Sinclair, and Shelton 2016).

Given the long history of higher education reform in the United States and persistent disparities in student learning and degree completion, especially the stark attainment statistics for poor students, the call for heightened and significant attention to instruction as a key lever of change has never been greater (Bowen and McPherson 2016). Within and outside of the academy, there needs to be focused attention on student learning among all demographic groups, support for and assessment of faculty development across departments and programs, and well-documented examples of the deep and enduring relationships between instructional support, teaching practices, and student learning.

Institutions of higher learning cannot move forward without acknowledging—and developing—such tremendous human capital. The work of faculty development is necessary but insufficient without attention to changes to the ways we think about and educate the majority of American college-going students.

To raise teaching excellence to the forefront of the student success agenda, the American Council on Education (ACE) and Strada Education Network are collaborating on a national effort—Examining and Quality-Assuring Post-Secondary Pedagogy—to assess the connections between quality teaching and student success. This work addresses three interrelated initiatives that explore: (1) relationships between instruction and student outcomes; (2) linkages among instructional quality, student outcomes, and institutional finances; and (3) the role of faculty professional development in advancing instructors' use of evidence-based teaching techniques, leading to improved student outcomes.

As the major coordinating body for the nation's colleges and universities, ACE represents all types of U.S. accredited, degree-granting institutions: two-year and four-year, public and private. ACE's Center for Education Attainment and Innovation (CEAI) leads national initiatives designed to recognize and promote adult learning programs in higher education as well as increase student attainment by engaging institutional leaders, higher education associations, and external influencers in crafting and promoting solutions to further its postsecondary attainment goals.

Strada Education Network, through its Completion With a Purpose agenda, seeks to support students' postsecondary education attainment that provides students with credentials and competencies that lead to productive and rewarding jobs and careers and thus to economic, civic, and creative contributions to their communities and society.

During 2016 and 2017, ACE convened teaching and learning expert scholars and practitioners to examine research and practice related to factors that influence how faculty approach teaching, how faculty learn about teaching, evidence-based approaches to faculty development, and especially, how faculty development centers assess the impact of their work on faculty learning, improved teaching, and student learning outcomes. The result of the convening and subsequent work is this publication, which focuses on the role of faculty development in advancing evidence-based teaching, improved student learning, and an institutional culture

that supports quality teaching and learning. This publication complements two previously published papers commissioned by ACE under the Strada Education grant on connections between instructional quality and student outcomes (Jankowski 2017) and on institutional net revenue (Brown and Kurzweil 2017), and several "best practice" case studies of institutions that are adopting evidence-based instructional practices and scaffolding approaches to faculty development.

This paper is divided into five chapters, each offering a distinct perspective on postsecondary teaching quality. The paper has multiple audiences—faculty developers, deans, provosts, and presidents—though faculty development is the constant thread that hangs the chapters together.

Chapter 1 highlights how faculty development has evolved from the creation of the first teaching and learning center over 50 years ago to its current state. This chapter is helpful to new faculty developers, or faculty interested in faculty development, who are interested in understanding how the field came to be and the related professional groups that have bound the field together.

Chapter 2 identifies the role faculty developers play in equipping faculty with knowledge and skills critical to improving teaching practice. This chapter articulates the faculty outcomes that faculty development activities and programs strive to achieve. The effectiveness of the teaching practices associated with these outcomes has a substantial impact and ripple effect on the teaching and learning culture of the department and institution.

Chapter 3 introduces promising practices to assess the impacts and intended outcomes of faculty development. The authors use "promising" because, while implemented at some institutions, not all practices have been widely adopted to date. Consequently, the authors highlight the need for resources to match expectations for assessment.

Chapter 4 outlines future goals and actions that the faculty development field might aspire to achieve in the next decade. Notably, the authors acknowledge that faculty development is still a relatively young field loosely bound by a collective desire to help faculty succeed, but not yet defined by a set of professional competencies, practice standards, or body of knowledge.

Chapter 5 raises awareness of the need for a mutual investment in improving instructional quality. This mutual investment, as suggested by the authors, involves a commitment to shared leadership to give voice and influence to the professionals responsible for improving instructional quality at the institution, and a commitment to adequately resource efforts to improve teaching excellence across the faculty ranks—full- and part-time, tenure- and non-tenure-track faculty, senior faculty and graduate student instructors.

What ensues is eminently practical advice for enhancing the most central endeavor of the academic enterprise—teaching and learning—by building a culture that promotes faculty development, informed by relevant assessment and evaluation, and recognizing the significant return on investment that institutions and their students realize from enhancing instructional quality.

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1

WHY NOW IS THE TIME FOR EVIDENCE-BASED FACULTY DEVELOPMENT

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Only recently has research established a connection between faculty development and student success (Condon et al. 2016; Seidman 2012). In their exhaustive examination of institutional action and retention, Seidman and others squarely identify faculty development with student learning. The authors state, "Faculty development plays a direct role in influencing pedagogy and curriculum and an indirect but very important role in student involvement, and therefore, student learning and success" (260). Further, by extending recent research in the Scholarship of Teaching and Learning (SoTL) to assessment of faculty development and its effectiveness, Condon and colleagues (2016) show that faculty participation in professional development activities positively affects classroom pedagogy, student learning, and the overall culture of teaching and learning in a college or university.

One avenue to foster high-impact faculty development is to determine benchmarks for quality, scalable faculty development to equip more instructors with learning-centered teaching skills. Essential steps in the development of performance measures for faculty development are to examine the goals and intended outcomes of faculty development, identify current methods centers are using to assess the outcomes of their work, determine strengths and weaknesses in those methods, suggest methods and practices to measure the quality and efficacy of faculty development activities, and offer an action plan for what standards the field might adopt or adapt to further evidence-based teaching and student learning outcomes.

Although an investment in faculty development leads to improved teaching, and improved teaching leads to improved student outcomes (Brown and Kurzweil 2017; Condon et al. 2016), this research-based reminder of the value of faculty development comes with the caveat that faculty developers have to be intentional, driven by evidence-based practices, and continuous in their assessment of the impact of their services to have a meaningful and lasting impact on the quality of teaching and learning. Colleges and universities also need to recognize that although faculty professional development is key to encouraging and supporting instructors' adoption of research-tested instructional ideas and strategies, it is but one of a constellation of influences that affect faculty members' approaches to teaching. Of course, much of pedagogy occurs in the classroom, and central to changing pedagogical practices are faculty and students. At the same time, a growing body of research asserts that a transition to evidence-based teaching requires "scaffolding" to sustain instructional efforts. Supports include access not only to teaching development opportunities, but also to resources (e.g., readily available learning tools, technology, data on student performance) and cultural change such as academic leadership commitment, incentives, and measurement of teaching excellence. This call for a more systemic approach to change in teaching and learning has been reiterated by numerous scholars (Association of American Universities 2014; Austin 2011; Fairweather 2009; Henderson, Beach, and Finkelstein 2011; Kezar 2013; Sorcinelli, Austin, and Huber 2016; Tagg 2012; Weaver et al. 2016).

To better understand the role of faculty development in the broader institutional culture, this chapter draws upon literature and research—in particular, the two largest-scale and most recent studies of the field (Beach et al. 2016; Sorcinelli et al. 2006). Grounded in quantitative and qualitative data from faculty developers in the U.S. and Canada, these studies allow us to (1) briefly trace the progression of faculty development, focusing on accountability practices; (2) describe how the field assesses its work; and (3) identify the influence of higher education professional associations on faculty development and its assessment.

We note from the outset that we will use the terms "faculty" and "instructor" throughout this publication, but the term is inclusive of the variety of instructional ranks and appointments: full- and part-time instructors, tenure-track and tenured faculty, lecturers, and graduate and teaching assistants. Further, where the authors reference adjunct or contingent faculty, this comprises all part-time and full-time non-tenure-line faculty whose primary job responsibility is to teach (Taylor 2017). Similarly, we will use the term "teaching center" with the understanding that the term is inclusive of the variety of faculty development centers for "learning and teaching," "improvement," "success," "excellence," and the like. Finally, although "teaching centers" engage in an increasing number of institutional priorities and efforts (e.g., support for scholarly work, leadership training, and developing mentoring programs), the primary focus of the current paper is on those teaching-related efforts that lead to a direct impact on student outcomes.

What follows in this publication are perspectives on past and current assessment practices in faculty development, teaching effectiveness outcomes for instructors and faculty developers, a detailed catalogue of promising practices in the assessment of faculty development outcomes, future goals and actions of faculty development, and key institutional commitments that need to be addressed in order to bring about quality faculty development.

EVOLUTION OF FACULTY DEVELOPMENT ASSESSMENT PRACTICES

The professional field of faculty development is young, having emerged just over half a century ago with the establishment of the first teaching and learning center at the University of Michigan. It owes its genesis and shaping to the evolving academic experience of faculty and learners, changes in pedagogy, and shifts in social and economic trends. To date, the field has been referred to by some interchangeable terms, especially beyond the United States, including educational development, faculty development, staff development, and professional development. Several scholars in the field note that the conversation about what to call the field remains productive but lacks consensus. While the term "educational development" is gaining currency, the commonly accepted term in higher education in the U.S. remains "faculty development" (Gillespie and Robertson 2010; Schroeder et al. 2011).

A galaxy of scholars and practitioners has contributed to the development of the field. Notable among those who defined the field are Bergquist and Phillips (1975) and Gaff (1975), professors in the areas of psychology, organization development, and public policy. Bergquist and Phillips argued that a comprehensive program of faculty development was one which provided three essential components: instructional development, organizational development, and faculty development. They offered a holistic view of faculty development designed to support faculty as teachers, researchers, advisors, academic leaders, and contributors to institutional decisions. Gaff (1975) envisioned the field as facilitating the professional and personal growth of faculty but proposed a core focus on teaching development and the role of faculty as instructors. Today, research suggests that the field has made its concerns comprehensive enough to include a strong emphasis on teaching and learning, but to embrace other interrelated professional development issues such as mentoring, scholarly writing, career advancement, and leadership (Beach et al. 2016; Sorcinelli, Gray, and Birch 2011).

Scholars have conceptualized the historical evolution of the field into a series of ages, with the documentation of faculty development outcomes progressing from the assumed to the assessed (Sorcinelli et al. 2006). In the Age of the Scholar (1950s–early 1960s), the key goal of faculty development was to help instructors to enhance their content expertise through sabbaticals and leaves. Few colleges and universities had formal programs, and there were virtually no measures of outcomes (Eble and McKeachie 1985; Rice 1996). Faculty development in the Age of the Teacher (mid-1960s–1970s), reflected a realization that faculty should not only be prepared in their disciplines but also able to teach. The first large-scale study of the field found that more than 40 percent of institutions surveyed had an individual, program, or set of practices that supported faculty and teaching development, yet only 14 percent of programs were evaluated (Centra 1976).

The Age of the Developer (1980s) described a decade in which the number of faculty developers and centers increased; at least 50 percent of four-year institutions offered some formal faculty or teaching development services (Erickson 1986). Interest in measuring faculty perfor-

mance heightened, especially the evaluation of faculty members as teachers. In the Age of the Learner (1990s) student learning rather than teaching took center stage (Barr and Tagg 1995). There were no comprehensive studies of faculty development during this decade, but external stakeholders were beginning to ask hard questions about performance measurement at every level—from individual faculty members in classrooms to departments to institutions.

Meeting new expectations for student and faculty success in the Age of the Network (the 2000s) called for greater collaboration among teaching centers, instructional technology units, libraries, graduate schools, assessment offices, and departments and colleges. In an extensive study of the field, *Creating the Future of Faculty Development*, faculty developers identified assessing learning outcomes as one of the top challenges facing faculty and institutions. Developers, however, rated their capacity to provide services responsive to this need quite modestly and expressed concern that centers would be pressured into various accountability systems "for business purposes rather than educational ones" (Sorcinelli et al. 2006, 136). At the same time, assessing student learning was one of the top three challenges that developers believed could and should be addressed by faculty development in the near future.

A decade later, a follow-up study of the field suggested that faculty development was at the onset of a new age. In 2006, researchers had explored questions of goals guiding faculty development practice, faculty development structures, staffing, and services (Sorcinelli et al. 2006). *Faculty Development in the Age of Evidence* (Beach et al. 2016) examined more deeply to what extent and in what ways faculty developers were assessing the impact of their programs on teaching and learning and other key outcomes. Assessment and accountability emerged as predominant and pervasive themes throughout the study, resulting in the identification of a new Age of Evidence, which also became the title of the study. Below we draw on findings from this study and other research (Chism, Holly, and Harris 2012; POD Network 2016; Hines 2009) to discuss how assessment currently fits in the work of faculty development.

CURRENT FACULTY DEVELOPMENT ASSESSMENT PRACTICES

How do faculty developers think about and understand assessment? One challenge is that a precise definition of assessment can be difficult to parse because it is applied to such activities as student learning outcomes, program review, performance benchmarking, and quality measurement, each of which has numerous manifestations in academic environments. Further, higher education has experienced a tension between activities such as performance benchmarking and student learning outcomes assessment for decades. The tension is sometimes identified as the difference between assessment for accountability (seemingly an administrative concern) and assessment for improvement (seemingly a faculty and faculty developer concern) (Ewell 2009; Sorcinelli and Garner 2013). Indeed, one study found that developers think about assessment and their role in the process along a continuum from developmental to evaluative, encompassing four areas: assessment of teaching and student learning; assessment of faculty performance; institutional assessment and accreditation; and assessment of the impact of their programs (Beach et al. 2016).

The study found that professional staff in teaching centers supported the assessment of he outcomes and impacts of their own programs and support services. Typically, they saw themselves as coaches who could help faculty build their skills as assessors, rather than putting the faculty developer in the role of assessor of student learning. For example, they might work

through an assessment cycle with a faculty member or faculty learning community—integrating outcomes in the syllabi, planning meaningful and authentic assessments of the outcomes (assignments), and using data from assessments to improve practice. Ultimately, faculty developers were interested in authentic versus prescriptive assessment—what was important to value, not what was easy to count.

Findings also suggested that the role of faculty development in the assessment of faculty performance was more muddied. Developers were deeply committed to helping faculty assess student learning but less enthusiastic about taking on roles in which they might be called on to evaluate the quality of faculty teaching for personnel decision making. This sentiment speaks to the long-standing separation of faculty improvement from evaluation for faculty performance reviews or other institutional actions. In contrast, developers were supportive of criteria for evaluating faculty work that called for evidence of student learning through reflective course or teaching portfolios. Moreover, they were enthusiastic about the Scholarship of Teaching and Learning (SoTL), in which faculty systematically investigate questions related to student learning with the ultimate goal of advancing the practice of teaching and overall educational quality.

The role of faculty development in supporting institutional assessment and accreditation was also somewhat confounded. Faculty development's guiding principles have focused on engagement in formative, voluntary, confidential, and faculty-driven work. The accreditation agenda is often viewed as summative, non-voluntary, public, external, and compliance driven. Findings indicated that helping the institution respond to accreditation demands was not among the goals most salient either to teaching centers or among issues identified for expansion. Still, over half of center directors (54 percent) reported collaborating with their assessment offices (Beach et al. 2016), and a nearly identical percentage (53 percent) of respondents to a POD Network membership survey reported that they "are involved in the accreditation work of their institutions or of component schools/departments" (POD Network 2016, 7). Developers were most positive about involvement in institutional assessment when it opened the door to support academic department and program-level curriculum revision and review as well as individual course-based assessment.

Finally, how do faculty developers assess the impact of their programs? Almost two decades ago, Chism and Szabó (1998) found that faculty developers were assessing their programs in encouraging numbers but using somewhat superficial measures to do so. In 2009, Hines documented the same situation through interviews with developers. She noted that although there was a significant lack of systematic assessment of programs among her study participants, there was an equally great interest in assessment.

Beach and her colleagues (2016) asked faculty developers how they measured the key outcomes of their programs on a Likert scale of one (not at all) to four (great extent). Findings indicated that as the complexity of the assessment approach increased (e.g., measuring the change in teaching practice or student learning), the percentage of use declined. For example, overall, centers collected data by tracking participation numbers (3.8) and participant self-report satisfaction (3.5) at a moderate to great extent; collected data on an increase in the knowledge or skills of participants (2.7) or a change in the practice of participants (2.5) at a slight to moderate extent; and collected data on changes in the learning of the students served by participants (2.1) and/or changes in the institution's culture of teaching (2.0) at only a slight extent. A recent membership survey of faculty developers corroborated this finding, reporting

that the impact of teaching center services is primarily measured and demonstrated by self-reports of satisfaction or learning after use of the unit's services (POD Network 2016).

As a whole, studies indicate that teaching centers are committed to assessment. Regardless of size and staffing, nearly all centers are actively engaged in tracking participation in and satisfaction with their programs but are challenged in assessing their impact on instructional practice, student learning outcomes, and culture change. Faculty developers are acutely aware of the need to assess the quality and impact of their programs but indicate that they often do not have the staff, time, skills, or resources to design and implement in-depth assessments. The question is how to address these challenges. Might there be avenues for deepening the expertise in assessment among faculty (e.g., as assessment fellows) and faculty developers? Might there be more fruitful collaborations with campus units such as an office of assessment or with doctoral students in an educational measurement degree program? Alternatively, might there be fruitful linkages with external stakeholders such as higher education professional associations with expertise in quality enhancement and improvement?

FACULTY DEVELOPMENT AND HIGHER EDUCATION ENTITIES

Professional associations in higher education have had considerable influence on the field of faculty development. They have been instrumental in giving individuals engaged in the work of faculty development a professional identity, and have partnered with the field as it has developed its knowledge base, skills, and qualifications. Perhaps no professional association has influenced the development of the field of faculty development as much as the American Association for Higher Education (AAHE). From its founding in 1968 to its dissolution in 2005, AAHE promoted change and reform in undergraduate teaching and learning. Early annual conference sessions incorporated faculty development topics such as improving teaching, evaluating faculty, and integrating instructional technology. In 1974, AAHE's magazine, *Change: The Magazine of Higher Education*, featured the article "Faculty Development in a Time of Retrenchment." At its 1975 annual conference, AAHE convened a group of college and university personnel to explore the founding of a "national organization focused on faculty development" (North and Scholl 1979, 4).

The Professional and Organizational Network (POD Network) in Higher Education was founded in 1976 "at the annual spring conference of the AAHE" as a professional organization for college and university personnel involved in providing professional development services for faculty, particularly focused on effective teaching. The POD Network organized its first national conference in October 1976 and has grown from a handful of practitioners to over 1,000 members, making it the oldest and largest professional association of faculty development in the world. It has continued to convene an annual conference and offer training and other resources (e.g., website, listserv, access to *To Improve the Academy*, and grants/awards) to its members. It also surveys its membership periodically to assess the future trends in the profession. Its 2016 survey identified future directions to include more exploration into the expanding nature of roles and career growth in faculty development, the growth mindset of faculty developers, networking opportunities, and development of professional pathways into the field (POD Network 2016).

Following its proactive role in founding the POD Network, AAHE continued to exert influence through its national conferences, including a specialized gathering on Faculty Roles and

Rewards, and through *Change* magazine. Of particular note was its collaboration in the development of "Seven Principles of Good Practice for Undergraduate Education" (Chickering and Gamson 1987). This cogent summary of research on good practices and conditions for student learning and the teaching that fosters such learning has had a lasting effect on research and practice in higher education. In fact, the expansive Wabash National Study, whose goal was to provide assessment evidence to promote improvements in student learning, concluded that "…students still benefit from the good practices and conditions that Chickering and Gamson highlighted over 20 years ago," practices that have had an impact on almost every outcome the Wabash study measured. Among four dimensions the study highlighted as good practices and conditions, the first dimension directly relates to the work of faculty development: "Good Teaching and High-Quality Interactions with Faculty" (Blaich and Wise 2011, 10).

As part of its promotion of the curricular and student outcomes benefits of liberal education, the Association of American Colleges and Universities (AAC&U) has long co-sponsored with the POD Network faculty development institutes and workshops at its annual conferences. In addition, together with the Council of Graduate Schools (CGS), AAC&U played a foundational role in the earliest years of the Preparing Future Faculty movement (Border and von Hoene 2010) enabling graduate students from research universities to become familiar with teaching at a broad range of institutions where they would eventually be hired. More recently the CGS renewed its support of preparing future faculty programs by funding projects that assisted graduate students in learning about assessment. AAC&U's work also has included guidance regarding how programmatic assessment can be leveraged to increase the quality of instruction. As an outgrowth of this work, the organization launched the LEAP initiative and released "High-Impact Educational Practices," a research analysis defining a set of educational practices that have a demonstrably positive impact on student success and that produce disproportionate benefits for underserved students (Association of American Colleges and Universities 2017). This initiative has led to a range of curricular initiatives across higher education, such as experiential learning, first-year experiences, and capstone courses, which often have been facilitated, in part, by faculty development efforts.

American community colleges have long had a dual mission of access and success. Advocates began in the late 1990s to assert that the agenda of open admissions had eclipsed students' successful transfer to baccalaureate-granting institutions. The success agenda has received new energy from several states and national organizations, including the American Association of Community Colleges (AACC), which issued Rebalancing the Mission: The Community College Completion Challenge (Mullin 2010). The success agenda includes a focus on course completion, degree attainment, and accelerating the developmental education pathway. The emphasis on use of empirical data to track student learning has course design, pedagogical, and institutional implications.

In addition to professional associations, a number of private foundations have played a significant role in supporting faculty development. For example, the Bush Foundation, Kellogg Foundation, and Lilly Endowment embraced the field in the 1980s and 1990s, supporting a wide diversity of projects and programs aimed at improving undergraduate education through faculty development (Eble and McKeachie 1986; Sorcinelli and Austin 1992). Pew Charitable Trusts was instrumental in the growth of the national TA development movement the 1980s and 1990s through its funding of five national TA development conferences (Border and von Hoene 2010). In the twenty-first century, foundations such as the Teagle Foundation and Andrew W. Mellon Foundation continue the support for innovation in pedagogy, curriculum,

diversity, and assessment. Additionally, the Teagle Foundation, through its Graduate Student Teaching in the Arts and Sciences Initiative (Beld and Delmont 2016), has helped graduate students at research universities develop teaching skills aligned with the outcomes we present in the next chapter of this paper.

There have also been decades of investment by government agencies to develop a deeper understanding of learning, pedagogy, and assessment in undergraduate Science, Technology, Engineering, and Mathematics (STEM) education. Initiatives include the Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE), and programs through the National Science Foundation (NSF) such as Course, Curriculum, and Laboratory Improvement (CCLI) and Transforming Undergraduate Education in Science (TUES), all of which have developed, implemented, and tested innovations in teaching (Weaver et al. 2016). Over the last few years, Weaver notes, NSF investments have been shifted to projects that target institution-level transformation rather than individual course improvements. Faculty professional development structures have varied, from creating department-based initiatives to launching disciplinary teaching and learning centers to partnering with the university's teaching and learning program. Perhaps most striking about the current STEM reform effort is its serious effort to develop metrics, design and select evaluation tools, and carry out assessment not only on individual courses and the teaching of them but also to determine what data serves the goal of measuring departmental and institutional change (Weaver et al. 2016).

Regional accreditors impose different regulations that impact the function of faculty development centers. We are beginning to see a more explicit linkage between the improvement of student learning and the development of the teachers who facilitate such learning (Sorcinelli and Garner 2013). For example, guidelines for the Higher Learning Commission include the following instructions for its institutions under its Academic Quality Improvement Program: "Development focuses on processes for continually training, educating and supporting employees to remain current in their methods and to contribute fully and more efficiently throughout their careers at the institution." It further asks that institutions "describe the processes for training, educating and supporting the professional development of employees," and "ensure that instructors are current in instructional content in their disciplines and pedagogical processes" (Higher Learning Commission 2016, 15).

Similarly, the Middle States Commission on Higher Education Standards for Accreditation and Requirements of Affiliation stipulates that "an accredited institution possesses and demonstrates the following attributes or activities: . . . 3. consideration and use of assessment results for the improvement of educational effectiveness. Consistent with the institution's mission, such uses include some combination of the following: a. assisting students in improving their learning; b. improving pedagogy and curriculum; c. reviewing and revising academic programs and support services; d. planning, conducting, and supporting a range of professional development activities." (Middle States Commission 2015, 10).

Further, the Southern Association of Colleges and Schools (SACS) requires that colleges and universities develop a Quality Enhancement Plan (QEP). The QEP ask campuses to identify key issues emerging from the institutional assessment that focuses on learning outcomes and/or the environment that supports student learning. Responses to the requirements for quality improvement from these various regional accreditation bodies have been as varied as the institutions that have developed them. What is important to note is that many QEPs have

been developed with substantial input and, in some cases, co-leadership from teaching and learning centers (Sorcinelli and Garner 2013). In this way, centers have been able to engage faculty for the benefit of their teaching and students' learning as much as for the institution's benefit or that of an external body.

Finally, as noted earlier, the American Council on Education (ACE)'s Center for Education Attainment and Innovation (CEAI) has been a leader in recognizing and promoting adult learner programs in higher education through the evaluation of workforce learning and credentialing, and supporting the development of campus-based plans to address attainment challenges. As part of its collaboration with Strada to better understand the linkages between evidence-based teaching, student learning outcomes, and quality faculty development programs, CEAI has reached out to faculty development scholars and practitioners through convenings, conferences, and other venues. Ensuing conversations have invited questions about how the field is developing a body of professional knowledge, standards of practice, and competencies for faculty development professionals at a national level. These conversations are timely because promoting the professional preparation of developers and defining a set of core competencies have been identified as top priority areas for the field for well over a decade (Sorcinelli et al. 2006; Beach et al. 2016).

ACE's role as the major coordinating body for higher education and as an association that represents college and university presidents places ACE in a position to elevate the role of and impacts and outcomes of faculty development within the broader context of the institution. All this suggests potential benefits to the ongoing dialogue between ACE and its Center for Education Attainment and Innovation (CEAI) and POD Network communities, other professional associations, and institutional accrediting agencies to consider ways they might act synergistically to support faculty development as it navigates the Age of Evidence.

CONCLUSION

Although the field of faculty development is relatively new, having been formed some 55 years ago, efforts to enhance its capacity to systematically assess its impact are opportune. Over the decades, the field has developed a vibrant and growing professional national organization that supports the work of faculty developers. Other professional associations, private foundations, government agencies, and accreditation bodies have long supported the work of and had considerable influence on the field of faculty development. Most recently, research has shown that investment in faculty development leads to positive student outcomes. The challenge now is to assess the outcomes of faculty development in ways that more fully measure the quality of existing programs and yield recommendations for designing programs for the future that address the changing needs of learners, teachers, and institutions in the increasingly differentiated, culturally diverse, and fast-paced ecosystem of higher education.

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2

INTENDED TEACHING EFFECTIVENESS OUTCOMES FOR INSTRUCTORS AND FACULTY DEVELOPMENT

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Throughout its history, faculty development has played an increasingly pivotal role in ensuring that faculty have support and resources available to bring about positive student learning outcomes effectively. As the research on teaching and learning has matured, so have the best teaching practices that faculty developers have assumed responsibility for communicating to and developing in faculty. Therefore, to accomplish any meaningful assessment of the effectiveness of faculty development programming, it is necessary to articulate the faculty outcomes these programs are striving to achieve. While many of these outcomes are intended for individual faculty or TAs, learning about, implementing, and documenting the effectiveness of the teaching practices associated with these outcomes has a substantial impact and ripple effect on the teaching and learning culture of the department and institution.

Faculty developers have an array of tools to help faculty achieve these outcomes: one-on-one consultations; student focus groups; face-to-face and online workshops and courses on teaching; in-house and external conferences on teaching; funding for teaching innovations and research and travel to teaching conferences; faculty learning communities and discussion groups; and collections of publications and videos. Developers also have high-quality outside help. Professional associations such as AAC&U, the POD Network, ACE, and many disciplinary associations provide faculty with expert support in evidence-based teaching practices that enhance student learning. Some organizations have created online resources for faculty teaching development. For example, the Association of College and University Educators (ACUE) has developed an online Course in Effective Teaching Practice—composed of 25 online teaching modules aligned with ACUE's Effective Practice Framework™—as a scalable solution to help more faculty reach many of the competencies presented in this chapter. The ACUE Course helps faculty gain knowledge and skills to improve their teaching practice through online, cohort-based modules, which complement development activities offered by a campus's faculty development center.[2]

In the following, we propose six areas that are essential for faculty development centers to consider with respect to bringing about positive student learning outcomes. These are the instructional skills and best practices that deserve the top-priority attention of faculty developers as they design their programming for faculty. Fortunately, most centers have emphasized most or all of these outcomes for years, if not decades.

While some TAs and adjunct faculty may not have full responsibility in all of these areas—course and curriculum design, in particular—they should be aware of these outcomes due to their impact on student learning and be prepared to perform them should they be called upon to do so as current and future faculty. In fact, more and more full-time adjuncts are participating in course and curriculum design.

COURSE DESIGN

The best practices, based on research on teaching and learning, recommend that instructors design courses that align with clear learning outcomes to enhance learning and engagement.

The broader success of teaching and learning finds its foundation in sound course design, which is why this competency is so important for faculty developers to emphasize in their programming for faculty. Effective course design includes coherent and transparent structures that integrate student learning outcomes, instructional activities and assignments, and assessments of student learning. Courses based on a learning outcomes model rather than on a collection of content bring about deeper student learning (Barr and Tagg 1995).

To set the direction for student learning in a course, it is important for instructors who are responsible for course design to give careful consideration to articulating measurable student learning outcomes. By this, we mean statements that indicate what the instructor expects students will be able to know, understand, and do at the conclusion of the course (Wiggins and McTighe 2005). These student learning outcomes reflect the types of knowledge and cognitive

2 ACE is invested in ACUE's success and has entered into a landmark collaboration with ACUE to enhance student outcomes as part of a national effort to advance effective college instruction through state-of-the-art online professional development programs for college instructors.

abilities expected within the discipline and are material to both the course level and its placement within larger departmental or school-wide curricula (Anderson et al. 2001).

To provide students with opportunities to learn and practice the requisite knowledge and skills, the learning activities and assignments that faculty design will move students incrementally toward learning outcomes. Learning activities that are most effective are based on research on student learning, engaging students in appropriate combinations of individual and group practice, active learning, and applied learning (e.g., problem-based, case-based, and experiential), as relevant to outcomes and course context. Students learn best when connections between activities and outcomes are transparent to students, providing them with clear paths toward achieving success in the course (Winkelmes 2013).

Effective assessments of student learning that faculty design align with the stated learning outcomes and are the culmination of learning activities used along the way. These assessments begin early in the semester and range from low to high stakes, providing students with feedback needed to understand their progress toward the outcomes and opportunities to improve their performance (Fink 2013).

It is also important for course policies and procedures to adhere to departmental and institutional requirements and to support fairness, equal access, and accountability. Policies and procedures that are linked to student success and support attainment of learning outcomes will bring coherence to learning, equity, and institutional requirements (e.g., assignment deadlines and revisions, guidelines for productive classroom climate, and expectations for intellectual integrity). Course designs should be inclusive of all learners, creating learning environments that support students of all identities and backgrounds.

CURRICULUM DESIGN

To meet accreditation and program review requirements, institutions charge faculty—primarily regular but in some instances full-time adjuncts as well—with designing or revising their program curriculum. Faculty developers can teach faculty the best practices in doing this task, which involve 1) setting program learning outcomes (the disciplinary or professional competencies expected of a graduate) and assessing students' achievement of them and 2) mapping the curriculum to ensure that the courses in the program enable students to achieve those outcomes.

The guidelines for formulating and assessing program learning outcomes are the same as those for course-level learning outcomes, which this white paper addresses immediately above in detail. However, the process of enabling students to achieve outcomes differs at the program level. The best practice is curriculum mapping, which higher education has adapted from K–12 education and which faculty developers can help instructors implement.

Curriculum mapping is a procedure for aligning required program courses with the program's outcomes and assessments. It ensures that faculty build into their courses multiple opportunities for students to learn and practice the program outcomes in a logically incremental way (Allen 2004). Ideally, lower-level courses introduce the outcomes (I), lower-intermediary courses provide practice in them (P), higher-intermediary courses reinforce this practice (R), and higher-level courses require students to demonstrate mastery (M), where mastery means the competency level that faculty specify in the program outcomes (Adsit, Ellis, and Ford

2014). These levels are also called "introduced" (I), "developed" (D), and "mastered" (M) (Allen 2004; Cal Poly Academic Programs and Planning 2017). When faculty collaborate to advance students through these levels progressively, the likelihood of students meeting or exceeding expectations increases (Adsit, Ellis, and Ford 2014).

Under the guidance of a faculty developer, faculty map their curriculum using a matrix with the program outcomes across the top and the program courses down the far-left column. The cells designate the level at which a course addresses an outcome (I, P, R, M or I, D, M). Some redundancy is acceptable—that is, more than one course may address an outcome at the same level—as long as the collection of courses addresses all the program outcomes at all the levels. Good curriculum maps often lead faculty to revise existing courses or introduce new ones to address previously ignored outcomes or to eliminate courses (at least from the required list) that address none of the outcomes.

Sharing curriculum maps with students in the program makes the learning process transparent. Faculty might also share their maps and the results of program and accreditation reviews with faculty who teach in similar programs at other institutions. Rather than working in isolation with a trial-and-error approach, faculty will find value in working with peers from other departments and institutions to learn how to design an efficient, well-aligned program from each other.

IMPLEMENTATION OF EFFECTIVE LEARNING ACTIVITIES AND ASSIGNMENTS

The best practices, based on research on teaching and learning, advocate that instructors develop and implement learning activities based on research on how students learn, providing practice of component skills and opportunities for formative feedback and guidance.

Effective teaching involves far more than the delivery of content. Faculty developers can teach instructors to develop and manage learning activities that allow students to apply their new knowledge and practice the disciplinary thinking required for deeper levels of learning. It is essential for faculty decisions to be based on research about how students learn, whether that evidence comes from scholarly sources or the instructors' classroom-level inquiry (Ambrose et al. 2010; Fink 2003).

Instructors benefit from being able to implement a broad, varied repertoire of student-centered teaching strategies that are suitable to their course learning outcomes, student populations, disciplinary and institutional contexts, and teaching platforms (classroom, hybrid, and/or online). Faculty developers can help faculty decide among active learning approaches that provide students with opportunities to practice the intellectual tasks associated with the course's learning outcomes, such as analysis, synthesis, and evaluation of course content. Typical approaches include writing, in-class discussion, authentic problem solving, peer instruction, and experiential learning (e.g., service-learning/civic engagement, problem-based learning, simulations, role plays, and internships). Even in lecture-focused classes, instructors can devise plans for interjecting opportunities for students to reflect on and synthesize key concepts, and to practice the application of those ideas within disciplinary frameworks (Bean 2011; Crouch et al. 2007; Prince 2004; Weimer 2013).

In support of these strategies, it is best for instructors to design learning activities and assignments at challenging but realistic levels, structuring student learning and deriving meaningfulness through clear connections back to the course's learning outcomes. Faculty developers can ensure that instructors can also demonstrate the ability to manage learning activities in ways that provide appropriate guidance for student practice while fostering engagement by all learners. This may include effectively structuring and facilitating class discussions, peer instruction, and group work, as well as developing methods for holding students accountable for both out-of-class and in-class work. As learning is an iterative process, it is imperative that instructors provide prompt feedback on these activities and assignments, providing guidance that students can use to improve their learning and future performance (McKeachie and Svinicki 2013). Further, faculty developers can advise instructors on utilizing rubrics and other assessment and grading methods that are transparent, fair, and tied to course learning outcomes.

Given our increasingly global and inclusive perspectives on learning, activities and assignments must be designed for all learners, and instructors should have the knowledge and strategies needed to engage and support students from a range of sociocultural backgrounds and abilities. This may include developing inclusive classroom climates, making materials accessible to students with disabilities, and selecting readings that represent different cultural viewpoints (Armstrong 2011; Saunders and Kardia 2016).

Recognizing the range of tools for promoting student learning, instructors can make pedagogically informed decisions about utilizing instructional technologies to promote student learning (McKeachie and Svinicki 2013), as well as be aware of how learning spaces can support active learning approaches (Baepler et al. 2016).

ASSESSMENT OF STUDENT LEARNING

The best practices, based on research on teaching and learning, advise instructors to design and implement quizzes, tests, projects, and capstone assignments to enhance and assess learning in alignment with established learning outcomes. These best practices also counsel faculty to grade student work according to desired outcomes using tools such as well-formulated grading rubrics to ensure fairness, transparency, and actionable feedback.

Faculty developers can acquaint instructors with a range of tools to evaluate student learning. Assessment tools such as low-stakes quizzes or clicker questions not only serve to help students and instructors take stock of what has been mastered without promoting significant stress (Kaufer 2011); the very act of generating and assessing one's knowledge has been shown to further deepen student learning (Nilson 2013a; Shimamura 2011). Tests and larger exams also serve this purpose, as long as students have had the opportunity to participate in learning activities that provide practice and the incremental development of the knowledge and skills tests and exams are designed to assess. Research supports using cumulative assessments to take advantage of the learning benefits that result from coming back to and interleaving material rather than approaching the material as isolated blocks (Kornell and Bjork 2008; Rohrer et al. 2015).

Providing frequent opportunities during the term for students to demonstrate their knowledge and receive feedback on their performance is crucial as it gives students the opportunity

to monitor their progress and understand where they need to put more effort to move closer to achieving established learning outcomes. It also allows instructors to gather information about student learning with enough time to adjust instruction to address gaps and difficulties before moving on to more complex material. In addition to quizzes and exams, instructors have at their disposal quick classroom assessment techniques, such as the Background Knowledge Probe or Minute Paper, to gather input and give feedback on student learning (Angelo and Cross 1993). Faculty developers can help instructors design assignments and assessment activities that reflect authentic problems or practices typically undertaken by professionals in that field, as best practices command (Covington, von Hoene, and Voge 2017). In addition to being authentic, however, assignments and assessments also need to be legitimate (Joyce 2011) and feasible, taking into account both available resources and constraints (Fink 2003; Prégent 1994).

Instructors strengthen student engagement and learning by developing, communicating, and implementing clear standards for grading student work (Suskie 2009; Walvoord and Anderson 2010). To foster learning and the collaborative, reciprocal engagement that leads to learning, student performance on any given assignment, exam, or project should be graded according to criteria related to course learning outcomes rather than against the work of other students (Covington, von Hoene, Voge 2017; Nilson 2016). To support transparency of expectations and alignment of assessment with learning outcomes, instructors can use tools such as well-articulated grading rubrics to tether assignments to learning outcomes, give targeted feedback, and ensure equity from student to student and across sections in a multiple-section course. Feedback is most helpful to the student when it is targeted to specific outcomes and timely, allowing for students to take action on areas that need improvement.

DEVELOPMENT OF INCLUSIVE AND ETHICAL LEARNING ENVIRONMENTS

To promote learning, faculty developers can show instructors how to create a classroom environment that acknowledges and benefits from a variety of backgrounds and perspectives and fosters ethical behavior. The strategies are based on research on teaching and learning.

Differences among students, including but not limited to race, ethnicity, gender, physical ability, socioeconomic background, prior knowledge, motivation, and many other factors, abound in the classroom. By creating inclusive classroom environments that respond to and draw on these differences, instructors foster the social and cognitive development of their students (Bowman 2010; Gurin, Nagda, and Lopez 2004).

Student learning and growth are enhanced in an atmosphere of reciprocity and respect in which students are open to new perspectives and feel safe to question their assumptions. To facilitate this sense of community, faculty can collaborate with students in creating foundational agreements for classroom interaction on matters such as turns at talk, interruptions, confidentiality, resolving disagreements, and responding to stereotypes, bias, or racist or sexist comments. Faculty developers can help instructors learn how to respond to potential situations that compromise these standards. Knowing, for example, how to productively respond to statements or actions that demonstrate unconscious bias, stereotypes, or stereotype threat can go a long way in promoting student intellectual and personal growth (Saunders and Kardia 2016; Steele 2010).

To foster an ethical classroom environment, instructors can familiarize themselves with (as well as abide by) campus policies and state and federal laws that set standards for ethical behaviors in areas such as student academic conduct, accommodations for students with disabilities, privacy of student records, and sexual harassment and follow up with appropriate steps to prevent or respond to violations in these areas. Also, instructors are advised to maintain professional relationships with students, avoiding such things as friending students on Facebook, becoming emotionally involved with them, or creating situations that may pose a conflict of interest or the appearance of favoritism (Keith-Spiegel et al. 2002; Murray et al. 1996).

Finally, faculty developers can help instructors implement pedagogical practices that promote an ethical and inclusive classroom environment. This means selecting course materials that represent all relevant perspectives and integrating pre-assessment activities at the beginning of the term so that they and their students can use the results to address gaps and set goals for further learning. Maintaining consistency, fairness, and transparency in grading requires articulated grading rubrics and consistent adherence to course policies and commitments across students. Another important guideline for faculty is to return assignments promptly so that students can use instructor feedback to advance their learning (Suskie 2009; Walvoord and Anderson 2010). When instructors are assigned teaching assistants (TAs), faculty developers can assist faculty in guiding the work of the TAs, in particular in grading student work to ensure fairness and equity across TA-facilitated sections (GSI Teaching and Resource Center 2017).

INSTRUCTOR REFLECTION, GROWTH, IMPROVEMENT, AND EVALUATION

Effective instructors demonstrate openness and commitment to growth and improvement. They collect meaningful data on their students' learning for reflecting on and assessing their teaching effectiveness and professional growth (Johns 2017; Seldin, Miller, and Seldin 2010). They also follow up with making changes in their teaching and taking informed instructional risks to maximize student learning. Institutions committed to promoting faculty teaching development and student learning use these data in conducting instructor reviews. Faculty developers can foster the disposition of continual growth and improvement and teach faculty how to collect data on student learning.

Instructors are in the best position to regularly and systematically gather data about their teaching, and faculty developers can help them acquire the needed expertise. These data include 1) during- and end-of-term feedback from students about their perceived learning (outcomes attainment) and 2) indicators of their actual learning gains, such as the difference between their outcomes performance at the beginning and the end of the course (measures of perceived and actual learning may yield different results) (Porter 2013). Collecting and incorporating formative feedback from students during the term has an impressive effect size of .90 on student learning (Hattie 2008), and because students can benefit from providing during-the-term input, they tend to offer more thoughtful comments than they do when providing feedback after the course is over. While several strategies can measure their actual learning gains, the gold standard compares pre-test (pre-course) and post-test (post-course) results (Hake 1998; Nilson 2013b).

Faculty developers can encourage instructors to reflect on and use these data across courses and over time to identify goals for improving their course design and teaching. To facilitate the reflection process, faculty can maintain a teaching portfolio with evidence of their effectiveness and their improvement efforts, including a coherent, cogent teaching philosophy (Seldin et al. 2010), and faculty developers can assist them in deciding what to include in the portfolio and how to articulate a philosophy. This kind of self-regulating focus enhances a faculty member's sense of self-efficacy in teaching.

Instructors can move toward achieving their goals by adjusting their course design and teaching strategies accordingly. To enable them to select wisely from various improvement options, they can benefit from internal and external opportunities that a faculty development unit provides to further their professional growth in teaching, such as relevant workshops, conferences, colleagues, books, articles, videos, and private consultations with faculty developers. Research tells us that faculty development efforts do enhance student learning (Condon et al. 2015). They also foster faculty self-confidence and metacognitive awareness of their teaching (Knight, Carrese, and Wright 2007). Many teaching centers also organize faculty learning communities on teaching where instructors can share experiences and feedback and engage in self-reflection.

In turn, institutions can review their instructors for reappointment, tenure, and promotion using instructor data and written reflections as well as peer observations of classroom teaching and evaluations of course materials. It is only reasonable that institutions reward instructors for striving to grow professionally and improve their teaching effectiveness. Given the mission of higher education, the most critical data for institutions to consider are evidence of student learning, such as the comparison between assessments of students' pre-course and post-course outcomes performance. While some data collected before the year 2000 show a mild positive correlation between end-of-semester student ratings and learning, dozens of more recent studies do not bear out that relationship (e.g., Boring, Ottoboni, and Stark 2016; Carrell and West 2010; Clayson 2009; Sproule and Valsan 2009; Stark and Freishtat 2014; Stroebe 2016); rather, these ratings measure student perceptions and satisfaction and, therefore, should not play a prominent role in personnel reviews (Nuhfer 2010; Stroebe 2016).

CONCLUSION

The evidence-based best practices outlined in this section provide a framework for a successful faculty development program—one that places articulated student learning outcomes at the center of an integrated process of designing courses, curricula, assignments, and assessments. It is important for faculty developers to adopt these same outcomes-based approaches to their work, establishing clear outcomes for their faculty clients to achieve. By articulating what is expected of faculty, developers can lay the groundwork for assessment of their work and that of their teaching centers. But what form should this assessment take? What data are relevant, and how should they be collected and analyzed? The assessment of faculty development has been evolving and advancing over the last couple of decades. In the next chapter, we address the history and today's best faculty development assessment practices.

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3

PROMISING PRACTICES IN ASSESSMENT OF FACULTY DEVELOPMENT OUTCOMES

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Faculty development occupies a critical intersection of teaching, learning, and research. While faculty development centers may vary widely by mission, clientele, and resources, faculty developers and their centers are by tradition and practice committed to assessment. Because faculty development intersects three critical pillars of the institution, faculty developers will want to demonstrate their impact on the teaching and learning enterprise in creative and

meaningful ways. How can we extend the ways in which we assess the influence of teaching and learning centers? What frameworks and methodologies are called for?

As illustrated in Chapter 2, faculty development programming and consultations help individual faculty to develop assignments, courses, and curricula that include opportunities to collect evidence of effectiveness; these may be interpreted and used to improve student learning as well as instruction. This commitment to assessment also extends to centers themselves. Measuring center effectiveness can demonstrate the value or impact of an existing program, suggest directions for new programs/resources, or argue for more resources.

The impact of faculty development activities is currently assessed across a spectrum of measures ranging from participation tracking to participant satisfaction with workshops to changes in the instructional practices of individual faculty over time. As discussed in Chapter 1, the most common evaluation methods reported by faculty development professionals—in order from most to least utilized—include tracking participant numbers, participant self-reported satisfaction, increase in knowledge or skills of participants or change in teaching practice, changes in student learning as a result of faculty participation, and changes in the teaching culture of the institution (Beach et al. 2016).

In this chapter, we aim to shed light on promising assessment methods and evaluative practices that, while implemented at some institutions, may be considered emergent at many others. In doing so, it is important to recognize and be sensitive to the diverse landscape of teaching and learning centers that exist and acknowledge that a number of factors—center budget, FTEs, physical space, mission, and institutional commitment—impact the extent to which a center can measure the impact and outcomes of its work. One center might have five to seven full-time staff members with one faculty member or professional staff person dedicated solely to program assessment, whereas another center might comprise only a part-time director who is also a full-time faculty member. It is imperative that assessment is completed, and that expected assessment efforts are consistent with the level of programs and resources offered at an institution. Chism and Banta (2007) suggest that a "solo" faculty developer most likely cannot and should not need to undertake complex assessments that exceed the level of the programs offered by their center, but may be able to refer to assessments that already exist as evidence for the impact of programs they offer. We hope the approaches outlined herein help centers to move the dial from promising to expected assessment practices that enhance teaching and student learning, but also recognize this may not happen if centers are not staffed, skilled, and resourced to meet the expectations of institutional constituencies.

ASSESSING TEACHING AND LEARNING CENTER EFFECTIVENESS: THE ROLE OF STRATEGIC PLANNING

As evidenced by the outcomes of faculty developers' work, laid out in Chapter 2, faculty developers are committed to assessment by tradition and practice. To assess their work, faculty developers typically apply the approach used with faculty, the learning outcomes assessment (LOA) process (Linse 2017). Faculty developers evaluate individual activities (workshops), programs, and services by specifying objectives and measuring these in some way. When faculty developers want to report on the value, influence, or impact of their work, they may take a collective or cumulative approach by bundling separate assessments of each program and

service to represent the center's work as a whole; this approach may make sense but also leads to reports that describe the past and current state of the work, rather than formative achievements met or organizational progress made (Linse 2017).

Classic strategic planning offers an effective and efficient method for assessing programming impacts on faculty, if not the work of the teaching and learning center. Through the strategic planning process, center leadership works collaboratively and consults with other stakeholders to consider why it exists, the impact it is intended to have, and how it will recognize success by specifying explicit targets for future actions. The mission, vision, and goals of the faculty development unit should always align with those of the institution and the population it intends to serve.

Establishing Vision and Mission

Faculty developers may begin this process by collaboratively developing center vision and mission statements. The vision statement is important for assigning meaning to the work of the organization; it is "blue sky" but also drives the mission statement (which is practical and goal-oriented). The mission, in turn, captures the purpose of the center in the context of the larger institution, conveys why the teaching and learning center exists, and ultimately determines how the center uses its time, effort, and resources to advance effective pedagogy. The mission guides, but is separate from, whom the organization serves (its constituents), what the organization does, and how the organization achieves its mission (Linse 2017).

A center's priorities will guide decision making and are included in the unit's strategic goals, which identify future actions and efforts to improve or change in specific ways. Strategic planners recommend developing SMART goals (specific, measurable, achievable, relevant, and timely), which may be measurable using qualitative or quantitative evidence. If goals are truly strategic, they can and will change over time as earlier goals are achieved, and targets are met. In contrast to a comprehensive learning outcomes assessment that encompasses everything a unit has done, strategic goals may not necessarily reflect every aspect of the mission nor the priorities of every constituent. An important distinction between strategic goals and objectives is that goals focus on the actions of unit personnel, while objectives focus on what others are expected to know and do.

Identifying Constituencies

Identifying whom the center supports is a critical part of measuring overall effectiveness. In strategic planning, a unit's constituents include not only the users of its services but also consumers of the outcomes produced by the work of the center. For faculty development centers, all faculty, tenure track and non-tenure track, and often graduate students, are obvious constituencies. Some centers include university staff who may teach. Students, administrators, and even boards of trustees and legislators may be relevant stakeholders. A strategic approach would also include input from faculty developers.

Each constituency will value different kinds of evidence and expects evidence to be presented in relevant ways; strategic planning allows the developer to consider what evidence is useful to collect. For example, faculty developers will value participation patterns in programming, and faculty will value the topical programming they feel best meets a current need, while

administrators may want evidence of the unit's reach within the institution, if not impact on current institutional initiatives and priorities.

Identifying those served by the center helps define communities of practice, some of which may be hidden, and makes relevant programming based on authentic need possible. For example, a teaching center at a large public university may discover that most of its adjunct faculty teach fewer than two courses on the campus, then create programming and outreach specific to that population.

Determining numbers and levels of tenure-track (TT) faculty, non-tenure-track (NTT) faculty (this latter group should be distinguished between part-time and full-time NTT members), and graduate teaching assistants should also be of primary concern.

ESTABLISHING CENTER GOALS THAT SUPPORT ASSESSMENT

Center goals can serve as a roadmap for aligning faculty development activities to the appropriate measures a center might use to demonstrate its impact. Each goal should have clearly stated outcomes, which can then be assessed using relevant data methods. These data may be reported using indirect (surveys) or direct (institutional research data reports) measures employing quantitative, qualitative (focus groups), or mixed methods. Data can be used to tell a story and drive awareness of faculty development. Goals may include serving larger numbers of faculty, increasing participant satisfaction, improving the quality of faculty development activities, measuring changes in instructional practice, curricular reform, or creating communities of practice that may influence entire changes in the teaching culture.

Beyond Numbers Served

Data collection measures and methods are critical goals that should be set during the strategic planning process. Tracking attendees of faculty development programming is relatively easy to accomplish and helps assess the impact of programming (Burdick et al. 2015). The methods for tracking participation should not be onerous or so overly complicated that the practice of tracking the number of faculty served is abandoned altogether (Gillespie and Robertson 2010); however, this is where a well-developed strategic plan is assistive. Faculty developers should think ahead to outcomes measures cited in strategic planning goals, as numbers alone do not determine outcomes.

Faculty participation in center events such as workshops, consultations, and long (intensive) programs may be tracked using sign-in sheets or software (e.g., Eventbrite). These could also record useful (predetermined) demographic data that can be used for program assessment. Examples include department, rank, the number of years teaching, average number of courses taught per term, and how participants learned about the session. Data can later be entered into a spreadsheet or database. Asynchronously delivered professional development can be similarly tracked.

Alignment with institutional needs and mission will be important, but so will considerations of "return on investment," particularly regarding the time involved to conduct the program or programs (Gillespie and Robertson 2010). The goal is to craft a story around how participation is meaningful to the larger context, whether that context is tied directly to the mission and

goals of the institution, to the specific disciplines from which faculty participants are coming, or even to larger philosophical guidelines such as motivation and organizational change (Burdick et al. 2015).

When reporting the number of faculty served, it is important to offer context. Examples include emphasizing greater benefits to limited attendance numbers when working with faculty one-on-one. If programming is designed with a specific audience in mind, such as graduate teaching assistants, mid-career professors, and faculty in the biology department, the number served in relation to the possible whole (75 percent of all TAs, or six of the 10 biology faculty) is a more meaningful story to tell than only tracking, and reporting, the individual number attended. As part of tracking attendance or participation in development activities, this is an opportune time to collect other demographic information that can be helpful in assessing who (full- or part-time, tenure or non-tenure-line faculty) is taking advantage of development activities and promoting other relevant programming.

Augmenting Participant Satisfaction Surveys

Of the research conducted on the impact and effectiveness of faculty development programming, numbers served through programs and satisfaction surveys have been found to be the primary data collected (Beach et al. 2016; Meyer and Murrell 2014). There may be inconsistency across the different service offerings; one study of several established teaching and learning centers found that 100 percent always asked satisfaction questions for activities and events, but only 70 percent of the time for consultations and 50 percent for resources offered (Hines 2011). The inconsistency across survey methods and data collected could be a result of limited expertise in survey design and assessment; which is understandable in cases of limited staff.

Centers can improve upon how surveys are conducted, how data are understood, and how they are reported (Brinkley-Etzkorn et al. 2016). A more rigorous use of participant satisfaction surveys to assess the impact of faculty development services would include:

- *Consistency in data collection across all types of services.* If satisfaction means participants found value in exchange for what it cost them to participate it becomes easier to make comparisons and priorities based on the responses. While outside the scope of this chapter, having a consistent rubric or standard, alongside measures for the resources needed to provide the service, will help justify the service offering. Consistency also includes uniformly collecting satisfaction responses, even if it is a single survey offered once a term or once every academic year (Birch and Gray 2009). Developers advocate and train faculty on improved ways to assess learning; the same principles apply to being consistent in asking questions about satisfaction with service offerings. Consistent data collection practices allow for more scholarly approaches to interpreting the information and disseminating results (Potter 2011). They can also create opportunities for incremental improvement, which is almost always less costly than designing an entirely new program from beginning to end.
- *Context for reporting data.* Sweet et al. (2008) describe methods for augmenting satisfaction data, and further clarifying the context of the impact and meaningfulness of development services, using grounded theory of qualitative analysis, which consists of systematic, but flexible guidelines for collecting and analyzing qualitative data to

construct theories "grounded" in the data themselves (Charmaz 2006). This is important in considering how information will be communicated to and used by external stakeholders (e.g., presidents, provosts, funding sources) who exercise influence over faculty development resources and positioning within the institution. Hines relays a story of how a teaching and learning center report of faculty satisfaction within the context of the mission of the institution became a deciding factor for the state legislature continuing funding for the program (Hines 2009).

Beyond participant satisfaction, faculty developers might consider how to use satisfaction surveys as a means to collect data that can be used to identify consistent trends as a result of faculty development programming. For example, centers may use participation rates in novel ways to:

- Determine the percentage of faculty interactions with the center by academic department. These numbers may be compared against department size to get an impression of faculty development center representation across disciplines. Based on this information, outreach may be extended to underrepresented departments or formerly overlooked constituents.
- Establish timelines to document patterns of use among departments to see where the teaching and learning center shows high and low impact across campus
- Tally repeat clients, especially those who have substantive interactions with the center, and measure these faculty longitudinally (see the "Assessing the Impact of Faculty Development on Teaching" section below) to see if there are changes in teaching practice.

Measuring the Quality of Faculty Development Programming

The quality of faculty development programming (activities) itself may be measured to indicate strengths and weaknesses of the programming. This can be achieved using a model of adult learning that calls for rigorous design (Merriam 2001). Proper criteria to gauge the quality of intensive programming would include:

- Activities that are aligned with principles of adult learning, and which recognize faculty as learners, albeit with substantial life experience
- Program objectives that are research-based and measurable
- Program activities that are clearly aligned with the learning objectives
- Program activities that are recursive: these would include regular feedback, where participants can repeatedly reflect on their performance and make adjustments to their teaching

If a faculty development program is sufficiently robust, that is, requiring intensive practice and feedback, a center could measure the impact of this practice over time (Steinert et al. 2006). With a robust program, faculty developers' assessment may include analyses of the impacts of longitudinal faculty development (e.g., an online module series, a planned sequence of individual consultations, a year-long learning community) in some ways, including:

- Qualitative analysis of teaching reflections following intensive faculty development programming to capture long-term changes in teaching behaviors. For example, the online, cohort-based Course in Effective Teaching Practice developed by the Association of College and University Educators (ACUE) requires faculty participants to try a new teaching technique in the classroom, then reflect on their practice with peers in an online cohort. Some graduate student teaching certificate programs require participants to submit written reflections describing how they implemented what they learned from a workshop in their teaching.
- Tracking changes in instructional behavior longitudinally. Faculty may set new teaching goals that can be followed up on at a later date.
- Following cohorts of faculty who redesign a course together and set new learning goals, optimizing development and effecting larger-scale changes; for example, the California State University Course Redesign with Technology program[3] has reached hundreds of faculty and thousands of students over the past five years.

Process-oriented studies that assess changes in the teaching practice of faculty are useful and may employ qualitative or mixed methods. For example, faculty who participated in a two-semester professional program, then redesigned and taught a course, would have had sufficient practice to demonstrate changes to their syllabi, in-class teaching behaviors, and/or student impacts following the redesign. Direct evidence might include the increase in percentages of A's and B's for students taking the course, following the program; students with effective instructors tend to earn higher grades (De Vlieger, Jacob, and Stange 2017). Centers can work with their institutional research office to decide on the appropriate measure. This method would be helpful for reporting cumulative learning in faculty and should only be employed where faculty have had sufficient time to participate, reflect, and make changes to their course. Because of the time-intensive nature of this assessment, such studies are relatively rare but are emerging.

With a vast literature confirming the strength of learner- and knowledge-centered environments in knowledge and skills acquisition, the same must be expected of faculty development programs; faculty also require development opportunities that are structured to their needs. Faculty development programming must also be "learning centered." Faculty development programming should provide opportunities for practicing teaching that involves faculty in different stages of participation, employs cohorts and interest groups (faculty learning communities, networks), and allows faculty time to reflect and practice (Bransford, Brown, and Cocking 2000).

No one intervention is sufficient to create widespread improvement across any dimension of teaching and the entire institution, but units at least loosely coordinating their efforts can increase their chances of attracting the attention of different faculty to a particular dimension of teaching improvement and engaging significant numbers of faculty in trying out new approaches (Ehrmann 2014).

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3 The California State University, Office of the Chancellor. 2017. Course Redesign with Technology. http://courseredesign.csuprojects.org/wp/.

Measuring a Center's Impact on Institutional Teaching Culture

It is important to note that faculty, as members of the larger institutional enterprise, shape, but are also shaped, by the institutional culture (Clampitt 2013). Faculty development centers play an important role in creating and sustaining a culture that values and rewards effective teaching (Honan, Westmoreland, and Tew 2013), and that arguably leads to a more engaged faculty.

Campus teaching culture can affect how faculty react to or perceive faculty development activities. A teaching culture that values and provides opportunities for development and experimentation and that also recognizes the associated risk with experimentation can have a positive impact on instructor self-efficacy—in this case, the belief in one's ability to help students succeed—and changes in instructional practice (Condon et al. 2015; Rowbotham 2015).

Measuring the effect of faculty development programming on campus teaching culture is best undertaken by established or growing centers that want to demonstrate their impact on local leadership. Tracking growth can illustrate culture shifts, for example, determining the origins of an uptick in growth (a specific college or department), and can also show general patterns of use. Findings such as those described below may be used by the center to assess mission and strategic direction, as well as to guide outreach and programming efforts:

- Social data network analysis is one way to determine the reach of the teaching and learning center. A network modularity algorithm can be used to detect community structure and help identify patterns of common interest among the faculty across the campus. Social data network analysis is helpful for uncovering communities of practice that may be hidden.
- Timelines can also shed light on center growth and reach. Creating a database from sign-in data, developers can chart patterns of use. Timelines can establish outcomes such as linkages between how many faculty participated in programming when, how faculty recruited other faculty along the way, and changes within a given academic department. Growth in departments attending professional development is useful to follow, as this can help redirect programming efforts.
- A center might also qualitatively assess its success in positively influencing key levers that are related to building a culture of teaching on campus—faculty professional development, resources, leadership commitment, and the reward structure (Austin 2011; Sorcinelli 2014).

Resource Implications for Faculty Development Impact and Assessment

Teaching and Learning Centers—activities, missions, and resources—will continue to be shaped by broader challenges. Because of the complexity and evolving breadth of Center missions, faculty development leaders need a tool for thoughtful analysis that represents the current Center efforts as well as a sophisticated yet transparent means for capturing this complexity (Schroeder 2015).

The Center Mission Matrix Tool (Schroeder 2015) helps translate the ways the ultimate purpose, or mission, of faculty development intersects with specific programs, services, and activities, in light of the level of impact these activities have be they at the individual, department, college/school, or institutional levels. The matrix tool can help address the deeper layers

of how, and to what degree, an institution is recognizing and is committed to faculty development. It was designed within the context of a centralized center for faculty development, but it can be adapted for a decentralized model so long as there is an overarching plan, or mission, by which the separate units operate.

With this in mind, a matrix can be created where the vertical axis describes the mission regarding the level of impact (individual, department, institution, for example) and a horizontal axis describes the impact on instructional development, career development, and research development. The cells of the matrix would then include the faculty development activities, services, and programming that addresses one or more of these intersections.

This is just one example, but laying out the mission, the purpose, of the programming against the needs and functions of the faculty development programming in a matrix like this is one way to quickly assess both the level of institutional commitment to faculty development programming and gaps to fill or strengths to build upon.

A subgroup of the authors of this publication have crafted a faculty development implementation matrix that incorporates institutional commitment and faculty development programming measures. The matrix can serve as a tool for connecting institutional investment in faculty development efforts, resource allocation, and anticipated outcomes. The initial draft of the tool is available at www.acenet.edu/effectiveteaching.

ASSESSING THE IMPACT OF FACULTY DEVELOPMENT ON TEACHING

Measuring Changes in Teaching Practice

One way to measure the impact of faculty development programming is to assess the extent to which faculty members have increased their skills or knowledge—which impact practice—as a result of participation in faculty development activities. Faculty who have availed themselves of formal and informal learning opportunities are likely to document changes in course materials and classroom approaches over time.

Cilliers and Herman (2010) note that attitudinal and perceptual changes about teaching should not be underestimated as a goal of faculty development; in fact, one's conceptions of teaching have been shown to be a determinant of teaching practice and a foundation for further changes in behavior (264).

The accumulation of instructional experiences, knowledge and skill acquisition, and reflection on instructional practice may lead to teaching improvements over time. The deliberate practice (DP) framework rejects innate talent as an explanation for cognitive abilities and instead posits that expert performance is a monotonic function of the amount of deliberate practice one puts forth (Campitelli and Gobet 2011, 280). It should be noted that DP research has focused primarily on practice at the expense of innate talent; less is known about how DP activities intersect with longitudinal differences leading to expertise (284).

Instructors who demonstrate strong self-efficacy and have a positive perception of recommended changes to their instructional approach are more likely to make changes (Condon et al. 2015), and continued practice and implementation of those changes may even have a positive impact on self-efficacy and instructional practice (Rowbotham 2015).

There are a variety of ways in which faculty learn and continue to learn about teaching and learning, formally (programs) and informally (through peers). The literature supports assessing the extent to which faculty member participants have learned as a result of engaging in some faculty development effort as being effective (Van Note Chism and Szabó 1997). However, within faculty development efforts, assessing the extent to which faculty member participants have learned as a result of engaging in some faculty development effort is relatively rare (Beach et al. 2016; Fink 2013).

There are multiple ways in which assessment data might be collected to document changes to teaching practice:

- Formative (low-stakes) assessments of faculty before and after programming:
    - The pre-test/post-test is one of the most common methods to demonstrate increased knowledge of a concept following a workshop, based on learning outcomes.
    - Peer review before and after a workshop or other faculty development event would allow for demonstration of a change in instructional practice. If a cohort of faculty participated in a faculty development offering, these same faculty could sit in on each other's courses to document changes in teaching strategies.
    - Expert observation is another method by which teaching changes might be documented, either by direct observation or by recording the class session. Ideally, a faculty developer or instructional designer would meet with a faculty member and discuss the changes that have been made. Following this discussion, an observation of a class period could be used to document the changes.
    - Self-reflections, concept maps, and other self-reported data are a means for which faculty can improve their teaching practice. Reflection requires faculty to be open to change, willing to engage in dialogue with other professionals, be intentional with actions in the classroom and students' responses to those actions, integrate new strategies into their ongoing practice, and be motivated to use information derived from practice as a means for further inquiry (Mellow et al. 2015).
- Instructor "artifacts" that demonstrate increased interest in teaching and/or student learning may include:
    - A comparison of course syllabi, lesson plans, assignments, and assessment tools collected before and after participation in robust faculty development programming; these are useful for documenting changes in teaching via the organization of course materials (Roksa et al. 2017).
    - Qualitative analyses of statements of teaching philosophy to measure increased knowledge, for example, following a learning community.
    - Publications and conference presentations on scholarly teaching topics that can measure knowledge gains.
    - Publication in the scholarship of teaching and learning demonstrates a commitment to and interest in research and deep learning.

- Faculty teaching awards may reflect this commitment/renewed interest in teaching.
- Self-report data in the form of reflection or other longitudinal observations that allow for professed changes in teaching behavior.

Capturing Instructor Attitudes About Students, Teaching, and Learning

Teaching quality is an important determinant of K–12 student achievement. By contrast, surprisingly little is known about the correlates to college instructor effectiveness (Jacob, Stange, and De Vlieger 2017; Bensimon 2007). Studies of college impacts on students are rarely integrated with research on teaching and learning (Roksa et al. 2016). Unlike K–12 education, which uses standardized testing to assess both student learning and, by extension, instructional quality, uniform assessments are rare in postsecondary settings. Other subjective measures such as grading practices and student self-selection into courses further confound measurement of college teaching success.

However, emerging studies of instructor effectiveness indicate that teaching quality does matter. One 2016 study, conducted at the University of Phoenix (UPX), focused on instructors in 30,000 course sections of introductory algebra; the very large sample demonstrated that effective instruction was highly positively correlated with an increase in student course grades—as well as improved subsequent performance in later math courses (De Vlieger, Jacob, and Stange 2016). The UPX study also found that instructional quality was largely unassociated with instructors' experience (years teaching). The authors conclude that instructor effectiveness may be especially important for nonselective institutions, with their sizable and growing numbers of nontraditional students. The UPX study did not measure instructor attitudes or beliefs.

Like instructor effectiveness, interrelationships between student and faculty perceptions, behaviors and habits are not well examined in the postsecondary literature (Neumann 2014; Roksa et al. 2016). However, personal attitudes and behaviors are known to impact teaching. Teacher beliefs are, in fact, one of the most potent characteristics in explaining student achievement and changes to practice for K–12 teachers (Berman and McLaughlin 1977; Tschannen-Moran, Woolfolk Hoy, and Hoy 1998, Tschannen-Moran and Woolfolk Hoy 2001). In the extensive K–12 literature on teacher quality, self-efficacy is associated with positive educational outcomes. Based on Bandura's social cognitive theory (1982), instruments measuring teacher self-efficacy are common in K–12 but not frequently employed in college settings, with only the occasional example (Navarro 2005).

Given the challenge of measuring faculty development impacts on student learning, faculty developers and universities might start here, by charting changes in instructor efficacy as a result of professional development. Capturing instructor attitudes about teaching, students, and learning could shed light on closely held, if unshared, beliefs that may influence teaching behavior and expectations of students. What attitudes and behaviors toward students and teaching practice do instructors bring to the classroom? What type of professional development disposes changes in attitude? The profession might start by creating a framework by which faculty perceptions and attitudes may be captured before and following development programming.

ASSESSING THE IMPACT OF FACULTY DEVELOPMENT ON STUDENT LEARNING

Teaching is a process of co-constructing understanding, one in which the desired ends must be clear as well as how instructors aim to get students to the desired ends through building learning experiences over time (Jankowski 2017). Therefore, measuring changes in the learning or behavior of students served by instructors who have received professional pedagogical development is an important indicator of effectiveness. The goal of teaching is learning, and so the ultimate measure of the effectiveness of a teaching workshop is the improvement in the participants' students' learning that can be attributed to the workshop (Felder and Brent 2010). Examining teaching effectiveness from a student perspective requires an understanding of the context in which teaching takes place and which learning occurs.

If teaching effectiveness is the ability to motivate and facilitate student learning, it only makes sense to assess faculty, at least primarily, on students' learning in their courses (Nilson 2013). The significance of faculty on undergraduate students' development is second only to students' peer group (Arum and Roksa 2010). What faculty do and how they engage with students matters greatly to students' development and educational commitment (Jankowski 2017; Arum and Roksa 2010).

The term "assessment" has been used differently in various contexts. To examine changes in students' learning or behavior as a measure of faculty development effectiveness, assessment refers to the process of stepping back from and analyzing students' progress in a summative way, with the goal of evaluating what has been learned, taught, or accomplished after the process is completed (Cook-Sather, Bovill, and Felten 2014). To assess the impact that the application of effective teaching practices has on changes in students' learning and behavior, faculty need instruments that make data on students' learning easy to collect and easy to reduce to a single number for each course (Nilson 2013).

To assess the impact of faculty development activities on student learning, some might argue for using instructors' conceptualizations and approaches to teaching as a measure. Here we offer means for instructors to gauge their teaching by focusing on the extent to which their instructional practice has an impact on student learning. Using student learning as a measure of impact, one might also focus on students' approaches to studying and learning, and how student engagement—that is, the energy they spend doing the work of learning—can be improved (Fink 2013). As a strategy to raise the profile of faculty development initiatives, faculty development professionals ought to consider demonstrating how these efforts support improvements in learning outcomes (Honan, Westmoreland, and Tew 2013).

Capturing Student Attitudes About Their Courses and Learning More Broadly

There is a connection between student perceptions of different dimensions of an instructor's behaviors, including interest in teaching, and enhanced student learning and motivation (Blaich et al. 2016). A possible challenge for faculty is that learning can be at odds with pleasing students. Learning can make students uncomfortable and even dissatisfied for a time because of the effort, focus, self-examination, acknowledgment of error, and changes in values, beliefs, attitudes, and behavior required of one to be fully engaged in the learning process (Nilson 2013).

Gauging students' attitudes about a course or an instructor, and about their learning broadly, can be achieved by asking students directly about their classroom experience or indirectly through an examination of student course completion rates, student grades, and persistence data. While faculty generally agree that student course evaluations can provide feedback helpful to improving their teaching, there are some limitations in using student ratings as a direct measure of the quality of teaching or as a proxy for learning outcomes (Trosset and Baumler 2006).

Methods for Assessing the Impact of Faculty Development Activities on Student Learning

Teaching is inseparable from learning, one of the few human activities dependent upon someone else—the learner—for it to have been said to occur (Hirst 1967). Both teaching and learning are intensely social acts. In higher education, student learning depends on what the college instructor does or does not do. Faculty remain the single most important influence on their students' success in and outside the classroom (Umbach and Wawrzynski 2005; Hattie 2008).

Assessing the impact of faculty development activities on student learning in instructors' courses can be accomplished using several methods. Fink (2013) offers four possible assessment measures: direct observation and analysis by a specialist, asking students about the presence or frequency of specific teaching behaviors (SEEQ), asking instructors specific questions about specific changes in their teaching practices, and a participant analysis of a role play.

1. *Direct analysis by a specialist.* A direct analysis of information about student learning can be done by an instructional specialist collecting and analyzing artifacts of student learning to assess changes in student learning that coincide with changes in instructional practice; this method is time intensive but generates powerful information (Fink 2013).
2. *Participant records or reports.* Use course data to compare measures of student success, before and after the instructor's participation in faculty development activities. The measures may include student rates of retention and passing in instructors' courses or a comparison of students' average grades on midterm exams. It is preferable to go beyond asking whether their students' learning improved and instead request actual evidence of real gains in student performance (Fink 2013).
3. *Use of standardized questionnaires for students.* The questionnaire might ask students whether specific kinds of learning occurred; an example is the IDEA questionnaire that asks students how much progress they made on 12 specific kinds of learning (Fink 2013). The Student Assessment of their Learning Gains (SALG) instrument (www.salgsite.org) asks students to assess their learning gains in a course and the degree to which specific course components helped that learning. This instrument addresses different facets of learning—general, understanding concepts, acquiring skills, developing positive attitudes about the course or subject matter, and integrating information—and includes components such as class activities, assessments, specific learning methods, laboratories, and resources provided. The SALG instrument uses a five-point scale, from "no gains" to "great gains" or from "no help" to "great help" (Nilson 2013).

4. *Locally constructed questionnaire for students.* This method measures students' conceptions of learning, first by interviewing students about this topic, then by constructing a questionnaire around three concepts of learning based on students' responses in the interviews. In one administration of the questionnaire, students responded to three conceptions of learning: getting through the course; engaging in the course in a meaningful way; and trying to understand learning and how to become a better learner (Fink 2013).
5. *Knowledge surveys:* Knowledge surveys consist of a large number of questions covering the full spectrum of course content at different levels of Bloom's Cognitive Taxonomy (Wirth and Perkins 2005). Students do not answer the questions presented; rather, they indicate their perceived ability to answer the question correctly. Instructors also benefit from constructing knowledge surveys in the following ways: instructors are forced to pay more attention to the frequency at which they challenge students with tasks at varying levels of Bloom's taxonomy; instructors are forced to design a classroom experience that intentionally integrates higher-order thinking; and instructors must design tasks that assess students' mastery of higher-level thinking in a meaningful way (Clauss and Geedey 2010).

The Gaining Retention and Achievement for Students Program (GRASP), implemented at a New Mexico community college in 2006, is an example of using direct analysis and student records to link faculty development activities with improved learning outcomes (Elliott and Oliver 2016). The GRASP assessment, which showed promising results, involved classroom observations once a week for 15 weeks and included instructor feedback and coaching on alternative strategies. The study included 31 faculty teaching 20 classes and included pre- and post-GRASP comparison data between 2006 and 2008 and course pass rates and retention as the measures. In this study, student success increased by 7.9 percent and retention rose 4 percent, supporting the use of interactive professional development conceptual model (Elliott and Oliver 2016).

Developing a Measurement Framework for Student Learning via Faculty Development

Instruction that supports the educational attainment of students within and across diverse student groups is a highly nuanced endeavor in which culture, motivation, and instruction in the course and instructional design are inseparable concerns (Gay 2010; Adams, Bell, and Griffin 2007; Kitayama and Markus 1994; Geertz 1973).

Faculty development centers currently measure factors in which faculty participate such as the amount of their study and practice, their course design and redesign, instructional coaching, and small group problem-solving. However, research on significant enhancement of course design, instructional practice and student learning requires a comprehensive instructional framework. Such a framework would require faculty to set clear learning goals and build them into the design of the curricula and syllabi, and further, to create assignments and practical applications that facilitate student learning; and notably, faculty should assess the result and use the assessment results to improve teaching practice (Sullivan and Drezek McConnell 2017). This suggests a shift toward building well-researched (and researchable) sets of

practices grounded in a solid, theoretically consistent, and pragmatic framework. Such a framework is necessary to:

- Enhance instructional communication and collaboration among instructors via the framework's instructional language and stable architecture for course strategies, including the incorporation of appropriate learning technologies.
- Promote inclusive, relevant, academically engaging, and competence-oriented curriculum, instruction, and assessment, with particular attention to nontraditional students and learners from historically under-resourced communities.
- Stimulate the development of empirically testable models with established psychometric properties, a credible factorial structure, construct validity, and a possible sampling frame.
- Serve as architecture for (empirically testable) teaching center initiatives.
- Inform instrument development for evidence-based reflective practice about student learning among instructors (e.g., student surveys, focus groups, examination of student work and grades)
- Provide campus-wide evidence of instructional effectiveness about student motivation and learning.
- Advance cross-institutional research on teaching and learning.

In essence, a comprehensive framework that is relevant to faculty learning through teaching centers and student learning through classroom instruction makes two well-aligned of layers of investigation possible, with valid and reliable instruments.

Without such a framework, measures of instructional effectiveness about student motivation and learning will most likely remain loosely correlated idea sets that fail to cohere around interdependent and multidisciplinary research on an intended outcome such as enhancing motivation and learning among diverse postsecondary student groups.

Effective teaching involves conditions that support the intrinsic motivation of diverse groups of learners, including a structure for faculty to plan, apply, and improve upon instructional practices. An underlying assumption is that to be motivationally effective; it is necessary for faculty developers and instructors to plan for intrinsic motivation rather than leave it to less effective default methods. The focus of affective learning is on changing learners' attitudes, feelings, and motivation level, and enhances the value and appreciation for learning (Beebe, Mottet, and Roach 2013, 58). In an affective learning environment, teaching becomes more than conveying content or developing skills; it involves helping learners understand how to value and respect what they learn (Beebe, Mottet, and Roach 2013, 260).

There are some small-scale studies of specific teaching practices about student learning. There are also larger-scale studies that consider instruction as one of the several institutional factors that influence student success (e.g., Kuh et al. 2008). However, few, if any, are grounded in a comprehensive synthesis of research on postsecondary teaching and learning, and most leave affective dimensions like motivation and culture to default. Further, few are randomized and broad-based across two-year, four-year, and large research institutions.

Although there are a number of informative postsecondary learning theories that offer general principles (for example, Dewey 1933; Knowles 1980; Kolb 1984; Mezirow 1997; Kegan 1994; Bandura 1997; Keller and Litchfield 2002), there are relatively few comprehensive models to

guide instructional design and research on adult motivation, teaching, and learning (Elliot and Dweck 2005; Kasworm and Marienau 1997). In Walberg and Uguroglu's (1979) benchmark analysis of 232 correlations of motivation and academic learning in first through 12th-grade students, 98 percent of correlations between motivation and academic achievement were positive. Given the robust evidence for students as old as 18, and recent breakthroughs in neuroscience, it is reasonable to associate this finding with adult learners as well. From a neurological perspective, when adults are motivated to learn, every fact and well-understood idea, and every related action connects to and is propelled by a dynamic integration of networks of neurons in their brains and physiological systems (Zull 2002).

We suggest that it is necessary to round out existing research via large-scale studies to measure the connection between instruction (among faculty and cohorts of faculty) and students' interests, perseverance, completion of academic work, and learning. The following are a few potential purposes of such large-scale studies:

- Describe patterns of instructional practices among postsecondary instructors in relation to (adult) motivation and learning theory.
- Correlate these described patterns with student learning outcomes within and across disciplines, institutions and cultural groups.
- Establish a trustworthy meta-framework to align instructional practices in faculty development and instructors' courses with comprehensive research on motivation and adult learning.
- Apply this framework to collaborate effectively within and across institutions on course redesign.
- Align theory and practice in faculty development and instructional research across campuses and institutions, while respecting institutional autonomy.
- Develop the psychometric properties of the meta-framework for instrument design and research.

An essential goal is to advance the development of a meta-instructional framework that supports the instructional autonomy of teaching centers and college courses, without compromising instructional fidelity to theory and research. An effective framework needs enough breadth to accommodate the range of diversity in postsecondary education and integrate assumptions from different disciplines. Most important, it has to explain how to create learning experiences that allow adults (faculty and students) to maintain their integrity as they strive for educational goals.

CONCLUSION

There is currently no standard assessment framework for determining the impact of faculty development center efforts. In creating an assessment program at a given institution, it is imperative to start with a strategic planning process, including a development of mission, vision, goals, and objectives. Methods to evaluate faculty development efforts include tracking participation, reports of satisfaction of participating faculty, increase in knowledge about teaching and learning, changes in teaching practices, changes in student learning, and changes in the culture of the institution with respect to effective teaching. In this chapter, many suggestions are made regarding the collection of data beyond tally counts of participants and their resulting satisfaction. In the future, advances in faculty development will depend on more large-scale studies to measure instructional effectiveness and student outcomes.

EXEMPLAR

STUDENT SUCCESS AND RETENTION THROUGH TRANSFORMATION OF LOWER DIVISION MATHEMATICS COURSES AT FLORIDA INTERNATIONAL UNIVERSITY

Florida International University (FIU) is a student-centered public research university located in Miami, Florida, and is part of the state's 12-campus state university system. In recent years, FIU has made improving classroom instruction and student outcomes a critical area of investment for the university. Of particular interest is the fact that the state of Florida has moved entirely to a performance-based funding model for public institutions, so it is critical to FIU's bottom line that FIU demonstrate improved student outcomes like increased retention, persistence and graduation rates, all of which affect FIU's overall expenditures and net revenue (Taylor 2017).

FIU has invested heavily in improving student outcomes in gateway courses which have led to improved success rates in these courses and decreases in course-retakes. Significant structural changes signal that teaching at FIU, which is a high research-intensive university, is a priority; this commitment, along with infusing technological advances and pedagogical reform, has increased faculty satisfaction in teaching gateway courses (Taylor 2017).

At Florida International University (FIU), a critical course is a large enrollment, lower division course with a high failure rate, a high attrition rate for students that do fail the class, or both. College Algebra rated as the number one critical course for fall 2010 and fall 2011 first-time-in-college (FTIC) students. In fall 2010, 66 percent of the more than 1,300 students taking College Algebra either failed or dropped the course, and 30 percent of those students did not return to FIU the following fall. At FIU, College Algebra is the foundation for the precalculus math sequence for STEM and business majors and has nearly half of entering freshman placing into or below the course. Moreover, with one-quarter of the approximately 45,000 undergraduates pursuing STEM degrees and a student population that is predominantly Hispanic (67 percent) and African American (12 percent), improving student achievement in College Algebra directly affects college persistence and completion metrics that now determine state funding.

In fall 2010, a small group of adjuncts, led by a senior instructor and an associate dean, piloted a high-tech, high-touch intervention using web-based, interactive course materials in a small dedicated lab staffed with undergraduate learning assistants. The design entailed two traditional class meetings each week with an additional three hours required in the lab. Small but immediate improvements in passing rates were used to nurture faculty beliefs that instructional design was both in their hands and that it mattered in student outcomes. Subsequently, a larger intervention, the Mastery Math Model, was included in and funded by a Title V Department of Education grant in 2011. While the model included computer-assisted learning experiences that would mandate time-on-task for the students, it also included expectations for high levels of student-faculty and student-student interactions. To support faculty in identifying and implementing research-backed practices to meet these high-touch mandates, a specialist in mathematics education

specialist joined the team. Team meetings, while originally intended to ensure a measure of project consistency and to plan assessments, became the backbone of the College Algebra transformation.

By fall 2012, after seeing a 20 percent increase in passing rates, FIU opened a dedicated Mastery Math Lab with 204 computers to serve all College Algebra and Intermediate Algebra students. The teams (an Intermediate Algebra team was created upon opening the new lab) continued to make decisions about lab policies and practices as well as curricular sequencing, test design, and levels of rigor, high-touch practices, alignment of assessments with learning objectives, etc. FIU's Center for the Advancement of Teaching (CAT) partnered with the project by supplementing the faculty collaboration with professional development that targeted specific needs, provided discipline-specific guidance and feedback, and modeled many of the best practices faculty were working to implement. Faculty were asked to question their practices and long-held beliefs about learners and learning and using data to back decisions—whether they involved dropping a test question or piloting a new teaching practice—became a part of the group culture. Also, because the decisions were collaborative but still driven by the faculty, passing judgment on unsuccessful elements of the course or project design became safer and fostered the freedom to suggest new ways of doing things.

In spring 2014, FIU was selected as a Founding Institution in the John N. Gardner Institute, Gateways to Completion (G2C), and began to incorporate the Mastery Math faculty working group model into other lower division gateway courses including Precalculus Algebra, Trigonometry, Finite Mathematics, Social Choice Mathematics, and Introduction to Statistics for Behavioral Sciences. Such a wide-scale implementation required a commitment from the university to the full-time instructor model with over a dozen mathematics instructors hired solely for lower division math courses. It also required shifts in departmental practices including strategic scheduling to create cohorts of instructors to teach courses for multiple semesters; requiring participation in weekly meetings as part of the letter of offer to new instructors; developing a student-centered continuous improvement mind-set; and, for non-major courses, revisiting course goals and instructional practices.

Currently, College Algebra pass rates are steadily in the upper 60s with drop rates of 5–7 percent. Finite Math and Social Choice Math now have approximately 80 percent of students passing compared with the mid-40's in AY 2013–14, and student success has doubled in Trigonometry. Measures of success are not limited to increases in passing rates. In College Algebra alone, 2,317 fewer failures have occurred than if the pass rates had remained the same as they had been in the semesters before and including fall 2010. Likewise, in the two years since starting the Mastery Math expansion, another 2,400 seats were saved in four lower division classes (Finite, Social Choice, Precalculus, and Trig).

At the core of the faculty team model is course and instructional redesign that includes (1) a consistent course structure centered around active learning, (2) a collaborative, high-touch teaching approach utilizing evidence-based educational practices, and (3) backward course design to prioritize, order, and assess material according to the nature of the content. To do this effectively, it is essential to maintain course integrity and mathematical rigor while creating an environment where students and faculty are treated with respect, are agents of their success, and communication is clear, engaging, and personal. Ongoing faculty development with CAT continues to help faculty make the necessary connections between education research and practices that they find are practical and accessible.

Key elements of FIU's lower division mathematics reform are: 1) full-time instructors working in cohorts that are regularly engaged in course transformation and instructional design, 2) a project director or education specialist supporting both operations and faculty development, 3) support and guidance from a university or department based teaching and learning center with professional faculty developers, and 4) a shared vision among faculty and administrators that teaching practices directly impact student success.

Source: Leanne M. Wells, Director of Technology Innovations & Learning Architecture, and Founding Director, Mastery Math Program, Florida International University.

Photo courtesy of Florida International Institute.

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4

FUTURE GOALS AND ACTIONS OF FACULTY DEVELOPMENT

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This paper has demonstrated that there is a vital role for campus teaching and learning centers to play in a fluctuating educational landscape, and encourages the collection of more systematic and meaningful assessment data to demonstrate the contribution and future value of this work. Changing demographics, the galvanizing effect of information technologies, dwindling resources, and what we continue to learn about learning all impact the daily work of the campus. The synergy between faculty, faculty development, and student learning can drive institutional culture in promising ways. Faculty development, done well, is adaptive, and designed to instigate expert learning and stimulate student success. The best faculty development assumes faculty can improve their teaching practice (and seek to do so), and strengthens faculty capacity to improve student learning outcomes. Equally encouraging, teaching centers that can productively engage a majority of faculty in teaching development can establish a campus culture of teaching excellence.

The goals of the twenty-first-century teaching and learning center are, by necessity, interconnected and fluid, embodying rapidly shifting roles for faculty, students, and the institution. All are impacted, and each impacts the others. What would future goals look like? What actions make centers of teaching and learning necessary, if not critical, in a changing higher education ecosystem?

We suggest the following three goals, which can activate the promise of faculty development in effecting student learning called for in this paper. They are aspirational. While these goals are dependent upon institutional mission and scope, they directly respond to several critical needs raised throughout this paper, needs that affect the majority of American colleges and universities: the need to establish a culture of teaching excellence, the need to improve instructional quality at scale to reach all students, and in order to do so, the need to make professional faculty development accessible to all faculty. In short, these goals attempt to reach all learners—be they students or colleagues.

GOAL 1: PROFESSIONALIZE UNIVERSITY TEACHING PRACTICE THROUGH PROFESSIONALIZED FACULTY DEVELOPMENT, WITH THE GOAL OF REGULARIZING TEACHING QUALITY ACROSS THE ACADEMY

Faculty developers have played a significant role in training new faculty to teach. Over the past 30 years, professional development programs for graduate students have been established at research universities that produce the PhDs who will go on to instruct students at American colleges and universities (Border 2011). While most universities require some amount of TA preparation for teaching, the extent of the training varies and is heavily weighted to the initial semester of teaching. Concurrently, future-oriented teaching preparation, such as certificates and "Preparing Future Faculty" programs, have surged over the past 20 years. Over 75 American universities now offer teaching certificate programs for their graduate students (von Hoene 2011); a number that will need to increase given that there are 355 doctoral universities and 741 master's colleges and universities that award graduate degrees in the United States (Carnegie Classification of Institutions of Higher Education 2016).

As laudable as these programs are, most are voluntary, and not all doctorate-granting institutions offer them. International faculty coming from doctoral programs abroad may not have access or experience with teaching best practice on American campuses. For academic positions at teaching-intensive institutions such as comprehensive state universities, liberal arts colleges, and community colleges, graduate students may be asked to demonstrate teaching outcomes described in Chapter 2 of this paper as part of an interview process or teaching portfolio; however, this practice is variable. Further, many instructors, particularly faculty who teach professional or workforce development courses, come from the private sector. While they bring professional and clinical experience, these instructors may not have had the opportunity to develop formal teaching skills.

Institutions, working with their teaching centers, have a responsibility to ensure that all faculty are taught how to use evidence-based teaching practices, which in turn produce known impacts on student retention and completion rates (see Chapter 5). We recommend that research universities align their certificate programs for graduate students with the outcomes

laid out in Chapter 2 and that all graduate students intending to teach in higher education be required to complete such a program. We also recommend that teaching centers similarly align their new and early career faculty development programs with these outcomes. These alignments would be coupled with ongoing professional development in teaching at all institutional types where PhDs are hired.

This call for increased attention to teaching quality is not new (Boyer 1991; Fairweather 1996, 2002), but has become more pronounced in recent years alongside calls for institutional accountability. Thought leaders William Bowen and Michael McPherson, in *Lesson Plan: An Agenda for Change in American Higher Education* (2016), write: "we are persuaded that higher education should professionalize the 'teaching corps' much as many universities professionalized research staff following World War II and the explosive growth of sponsored research that accompanied it" (124). Research has social and economic value, but so, we are learning, does good teaching (Brown and Kurzweil 2017).

Faculty development itself, perhaps reflecting the lack of standardization attached to teaching that Bowen and McPherson point out, has not yet been codified professionally. This reflects a young field. In 2006, faculty developers reported a concern about the regularization of the profession; regularization is defined here as the creation of graduate programs to prepare faculty developers, a theory of change and developmental model specific to the field, and the identification of a set of core competencies expected of entry-, mid-, and senior-level professionals. Eleven years after this study of the membership of the Professional and Organizational Development (POD) Network (Sorcinelli 2006), their concern remains (Beach et al. 2016). This matters, as teaching and learning centers are asked to fill in for incoming faculty who may not have had access to professional development in developing teaching skill, detailed above.

Faculty developers are naturally linked to the professionalization of instruction. They hail from and are a product of the academy. They have been socialized into teaching via particular disciplines and programs. Their varied experiences will all impact the type and kind of faculty development offered on a given campus. Expert faculty developers are "meta professionals" (Candy, Crebert, and O'Leary 1994; Candy 1996), used to directing learning organizations (centers), and absent a requirement that college teachers be prepared to teach, must often lead from the middle in developing teaching practice.

Faculty development is at a juncture where expounding a defined body of knowledge, formal pathways to the profession, and consensus on what constitutes research in this area can take the field forward. Other higher education professions such as institutional research, research (Research Administrators Certification Council), student affairs, and professional and continuing education have developed professional practice standards, competencies, or hallmarks to guide their work. Atul Gawande (2009, 2011), in his discussions of codes of professionalism in learned professions such as medicine, architecture, and law, demonstrates that these disciplines have concretely articulated expectation of skill, trustworthiness, and disciplinary practices. For example, in medicine, such competencies are well-defined minimums that must be achieved in order for a resident to advance.

In higher education, faculty who become faculty developers are judged to be good teachers. Evidence of skill is typically based upon the developer's past performance in the classroom as a faculty member. While there is an established body of literature on how people should teach, implementation of these findings—how faculty developers design and assess faculty development programming—is not standardized. For example, as demonstrated in Chapter 3, there is

currently no standard assessment framework for determining the impact of faculty development center efforts. Faculty developers should not have to do this on their own. The profession can define how it supports directors seeking to institutionalize teaching culture.

For new faculty developers especially, there should be an expectation of programming and assessment competencies, that is, the ability to use principles of andragogy to structure programming, to assess programming (see Chapter 3), and to keep up with a burgeoning literature typically found outside the director's original discipline. Moreover, it is not uncommon at comprehensive universities and community colleges for faculty to lead a center for a short period before returning to the home discipline. Short-term and part-time directors will struggle to influence teaching success at the scale called for in this paper. For this reason, some centers may be better served by funding full-time administrators who can devote their full attention to gaining competencies in program design that results in changes to teaching practice and improvement of student learning.

Actions

- Building on the work done by research universities in preparing graduate students for teaching, require doctoral students who intend to teach to participate in programs that will enable them to demonstrate the outcomes described in this paper.
- Require clinicians and other instructors who do not come up through a PhD program to participate in professional development that will enable them to develop their skills in teaching prior to their first appointment.
- Codify professionalization of the field of faculty development:
    - As outlined in Chapter 1, create a national set of faculty development standards and competencies that create the proper conditions for expert direction of teaching centers.
    - As outlined in Chapter 3, create a theory of change or developmental framework based on faculty andragogy, as this would assist developers in creating and assessing relevant and appropriate programming.
    - As outlined in Chapter 3, faculty developers should embrace assessment of center programming for measurable impacts on faculty and students, as this moves the profession forward.
- Where feasible, institutions should fund centers to allow for full-time directors, preferably with administrative appointments, to minimize turnover and allow for the establishment of long-term goals.

GOAL 2: ENLARGE THE INFLUENCE OF THE FACULTY DEVELOPMENT CENTER AS AN INSTITUTIONAL PLAYER ON CAMPUS

Faculty development centers often act as unique agents to organizational change (Austin and Sorcinelli 2013; Grupp 2014). Schroeder et al. (2010) suggest that a majority of directors spend substantial time engaged in larger institutional initiatives that advance the quality of teaching and learning. Developers can take a stronger leadership role within the institution and expand

their repertoires to include change management (Austin and Sorcinelli 2013; Cook, Kaplan, and Monts 2011; Gappa, Austin, and Trice 2007; Grupp 2014; Schroeder et al. 2010).

To make the case for the teaching center as institutional player, many faculty developers will be asked to think and work at scale. The individual support model common at many teaching and learning centers is arguably less ideal to influence broader organizational outcomes (Brown and Kurzweil 2017); for example, closing the achievement gap. Kezar and Gehrke (2015), in their study on STEM pedagogical reform, demonstrate that so-called communities of transformation—multiple networks of faculty working on common practice—had the power to address both individual faculty need and to create substantive curricular change. Such campus networks will be necessary if faculty development is intended to reach all faculty, in cases where curricular reform may be desirable/necessary, or if universities intend to reach largely "nontraditional" student bodies (see Introduction and Chapter 5). This work cannot happen without intensifying collaboration efforts. Kezar elsewhere calls increasing collaboration in higher education "an imperative" (Kezar and Lester 2011). How teaching centers (original innovators of FLCs and other communities) convene large teams and build organizational capacity for instructional improvement aimed at student success requires additional attention and practice. Recent scholarship on teaching in higher education points directly to the need for a coherent set of conditions that enhance faculty intrinsic motivation to join (Bensimon 2007; Merriam and Bierema 2014; Wlodkowski and Ginsberg, forthcoming). Scaled efforts may feel new; of 900 faculty surveyed, respondents were suspicious of "alignment" attempts between the department and institutional needs (Kezar, Holcombe, and Maxey 2016).

Farsighted centers and developers are envisioning larger units of change as these impact student learning: networks that have a multiplier effect and assist in making space for the larger community. In the past, centers have hosted multiple year-long faculty learning communities of eight to 15 faculty members (Richlin and Cox 2004); increasingly they include large campus networks, faculty teams in the process of developing student cohorts, instructional improvement through lesson study groups, departmental action teams, and so forth (Corbo et al. 2015).

For example, departments with so-called gateway courses—required, lower-division courses featuring multiple sections—might view these less as discrete units than as an opportunity to work with colleagues to vertically and horizontally align, integrate, and deliver a master course with shared outcomes for better learning, especially for courses with high rates of noncompletion (see Chapter 3 for the discussion of FIU's scaled math initiative). Teamwork is a powerful mode of learning for everyone (Barkley, Major, and Cross 2014), and collaborative learning projects and assignments are a demonstrated high-impact process (Kuh 2008). What is good for students is also effective for faculty; faculty understanding of collaboration also has important implications for student learning. Relative to individual work, cooperation also improves student learning outcomes. "Belonging" is foundational to taking risks to improve instructional practice. Creating an effective learning environment means devising ways to reach the new majority of students within a new paradigm of collaboration and inclusion.

Chapter 3 demonstrated that investing in scalable quality instruction can be a lever to drive improved student outcomes and increased institutional efficiency. To position faculty development centers as direct participants in institution-wide decisions that impact student learning (e.g., program review, academic support, and accreditation), and in institution-wide bodies involved in the assessment of student learning, centers should be included and called upon as regular institutional supports (as are offices of institutional research and assessment). Faculty developers are in a special position to deliver hands-on programming to program

review and accreditation committees, to make connections between the art of teaching and program impacts. Centers are able to promote instructional expertise within and across departments and programs, and to connect instruction with evidence-based student learning, with particular emphases on enhancing motivation and learning outcomes among historically underserved students. Indeed, there are strong connections between faculty development and improvements in instructional quality (Styron, Michaelsen, and Styron 2015). As shown in Chapter 3, investing in scalable quality instruction can be a lever to drive improved outcomes for all students and increased institutional efficiency.

Another opportunity for faculty development centers is to harness the influence that information technology plays in both pedagogy and center workflow. For some time, faculty development leaders have argued for centers to work with faculty to enhance technological literacy as this supports student learning; faculty development leaders also support housing academic technology units such as media labs within the centers (Lee 2010). What centers of teaching and learning often do more effectively than IT centers can, is showing faculty how to use emerging technologies in pedagogically effective ways and, in certain contexts, what technologies to avoid using. This move is not without challenges. Learning technologies groups do their work very well, and IT center budgets and personnel lines typically outflank those of faculty development centers. (Why is beyond the scope of this publication.) But are separate units for teaching and technology either faculty-centered or cost effective? Does housing these apart improve teaching quality? In reality, a faculty technology need is often a teaching need. Combining teaching and technology centers would reach faculty at a single point of need. Housing technology either within or adjacent to a teaching and learning center would also privilege teaching, a missional activity.

Overall, centers are most directly collaborating with technology centers, at the college level with deans, with libraries, and with assessment offices (in that order). Some collaboration with centers for service learning, writing programs, offices of diversity/inclusion, and graduate schools/TA development also occurs (Beach et al. 2016). Some centers even collaborate with faculty development centers on other (feeder) campuses. These integrated and cooperative models reflect a model that can be used by other centers in being proactive to a campus's needs.

The future of faculty development is best contextualized within challenges to higher education, operating under fiscal constraints, changes in student demographics, emerging technologies, and expansions in faculty work roles, and in a growing culture of accountability. Centers are also subject to scrutiny and will be called upon to demonstrate their efficacy. Faculty developers must be ready to demonstrate programming impacts on both student and faculty learning. The hard work of assessment can also move the field forward by making a case for the primacy of teaching practice.

Actions

- Scale faculty development by designing programming that impacts multi-section curricula or large numbers of students, using a course, department, or program as the unit of measure.
- Position the center as a campus collaborator in accreditation, program review, and related campus-change assessment efforts.

- Privilege teaching and learning centers as the first point of need for faculty.
- Consider relocating campus IT training units adjacent to or within teaching and learning centers, to both privilege university teaching and to create a single service point for faculty.
- Consider providing train-the-trainer models of support for staff, e.g., advisors, student affairs personnel, and others; these staff are influential and often underutilized, especially on under-resourced campuses.

GOAL 3: SUPPORT THE TEACHING DEVELOPMENT OF DIVERSE FACULTY USING COLLABORATIVE APPROACHES, AND DIVERSIFY THE FIELD OF FACULTY DEVELOPMENT

Chapter 2 of this paper identified the role that the faculty developer plays in equipping faculty with knowledge and skills critical to improving teaching practice, including the development of inclusive and ethical learning environments (22). Goal 3 of this chapter extends inclusive practice to the teaching and learning center itself, which should strive to accommodate rapidly increasing numbers of contingent faculty, as well as diverse faculty.

Every center of teaching and learning tries to respond to and support faculty members and their goals for teaching development across the career span. Such assistance has helped tens of thousands of colleagues, building out relationships that slowly grow a campus culture of collaboration. Individual consultation remains one of the top approaches used by teaching centers to provide service, and studies on the efficacy of the approach found a statistically significant and positive connection between consultative feedback offered by centers and teaching effectiveness scores (Finelli, Pinder-Grover, and Wright 2011). Smaller networks and communities of practice have also provided a sense of community and accomplishment. The faculty learning community, an approach, pioneered by faculty development experts, are one example of using a collaborative model to improve practice with demonstrated positive outcomes in a number of areas related to better teaching and enriched student learning (Richlin and Cox 2004).

But do we reach everyone? One concern is the limited access that non-tenure track (NTT) faculty have to professional development. Contingent faculty are a substantial and growing population, if not the majority on many campuses, yet adjuncts report limited access to professional development programming (Eagan et al. 2014). Meanwhile, NTT faculty teach a majority of mission-critical undergraduate courses on many campuses. There is some early evidence that first-year students learn more from their NTT instructors, and that contingent faculty are better at working with disadvantaged students (Figlio, Schapiro, and Soter 2015) than their tenured counterparts. Contingent faculty numbers are only expected to grow (American Association of University Professors n.d.; Taylor 2017). Centers of teaching and learning should plan to reach this dynamic population using different modalities; for example, by offering professional development online (see Chapter 5 for discussion of institutional responsibility for NTT professional development).

The rise in NTT faculty teaching across the majority of American colleges and universities signals a generational shift in faculty roles. On many campuses, community remains an unmet

need (Kezar, Holcombe, and Maxey 2016). Despite a significant body of research on the benefits and relevance of groups that collaborate for personal fulfillment and scholarship, as well as examining and improving instruction, most faculty still spend most of their time working alone. Faculty labor remains qualitatively different from most other professions (Bozeman and Gaughan 2011). Consensus is low on how to move forward. Kezar, Holcombe, and Maxey (2016) surveyed 1,500 faculty and administrators on the changing roles of the professoriate and found strong agreement on the need to restore professionalism and ways to do so—including increasing emphasis on importance of teaching and adoption of Boyer's (1991) broad definition of scholarship—but low perceptions of agreement and feasibility of change.

Centers understand the role that collaboration plays in fostering community; literature is rich with the influence of groups on adult learning (e.g., faculty learning communities). The study of the power of cooperative learning is particularly illustrative for faculty who seek a sense of belonging: a meta-analysis of 375 relevant experimental studies in which research participants varied in age, economic class, and cultural background (Johnson 2003) and several other peer-reviewed studies (Johnson and Johnson 2012, Johnson and Taylor 2006; Barkley, Major, and Cross 2014) support the finding that when adults learn cooperatively, they tend to develop supportive relationships—including relationships across sociocultural and linguistic groups. Cooperative learning about teaching creates an environment in which learners can construct and extend their understanding, receive interpersonal feedback about how well they are performing in the classroom, be held accountable by their peers to practice and learn procedures and skills, and develop a "voice" (Rendón 1994) to validate their own learning.

Cooperative learning is especially beneficial for diverse faculty bodies. Collaboration yields unexpected benefits for women, faculty of color, and NTT members, many of whom continue to struggle with "belonging" in the academy (Gutiérrez y Muhs et al. 2012; Zambrana et al. 2015). Faculty of color, increasingly the face of their students on many campuses, report isolating and unwelcoming work environments (Zambrana et al. 2015), and say they must work harder than colleagues to be taken seriously as scholars (Eagan et al. 2014; Gutiérrez y Muhs 2012). Women in higher education continue to wrestle with these issues, as well as tenure challenges (Meyers 2012).

The benefits of collaboration normalize behavior and influence practice. High-quality mentoring often occurs in such communities (Kezar and Gehrke 2015). Kezar and Gehrke's STEM study (2015) found that female faculty reported statistically significantly greater benefits resulting from their participation in such communities compared with their male counterparts. In a second longitudinal study, mutual mentoring networks in research and teaching attracted 40 percent of all full-time instructional faculty on one campus, with women and faculty of color overrepresented (Yun, Baldi, and Sorcinelli 2016). Female faculty are more likely than their male counterparts to participate in faculty professional development.

(Diverse) faculty will continue to seek out such networks. Faculty developers have a privilege and a duty to help foster community here. Ironically, the demographics of faculty development are largely white, female, and aging. Like the professoriate itself, the field lacks diversity. Given the likely large number of retirements among faculty developers in the next decade, the demographics argue for a careful consideration regarding the career path into the field and attention to expanding the diversity of faculty developers (Beach et al. 2016). It remains for the profession to advocate for the critical roles that contingent and diverse faculty play in contributing to the university.

Developers can also combine this pressing need for community with culturally inclusive programming support that extends to students; for example, remediating pedagogical relationships and including culturally inclusive pedagogy in coursework (Dowd and Bensimon 2015). It is telling that many faculty report feeling unprepared to address diversity-related conflict in the classroom (Dowd and Bensimon 2015; Eagan et al. 2014), at a time when students are entering college in hugely diverse numbers (Musu-Gillette et al. 2016). Higher education is racially polarized. Here is an opportunity for centers to craft programming on this timely issue—to also "teach for diversity" (Adams, Bell, and Griffin 2007).

Faculty remain the principal constituency charged with fulfilling the instructional mission of the academy. They are finally responsible for achieving standards of excellence and student success. Faculty work in cohorts produces results at scale, focuses on what is best for students, and is cost-effective (Brown and Kurzweil 2017). In fact, it is precisely diverse collaborations that can bear the most fruit (Nelson 2014). Communal practice often clarifies and helps to make explicit unexamined connections between teaching effectiveness, faculty identity, student need, and institutional mission.

Actions

- Design and assess mentoring networks and mutual mentoring programs that reach women and faculty of color.
- Develop and assess programming and outreach specifically for contingent faculty, now the dominant teaching population at American colleges and universities (see Chapter 5 for discussion of institutional commitment to contingent faculty).
- Attract, develop, and support networks of faculty and administrators of color to engage and help to shape the work of faculty development (see Chapter 5 for further discussion of institutional commitment).

CONCLUSION

There is a vital role for campus teaching and learning centers to play in achieving student learning outcomes and, more broadly, institutional effectiveness. With student learning at the heart of higher education, what could be more important than educating and supporting the faculty who are charged with teaching those students? Faculty development centers are positioned to do just this, but to date have failed to develop a set of unifying principles within the profession that would garner necessary support from institutional leaders and address some of the most pressing needs facing higher education today. To these issues, we put forth and provided the evidence for three aspirational goals:

- Professionalize teaching practice through professionalized faculty development, with the goal of standardizing teaching quality across the academy.
- Enlarge the influence of the faculty development center as an institutional player on campus.
- Support the teaching development of diverse faculty, and diversify the field of faculty development.

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5

INSTITUTIONAL INVESTMENT IN TEACHING EXCELLENCE

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The concepts and ideas framed in this paper have been developed and structured based on the collaborative efforts of individuals working in the field of faculty development, often struggling to find an institutional home for over half a century. The authors presented the evolution of the field of faculty development and the important role faculty developers play in improving instructors' teaching practice. Further, the authors examine promising practices to assess faculty development impacts and outcomes, and finally, offer future goals and actions

toward which the profession might aspire. The ideas put forth are based on solid evidence, and represent the thoughts of a group of internationally recognized leaders in faculty development on behalf of center directors across the country who, in many cases, have for too long worked as individual entities within the institution.

If faculty development is to progress (which evidence suggests will improve higher education through enhanced student learning), then there must be a strong and persistent institutional commitment to this field. Offices of faculty development should be held in the same esteem as any other entity sitting at executive council meetings. Such offices should also face the same expectations, with annual reports including solid assessment data, and contributions to campus-wide strategic planning.

To accomplish this requires a standardization of the field of faculty development, with a better understanding of possible practices and expected outcomes, with base-funded efforts and directors whose positions are well respected on campus, and a firm understanding of how improved teaching and learning through faculty development efforts impacts the institution's efficiency.

ENHANCING THE CENTRALITY OF TEACHING EXCELLENCE

Culture, practice, student outcomes, and institutional finances are increasingly bound together (Brown and Kurzweil 2017). Colleges must demonstrate to accreditors, parents, and market forces that they are "student ready" (McNair et al. 2016) if they want to survive, with an emphasis on creating effective learning environments in and outside of the classroom, the latter often tied to institutional performance (Felten et al. 2016; Institute for Higher Education Policy 2012). Schroeder and associates (2010) note that issues confronting higher education will interface with some element of teaching and learning in the classroom. From this, we would infer that professional teaching practice is highly valued on college and university campuses. Teaching is a deep and complex form of communication. In fact, teaching achievement is undervalued on many American campuses (Bowen and McPherson 2016; Fairweather 2002; Kezar and Maxey 2016; Wilson 2010).

While faculty participation in the ongoing improvement of teaching is essential to the mission of colleges and universities, the value of teaching to the institution is especially reflected in the lack of support it gives this (generally) silent majority of teachers: non-tenure track, or contingent, instructors. However, investing in instructional quality is increasingly becoming an institutional imperative. This is especially the case for institutions in states that have moved toward a performance-based funding model for public institutions, such as the State of Florida, where demonstrating improved student outcomes directly impacts the institution's overall net revenue (Taylor 2017a).

As indicated in Chapter 4, Goal 3, institutions must do a much better job of building the teaching capacity of contingent faculty, who now make up half of college instructors nationwide (American Association of University Professors 2017; Austin 2002; Bowen and McPherson 2016)—a number expected to increase each year for the foreseeable future (Taylor 2017b). Non-tenure track (NTT) faculty should not be required to participate in professional development without consideration of fair compensation. Doctorate-granting universities can also demonstrate that their graduates (many of whom are bound for public comprehensive, land-

grant, urban serving or minority serving institutions), know how to teach (see Chapter 4, Goal 1). As discussed in Chapter 4, many excellent teaching programs offered at doctorate-granting institutions are largely voluntary. Future faculty may receive little formal teacher training (as opposed to TA work) as part of their postgraduate studies. This makes little sense for thousands of doctoral students headed to careers at the majority of U.S. community colleges and universities—comprehensive teaching institutions.

Professional development in higher education also differs markedly from that in other fields—for example, medicine, with its emphasis on continuous improvement (see Chapter 4). Systemic approaches to professional development in other fields often contrast to the historically individualistic views of faculty in their role vis-à-vis undergraduate success, where the locus of control remains behind the closed doors of the classroom and teaching is a fixed enterprise. Of the two major responsibilities of faculty, teaching and research, faculty are more likely to identify as scholars than as teachers (Damrosch 1994; Fairweather 1996, 2002; Hattie and Marsh 1996). Meanwhile, faculty interest in teaching and their students' outcomes matters deeply—this relationship drives profound learning and structurally explains much of the relationship between, for example, organized instruction and first-year GPA (Roksa, Trolian, Blaich, and Wise 2016).

Although teaching centers are increasingly connected to student learning, many still operate at the margins of academic affairs. As a consequence, institutions may allocate fewer resources for professional development staffing. Fundraising by development directors (many of whom were and are part time) and institutional expectations combine to undermine the capacity, scholarship, and potential influence of working with faculty to improve teaching and learning. Expectations for some centers are low, and some campuses have leveraged neither their goodwill nor their expertise. Faculty development, while understood as having a meaningful impact, has often gone unfunded or underfunded.

Have we fully embraced teaching in our profession? Faculty embrace what they are rewarded for. Institutions can help by creating conditions where faculty can dedicate more time, attention, and energy to meeting their current students where they are—to making higher education the engine of mobility it has promised to be. This is the question each college and university must answer honestly given mission and constituencies.

ACHIEVING INSTITUTIONAL EFFICIENCY THROUGH INSTRUCTIONAL IMPROVEMENTS

More and more, teaching and learning centers are being brought into the crux of strategies to improve institutions generally, examples are decreasing DFW (drop, fail, withdraw) rates, access for disadvantaged groups, and better uses of campus resources such as learning management systems (Kelley, Cruz, and Fire 2017). Increases in instructional expenditures have been shown to be positively correlated with student outcomes such as increased retention and degree completion.

Institutions can and should provide resources to help faculty developers and the faculty they serve better employ active learning strategies (such as cooperative learning and inquiry-based learning), as well as improving instructional organization, and better alignment of assessments with course objectives, all positively impacting mastery, course grades, and completion.

These results were found to be especially true for first-year students, remedial courses, and underserved and at-risk student populations (Brown and Kurzweil 2017, 8–10). The authors' review of the literature shared this compelling finding:

> The more a faculty member participated in development programs, the more her teaching and the outcomes of her students improved. Moreover, faculty participation in development had long-term impacts on student learning; students of participating faculty continued to demonstrate increased learning over time (11).

At the University of Central Florida, a campus that has grown 150 percent over the past decade, Brown and Kurzweil found intentional and consistent faculty development programming designed to increase instructional quality and capacity was integral to campus efforts to scale (16).

While quality instruction directly impacts student learning, it also impacts student motivation, pass rates, and interest in a subject, all of which link to decreased time to degree and course retakes. Instructional quality has also been found to be positively associated with student retention, which often leads to increased net revenue by avoiding gaps and inefficiencies. For example, recruiting a new student can cost three to five times what it costs to provide services for an already enrolled student. One student remaining for four years generates the same amount of revenue as four new students who leave after one year (Brown and Kurzweil, 6).

Improving instructional quality, and faculty development generally, does not happen in a vacuum. Fostering quality instruction is a key component of a quality department. Wergin's work describes a commitment to excellence in teaching, student learning, and scholarship as a central pillar to a quality department. He goes on to state that motivation to do quality work is found when four key factors are present: autonomy, community, recognition, and efficacy (2003). Solid faculty development programming fosters these four domains in service of improving instructional quality. These factors can also directly impact retention of faculty, another high-impact cost to institutions. Replacing a faculty member is estimated to cost as much as 5 percent of a department's operating budget (Bachrach 2005). Funding for faculty development is, therefore, a measure of institutional commitment not only to the development of faculty and student outcomes but ultimately to the mission, and bottom line, of the institution. With this in mind, what measures should be used as possible standards to demonstrate an institutional commitment to faculty development?

While differing institutional contexts and missions will require different prioritization, generally speaking, an effective faculty development program will do the following (Shahid 2013):

- Get the support of senior administrators for faculty development programs.
- Determine and provide/solicit the necessary human and financial resources for the program.
- Identify relevant leadership.
- Focus on realistic outcomes through training and workshops.
- Focus on consistent themes for some years.
- Set benchmarks for faculty learning.
- Use assessment to demonstrate impact.

INSTITUTIONAL COMMITMENT THROUGH SHARED LEADERSHIP

Teaching and learning initiatives are typically scattered across the institution, the purview of many people and processes. "Student success" projects are variously housed in colleges, within grants projects (e.g., education grants), in program review committees, in centers of teaching and learning, and within student affairs units, among others. These initiatives are almost always associated with accreditation visits. Such individual projects and practices may be highly successful, but are typically unlinked or unknown to each other, and therefore arguably less effective at driving institutional change. For example, highly influential processes one step away from the curriculum, such as program review, are often unconnected to faculty development work, which might capably assist improvement of curricula (see Chapter 4).

One solution is to share leadership in this critical area, moving instructional effectiveness to the top of the institution's agenda. Holcombe and Kezar (2017) argue that emerging institutional imperatives require new forms of campus leadership. Shared leadership would create a linking infrastructure where multiple people and perspectives drive decision making, including both faculty and administrators, around this issue. Shared leadership, unlike shared governance, designates a funded and unified approach to instructional effectiveness as a central endeavor. It is the contention of this paper that, given broad and complex shifts in higher education, existing approaches to teaching effectiveness as it drives student success are largely episodic and thus ineffective to meet demands on both the professoriate and on teaching and learning centers outlined earlier. A shared approach between faculty developers and academic and institutional leaders would cluster teaching and learning initiatives to effect large-scale impacts.

There is a unique ecology to the role faculty development plays with regard to teaching quality and student success, one that complicates the effect that faculty development can have on changing campus teaching quality. This dynamic includes teaching culture, endowments for teaching, centers for teaching and learning, and institutional funding (see Figure 1 below, which frames this issue). Faculty developers have historically led from the middle as agents of change, advocating for instructional quality and responding to the needs of dual constituencies. Leading from the middle, however, disproportionately burdens teaching and learning centers, if not faculty. In Chapter 4, the authors push faculty developers to establish professional framework and competencies and to successfully assess programming for greater institutional gains. But faculty developers cannot do this important work alone. Increasing teaching quality requires a dedicated and funded commitment from the institution, including changing teaching endowments such as RTP, and by its leaders to signal the importance of investing in instructional quality, a recognition that teaching excellence is a strategic priority.

It is arguable that an entire university could be approached from a developmental perspective. Higher education cannot meet increasing challenges without linking processes that purport to affect the same outcomes. In tight budgetary times, it benefits higher education institutions to recognize that quality faculty development has a financial impact and benefit to institutional mission. Simply put, it helps keep the lights on.

Figure 1. Ecology of faculty development with regard to teaching quality and student success

THE SOCIAL RESPONSIBILITY OF HIGHER EDUCATION

Corporate social responsibility (CSR) involves the ethical relationship and transparency of a company with all its stakeholders (faculty, staff, students, community) as well as established goals that are compatible with the sustainable development of society, respecting diversity, and reducing social ills (Dahan and Senol 2012). While CSR has always been closely tied to the educational mission of higher education institutions, social responsibility is a way for institutions to adapt a more businesslike approach that enables them to contribute to the well-being of the communities they serve, still achieving their bottom line.

Making learning more accessible and motivating at every level of education is not only a matter of equity; it also has significant pragmatic value. The state of California alone will be short more than 1 million baccalaureates by 2030 if current trends continue, with far-reaching consequences for future tax rolls (Johnson, Cuellar Mejia, and Bohn 2015). Further, enhancing the educational achievements of all Americans is another way to strengthen productivity and innovation in the workforce: more diverse teams are simply more effective (Nelson

2014). Increasing educational attainment among adult and other nontraditional learners has far-reaching global and national economic implications (Friedman 2007). Degree attainment is connected to lifetime earnings (Bowen and McPherson 2016); statistics regarding the lower percentages of highly qualified low-income students who attain degrees versus highly or moderately qualified high- and middle-income students who do are dismal.

Currently, 80 percent of high school graduates attend college within eight years of graduation, and undergraduate enrollment is six times greater than it was 50 years ago (Attewell et al. 2007). With estimates of the number of nontraditional students exceeding 70 percent of the enrollment in many postsecondary institutions, as well as being the highest population of learners in adult basic education (Zafft et al. 2006), we have to ask: Can formal education provide greater access to historically underserved learners—and graduate them in a timely fashion?

One answer to this question is that merely providing access is not enough. A case in point is a study of Hispanics in the City University of New York (Leinbach and Bailey 2006), an institution that has historically played a critical role in the education of minority, immigrant, and otherwise marginalized New Yorkers. Leinbach and Bailey report significantly lower success rates for Hispanics, compared with other minority and other immigrant populations, despite their prevalence in the university's population, and despite the fact that Hispanic students are represented in a proportion similar to that of Hispanics in the New York City population.

In 2013, just 14 percent of Hispanics, 15 percent of American Indian/Alaska Natives, 16 percent of Pacific Islanders, and 19 percent of black adults age 25 and older had earned a bachelor's degree, compared with 32 percent of adults of two or more races, and 33 percent of white adults (Musu-Gillette et al. 2016). The disparities between ethnic groups are starker in STEM attainment rates (Crisp, Nora, and Taggart 2009; Eagan, Hurtado, and Chang 2010). Of all science and engineering bachelor's degrees awarded in the U.S. (2012), only 8 percent went to blacks and 10 percent to Hispanics (National Science Foundation 2015). Even associate degree attainment remains low, especially for ethnic and linguistic minority students: in 2008, 30 percent of blacks and 20 percent of Hispanics age 25 to 34 had attained an associate degree or higher, compared with 49 percent of whites and 71 percent of Asians (Lee and Ransom 2011, 9). Black men in community colleges had the lowest completion rate of all racial, ethnic, and gender groups; 68 percent had not graduated in six years (Harper 2006). By 2012, 49 percent of all black undergraduates and 56 percent of all Hispanic undergraduates were enrolled at community colleges (American Association of Community Colleges 2013), where few will transfer to a four-year college to complete their degrees (Gándara et al. 2012).

Low-income, first-generation, adult students, and those with disabilities strive for college with mixed results. Students with low socioeconomic status (SES) are half as likely to earn a bachelor's or higher within eight years of high school completion than are students with middle SES (14 versus 29 percent)—in contrast to 60 percent of high-SES students who attained this level of education (Snyder, de Brey, and Dillow 2016). Adult learners, a rapidly growing population over the age of 25 (typically with extensive life experience and responsibilities), constitute roughly 47 percent of postsecondary students (Snyder and Dillow 2015). Few long-term college persistence studies focus on adult students; Attewell and his colleagues (2007) found that 28 percent of bachelor's degree recipients earn their diploma more than six years after enrolling in college, with women, students of color, and low-income students disproportionately affected. Steady growth is predicted throughout the U.S. for non-white populations through 2030 (Urban Institute 2015).

These numbers warrant significant attention to culturally responsive teaching in the academy. Faculties tend to judge the promise of their students of color more harshly than they do their white counterparts (Bensimon 2007; Jacoby-Senghor, Sinclair, and Shelton 2016), while instructional quality remains a primary influence on student motivation and learning (Arum and Roksa 2010; Elliot and Dweck 2005; Deci et al. 1991; Jankowski 2017). To graduate this emerging student majority, colleges and universities must attend to instruction that supports educational attainment of students within and across cultural groups (Adams, Bell, and Griffin 2007; Kitayama and Markus 1994, Geertz 1973) by revisiting teaching development, including questioning basic assumptions about these learners, many of them deficit (Lundquist, Spalding, and Landrum 2002). Inclusion stands as the largest barrier to college attainment (Orfield, Marin, and Horn 2005).

While there are some well-researched teaching practices that promote inclusive and deep learning within and across cultural and linguistic groups, there are relatively few comprehensive models to guide a coherent approach to instructional design and reflection on college teaching—for example, the motivational framework for culturally responsive teaching (Ginsberg and Wlodkowski 2009). Also, research on accelerated and intensive learning indicates that these formats can reduce the amount of time to earn a degree or credential, strengthen student learning, and make a postsecondary education more accessible for working adults (Aslanian 2001; Wlodkowski 2003). This task is the purview of the academy at large, and cannot fall to teaching centers alone.

As argued in Chapter 4, Goal 2, to effectively "pull a thread" through faculty development, teaching practices, and student learning requires a foundational theory that aligns well-theorized conditions (standards) and practices (see Goal 2). The theory needs to be an intersection of multi-discipline research on adult and professional (faculty) learning that can be represented through a pragmatic and coherent framework. Such a framework will enable teaching centers to more consistently create, implement, and study faculty learning. Similarly, it will enable faculty to create, implement, and study course design, instructional plans, and individual strategies. As noted in Chapter 3, we are calling for researchable sets of andragogic practices grounded in a solid and theoretically consistent framework.

Regardless of the model, a shared language (standards) for improvement, multiple forms of instructional collaboration (before, during, and after instruction), external partnerships, ongoing analysis of quantitative and qualitative data to inform teaching practices, and signature practices that elevate the identities of teaching centers discussed earlier in this paper are both essential and feasible.

CONCLUSION

As the focus in higher education becomes increasingly concentrated on outcomes versus inputs, institutional leaders are increasingly paying attention to the impacts of inputs on outcomes. While a growing body of literature has emerged in recent decades around the effects of teaching quality on student outcomes, a changing professoriate, shifting student demographics, and advances in learning design and delivery are leading to a renewed interest in research on the connections between instruction, student outcomes, and institutional resources.

In this and earlier chapters, the authors present evidence that suggests an investment in instructional quality improves student retention, persistence, and success rates, all of which

may positively affect net revenue (Brown and Kurzweil 2017). Enhancing the quality of instruction is necessary to support students through an improved holistic higher education experience that enhances learning and improves student outcomes. To achieve better teaching requires institutions to prepare for a postsecondary landscape in which the importance of faculty development and preparedness goes beyond the traditional tenure-track or research model. This means institutions should support faculty of all types and at all levels—part time and full time, tenure- and non-tenure-track, and graduate teaching assistants—to achieve and maintain high levels of teaching effectiveness. Faculty developers are well-positioned to provide that support. Moreover, if adequately resourced, faculty developers are well-positioned to partner in the design, delivery, and assessment of campus-based change strategies to enhance teaching practice and strengthen student learning, all of which may positively impact student attrition, course repeats, and time to graduation.

Simply stated, investing in good teaching through evidence-based, assessment-driven faculty development efforts can be a major lever for achieving better student outcomes. In an environment where many institutions, particularly public institutions, are increasingly facing budgetary challenges and are pursuing systematic improvements to increase efficiency, improving student outcomes through enhancing teaching effectiveness can be good for the institution's bottom line.

What Can Institutional Leaders Do Next?

- Fund faculty development centers proportional to campus mission, vision, and strategic direction.
- Advance effective instruction as a top agenda item for institutional leaders, sharing leadership in this area across the organization.
- Doctorate-granting institutions should work to create a national teaching corps (Bowen and McPherson 2016); require graduate students to participate in professional teaching programs to ensure best teaching practice.
- Promote a "continuous professional development" model of faculty development that encourages and rewards recursive practice.
- Provide faculty development to all faculty, including those with part-time or contingent appointments—now the majority on many campuses.
- Privilege teaching quality in hiring, retention, tenure, and promotion documents, or other endowments.
- Adapt or develop research-based theoretical frameworks that demonstrate the complex and multidimensional relationship between professional development and student learning, which will stimulate the development of empirically testable models.
- Effectively prepare faculty to teach new majority students (e.g., adult learners, students of color, and first-generation students).
    - Prioritize teaching the most underprepared students using inclusive practices.
    - Collaborate to create instructional approaches that are mindful and self-aware.
- Ensure that curriculum remains relevant and responsive to student and community needs and that it incorporates appropriate learning technologies.

EXEMPLAR

RUTGERS UNIVERSITY–NEWARK: A STRATEGIC COMMITMENT TO TEACHING EXCELLENCE

Given the research about the barriers first-generation students and those from under-resourced communities and schools face in completing credentials and degrees, it is likely more student-centered, attainment-focused instructional approaches will have a disproportionately large and positive impact on students from underserved communities.

Rutgers University–Newark (NJ), one of the four institutions in the Rutgers, The State University of New Jersey system and the most diverse campus in the country, completed a strategic planning process in 2016 under the leadership of Chancellor Nancy Cantor. Rutgers–Newark is increasingly focused on institutional change to build on its legacy as a place of opportunity that emphasizes "curriculum, scholarship, initiatives, places and spaces for both intra-group solidarity and intercultural engagement." Instruction and creative pedagogy are natural places to value and leverage diversity for the greatest impact on student success.

Citing research confirming that students' success and instructional practices are directly correlated, Rutgers–Newark has made a commitment to enhancing professional development opportunities for faculty and staff, and fully supporting them across their overlapping roles as scholars, teachers, and mentors. Excellence in instruction, therefore, is an important part of Rutgers–Newark's plan to drive stronger student outcomes and higher graduation rates. In fall 2016, the university launched the P3 Collaboratory for Pedagogy, Professional Development, and Publicly-Engaged Scholarship, a comprehensive faculty development center that supports the emerging and existing professoriate.

Rutgers–Newark is making pedagogical training a cornerstone initiative of the P3 Collaboratory and aims to scale faculty development efforts to prepare nearly three-quarters of its instructional faculty in evidence-based instruction. To accomplish this effort, Rutgers–Newark is deploying the Association of College and University Educators (ACUE) online Course in Effective Teaching Practices, which aims to provide faculty with pedagogical tools and techniques they can implement

in the classroom. Faculty who complete the Course in Effective Teaching Practice earn a certificate in Effective College Instruction, which is co-endorsed by ACE. The university is providing the ACUE program to its faculty participants at no cost, and as a result of faculty completing the online course, Rutgers–Newark expects the university's already high graduation rates to continue to rise, along with faculty and student satisfaction.

Source: Taylor, Steven. 2017. "Seeking Better Student Outcomes? Start With Improving Instructional Quality," Higher Education Today *(blog), American Council on Education, May 8. https://www.highheredtoday.org/2017/05/08/seeking-better-student-outcomes-start-improving-instructional-quality.*

Photo courtesy of Halkin Mason.

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