Developing Faculty to Provide University Students With Improved Learning Experiences: The Role of Centers for Teaching and Learning

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Abstract

The article addresses the importance of incorporating faculty development as a key priority of higher education institutions. A literature review and some face-to-face and online interviews were conducted at various U.S. institutions, to identify common and best practices regarding this important matter. The article offers some ideas about what is done, and how it is done, to help faculty be ready for the challenging role they need to play: to be effective developers of a diverse student body that meets the evolving needs of industry and that utilizes technological tools that never existed before.

Keywords: faculty, professional development, higher education, teaching, learning

Introduction

The faculty role in higher education institutions could be considered quite simple: Faculty are expected to create the conditions necessary for students to learn. In that sense three elements of student learning seem to matter the most: programming and curriculum development, learning resources, and faculty.

The academic program of study, the relevancy and currency of its curriculum, and the way the learning outcomes are addressed, as well as the alignment with the real needs of the labor market, are key elements in the educational process. The classroom space and its equipment (physical or virtual), the learning materials, specialized references, digital tools, and materials provided through academic partnerships are a few examples of the learning resources that can make a profound difference in students' college experience and their final readiness for a successful career. Last, but not least, is the fundamental role of faculty and their training and development. Providing faculty teaching skills can result in inspiring students in the acquisition of knowledge and in the development of competencies and values. The size and allocated resources, composition, and initiatives developed by today's centers for teaching and learning (CTL) are diverse, and there seems to be an increasing number of success stories and positive contributions to institutions that could help colleges and universities make their faculty stronger and better prepared for the ultimate goal of helping students grow academically and professionally. The ability of faculty to engage and support students, their guiding role as subject matter experts, their professional network, or their own growth mindset are essential ingredients for institutions to achieve their educational mission.

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Regardless of online or in-person delivery, faculty are the engine of higher education. Their value lies not only in what they know (since the body of knowledge of universities is no longer what matters most) but in their contribution to progress through the growth of their students, and the generation and cocreation of new knowledge and advanced solutions that benefit society. The role of faculty that will be addressed in this article is mainly the first of these contributions: the education faculty provide to students, which is also a common responsibility of all higher education institutions.

Lee (2010) defended the widely-held assertion that the college degree replaced the high school diploma as a requirement for participation in the knowledge economy. This fact has led to a dramatic increase in enrollment at institutions of higher learning, which continues today and is projected to continue to rise through the year 2024 (Hussar & Bailey, 2016). This enrollment surge includes traditional-aged students, non-traditional-aged students, students of all ethnicities and minorities, international students, and first-generation students. The growing diversity of the student body fortunately broadens the impact and scope of higher education through expanded access and, at the same time, presents new challenges for faculty, including a clear need to adapt to the different generational learning styles, which requires additional training and development.

According to industry leaders, many graduates are not ready for the workforce and lack the crucial skills for success in the world of work today. A report by Hart Research Associates (2015) highlighted how employer perceptions of graduate workplace skills fall short of expectations. Specifically, most employers (60%) desire graduates who have both field-specific and broad-range knowledge and skills. Other skills identified by over 80% of employers as critical when making a hiring decision for a graduate include (a) the ability to communicate orally, (b) the ability to work effectively with others in teams, (c) the ability to communicate effectively in writing, (d) ethical judgement and decision-making, (e) critical thinking and analytical skills, and (f) the ability to apply knowledge and skills to real-world settings (Hart Research Associates, 2016). The needs of students today are more diverse and individualized than at any time in history. The high-tech, fast-paced world of work requires institutions of higher learning to prepare students for a future that is not clearly defined and for jobs that do not yet exist. Because job requirements of the future are unknown, the importance of developing learning skills, and the foundation for adaptation to change and readiness for innovation, in students is essential.

Institutions of higher learning have the opportunity to revisit teaching and learning approaches to help students prepare for life after graduation, and faculty are the vehicle to do it. The important question that arises then is how should higher learning institutions help their faculty be ready for the challenging role they need to play, to be effective developers of a diverse student body that meets the evolving needs of industry and that utilizes technological tools that never existed before?

Centers for Teaching and Learning: Mission and Challenges

To help faculty be effective instructors in the 21st century, the CTL of our institution initiated a search of common and best practices in the United States. The CTL team identified other CTLs to visit or whose staff could be interviewed online; some were members of the Professional and Organizational Development (POD) Network in Higher Education, a professional association of faculty developers, and some were highlighted in social media. A bibliographic search was also conducted regarding the ways that CTLs engage faculty to help them develop as instructors, how they encourage innovation in higher education classrooms, the composition of CTL staff members, and the challenges CTL leaders found related to faculty development.

Educating adults is about creating conditions for students to learn; a more concrete question emerges of how best to help faculty integrate innovative practices into their classes to create and sustain such conditions that meet the current needs of students. This is where CTLs (and similar departments with similar missions) do their work. Centers vary in how they support faculty members' needs, and focus areas include curriculum, research, career, leadership, and learning technologies. The primary focus of such centers is supporting enhanced student learning through the pedagogical development of faculty (for planning and teaching courses). Technology occupies a significant space of their work, as advances in technology create opportunities to enhance learning and faculty need to develop the knowledge to take advantage of the tools. While some faculty take to this quickly, others need more support. Also, the online and blended modalities resulting from technological advances come with additional opportunities for faculty to learn and grow. Technology aside, these all tie back to needs originating from student learning.

As learners themselves, faculty have various profiles. Instructor experience, career interests, availability of time, and needs vary from one to another. Faculty developers seem to agree that an individualized approach is best, at least to some extent, but what they can do very much depends on the resources, the institutional focus on faculty development, and such development's alignment with many other policies and priorities. The more faculty development matters to an institution, the more it matters to its faculty (Mohr, 2016).

Getting faculty onboard with the faculty development missions of CTLs is a continuing challenge. Although awareness and acceptance of CTLs has grown over the past 20 years, some instructors still view faculty development as irrelevant or even threatening. In larger or more traditional institutions, where the premium has been on discipline expertise rather than on teaching, faculty can place a low priority on participating in development. Long-term faculty who established their careers under this system can be reluctant to spend time on faculty development. This also applies to faculty who are focused on advancing their research to achieve tenure. Boyd, Baudier, and Stromie (2015) conducted a survey of 23 members of the POD Network and found that more than a third of faculty developers encountered resistance during consultations, workshops, and meetings. They speculated that there continues to be a perception of educational development as a less-than-valuable use of time. One survey respondent reported that, in a discussion about learning objects, a faculty member wondered "why the insistence on giving confusing names to things she was already doing?" Faculty unfamiliar with educational terminology may find it more confusing than helpful to be confronted with a new way of looking at things.

Confusion around the purpose of CTLs and their role in educational delivery also contributes to this problem. "The role of any given CTL is part myth, assumption, and rumor. Even a one-dimensional center mission focused on instructional development can be misunderstood and surrounded by strongly held misconceptions" (Schroeder, 2015, p. 22). Over the past 2 decades, the scope of CTL activity has broadened to include instructional design and delivery, curriculum development, integration of technology, assessment, leadership, and organizational development. The shifting and evolving nature of the faculty developer's role may make some faculty feel that their territory is being encroached upon.

According to Kay Sagmiller, director of Oregon State University's (OSU) CTL, new hires are more receptive because they come in with a focus on the quality of teaching. "I think that's partly a result of the center for teaching and learning movement, which has been calling attention to the importance of teaching and its impact on student learning" (K. Sagmiller, personal communication, July 18, 2017). Mary Wright, the director of Brown University's Sheridan Center for Teaching and Learning, has observed the increasing emphasis on teaching skills in higher

education. "When I first started out in this field, a large percentage of university faculty had not taught before. I don't see that now. I think that's due to the growth of preparing future faculty programs" (M. Wright, personal communication, July 28, 2017).

Some faculty may still feel threatened by outside scrutiny. For this reason CTLs must make it clear that their focus is on enhancing good practices, not on remediation. "We always talk about extending and refining the talents that are already there in our faculty" (K. Sagmiller, personal communication, July 18, 2017). "The approach we use is not to scold people, feeling that most faculty are trying to do a good job in the classroom" (M. Wright, personal communication, July 28, 2017). For this reason most CTLs emphasize the voluntary nature of their programs and services. "Not everybody is interested, so you start with the ones who are and build over time" (K. Sagmiller, personal communication, July 18, 2017). Efforts to make CTL participation mandatory would seem to be counterproductive.

Victoria Bhasvar, director of the California State Polytechnic University, Pomona's Faculty Center for Professional Development, observed that when faculty feel forced to use the CTL "it never goes well" (V. Bhasvar, personal communication, July 27, 2017). That is why she and other faculty developers wait for faculty to reach out to them for assistance, and why they strive to keep consultations with faculty confidential, even from the chair or dean who referred the faculty member in the first place. "I always try to couch these things in the literature about learning. Faculty really wants to see the evidence supporting recommendations. It helps that there is so much readily accessible information and great books to share with them" (V. Bhasvar, personal communication, July 27, 2017). This highlights how CTLs are most successful when they act as a resource for faculty and administrators.

The key to success, said Wright (M. Wright, personal communication, July 28, 2017), is helping administrators solve problems, making faculty's lives easier, and making teaching more fulfilling and joyous. CTLs are in an ideal position to function as central hubs for recognizing excellence and distributing best practices throughout the university. Ultimately, Sagmiller, Wright, and Bhasvar agree that the success of CTLs rests on relationships developed through making connections and communicating with stakeholders across the university over time. Sorcinelli, Austin, Eddy, and Beach (2006) point out that educational developers will increasingly have to "connect, communicate, and collaborate to meet the challenge of how to do more with less while simultaneously maintaining excellence" (p. 158). In keeping with these general guidelines, our research revealed a number of best practices common to successful CTLs.

Some Common and Best Practices

CTL leaders do their best to make their support relevant for faculty. They strive to offer enough variety of learning resources, formats, and tools that engage faculty and help them grow professionally.

CTL leaders offer workshops as a regular part of their services. However, some of the most innovative centers prefer engaging faculty through other means. At Indiana University (IU) Bloomington the bulk of their work starts with consultations, through which other services are introduced. An example would be a faculty member coming to the CTL for help using the Grade Center in the learning management system, and the CTL member using this as an opportunity to talk about rubrics or best practices in assessment and evaluation. Similarly, at the California Institute of Technology (Caltech), Director Cassandra Horii identified the method of individual consultation as a key contributor to the center's success in the early years, as it allowed the interaction to be flexible and in-depth. Most recently, they have seen increased faculty interest in

the more typical group events, which may be situated in their general or discipline-specific contexts. (C. Horii, personal communication, August 2, 2017). A notable annual tradition, now in its third year at Caltech, is TeachWeek (http://www.ctlo.caltech.edu/), a week-long celebration of teaching and learning, providing faculty an immersive experience of opportunities to connect through events such as workshops, panels, distinguished lectures, discussion, and open classes OSU's CTL hosts a similar celebration of teaching event every spring.

Another common way CTLs assist faculty in improving their teaching is through observations. The way these are done varies across institutions. At IU Bloomington this is deliberately not advertised but rather offered as the need arises through a consultation. A "may I come to your class and see what's going on?" often works much better, so the observation is viewed in the spirit of collaboration and as information gathering to enhance the consultation. It is made clear that the observation is not evaluative, and the purpose of the intervention is to gather data for enhancing strengths and solving whatever issue is at hand. Practices may vary in the online-only environment, where faculty observation can be an important quality control strategy. CTLs may get involved in gathering data about faculty presence to identify faculty who may need coaching in best practices in online education. Kendall College's CTL currently oversees a faculty coaching initiative that directly addresses this need through a peer-to-peer format led by exemplary online teachers.

Observations can also happen in the peer-to-peer format. OSU has a unique Professional Learning Community called Teaching Triads, in which three instructors work together to observe each other's teaching. Beyond improving teaching and learning techniques, the feedback format creates an opportunity to also develop the teachers' ability to effectively give and receive feedback. During this "intellectual coaching," as Director Kay Sagmiller (K. Sagmiller, personal communication, July 18, 2017) calls it, CTL staff teach the faculty how to ask questions that build trust and rapport, rather than defensive relationships. Faculty also learn methods of observation that emphasize data collection. It has proven to be a very popular development opportunity with repeat participation.

More broadly speaking, learning communities that are coordinated by CTLs bring faculty together (often from different disciplines) to interact and help each other deepen their knowledge. At IU Bloomington, faculty come together in Faculty Learning Communities and Communities of Inquiry to produce outcomes or products that contribute to advancing teaching and learning. These projects are also financially supported. Again, at OSU, the term used is Professional Learning Communities, one of which was the Teaching Triads. These communities are a significant and versatile mode of professional development. Faculty can join existing Professional Learning Communities or start new ones. Important in these groups are the development of community, a focus on action, and a scholarly component.

The nature of faculty involvement is varied across CTLs. Some CTLs select faculty to serve as fellows (sometimes accompanied by a small stipend) for a designated period in which they work closely with the center staff to share their expertise with the greater teaching community in the form of workshops and seminars on their areas of expertise, as well as research and individual consultations. This is the case at the University of Notre Dame (K. Barry, personal communication, July 27, 2017). Additionally, Notre Dame's seasonal workshop series is conducted by the center staff (K. Barry, personal communication, July 27, 2017). Opportunities for faculty fellows at IU Bloomington take on a more focused nature, with established projects such as the Service-Learning Program in which a faculty member may apply to be a Service Learning Faculty Fellow, or the Student Learning Analytics Fellows Program, which funds faculty-driven research projects to foster student success.

At Caltech faculty involvement takes the form of an advisory committee that meets twice a year to advise the CTL with strategic development of ideas and communications, as well as to serve as a liaison to their department. With the research-intensive culture at Caltech, and the time required to attend to those priorities, participation on an advisory committee provides an appropriate amount of faculty involvement in the center.

Structurally, as the support has become more centralized and formalized in institutions across the United States, CTLs have begun collaborating with other offices at the institution to provide needed support for faculty. Teaching and learning universally extends beyond any particular office. As an example, IU Bloomington's Center for Innovative Teaching and Learning is a partnership between the Office of the Vice Provost for Undergraduate Education and the University Information Technology Services, and the staff is comprised of experts in a variety of specialties, who are available to provide consultations to faculty according to their specific needs. A formal partnership launched across IU campuses, called Mosaic, encourages faculty to use active and collaborative learning approaches in the classroom and brings together university stakeholders to support the instructional, spatial, and technological needs.

As discussed earlier, the advancement of technology has created opportunities for enhancing learning with new tools and along with that the need to develop faculty to leverage such tools. It is common for at least one member of the center staff to focus on educational technology. The staffing model used at IU Bloomington is comprised of staff consultants, including several instructional technology consultants and an online instructional technology consultant. Along these lines we have even seen some recent organizational shifts, like those at California State Polytechnic University, Pomona, where the e-learning team, which had been housed under Information Technology, is now in the Faculty Center, since the conversations have more to do with learning as opposed to "what button to click" (V. Bhasvar, personal communication, July 27, 2017).

Ultimately, the modality of faculty development can and should vary depending on the needs of faculty at each institution. What has made successful development opportunities stand out is that they are personalized and collaborative. As mentioned earlier, the individualized approach allows for an individual instructor's specific needs to be identified and addressed in-depth. The learning communities allow interactions across disciplines and are created around topics that are current and relevant to faculty's interests and needs.

Finally, when referring to what CTLs do, a number of centers provide all-around support for the needs of faculty, which includes needs peripheral to teaching and learning (e.g., tenure support, personal ePortfolios). Austin and Sorcinelli (2013) advocated for CTLs to broaden the scope of their interventions, beyond those strictly related to pedagogical skills, as a means to conceive faculty development in a more comprehensive manner that helps faculty become more effective professionals over all, who will also be able to deliver better instruction in their classes and in their interactions with students. Managerial and research skills, for instance, will ultimately circle back to the original focus on teaching and learning.

When exploring CTLs, both through the corresponding literature review and live interviews with staff at successful CTLs, a long list of themes emerge as best practices. Although not exhaustive, we hope these best practices can offer other CTLs some inspiration too.

New faculty first: In interviews with OSU and IU CTL leaders both strongly suggested CTLs target new faculty members for their initiatives. The consensus was that new faculty are most

likely to have a "teaching first attitude" (K. Sagmiller, personal communication, July 18, 2017). New faculty orientation is an opportunity to reach brand new faculty, to encourage peer-to-peer interaction, and for the CTL team to determine which faculty are the most involved members (G. Siering, personal communication, July 20, 2017).

Common language: Establishing a common language of terms may seem obvious, but it is extremely important. Content-matter experts may have little to no formal teacher training and can get bogged down with too many acronyms and jargon. So many faculty members are "brilliant people focusing on their discipline [but] speak a different language" (K. Sagmiller, personal communication, July 18, 2017) Even something as straightforward as using the term *outcomes* instead of *goals* or *objectives* positively changed the narrative between CTL members and faculty (K. Sagmiller, personal communication, July 18, 2017). In addition to establishing common terms, CTL leadership must clearly articulate their mission to faculty as collaborative and not punitive. Some faculty feel threatened or have a fear of marginalization if they recognize shortcomings in their teaching abilities. CTLs can avoid this situation through open dialogue, providing anonymous feedback, and sending the message that the CTL is not a "remediation center" (K. Sagmiller, personal communication, July 18, 2017).

Faculty-led colloquium: Regularly organizing a faculty-led colloquium with a focus on contemplative teaching that celebrates the strengths of each faculty presenter is likely to attract many participants. These meetings promote peer interaction and allow faculty members to share their expertise. For both reasons, a faculty-led colloquium benefits the CTL. It attracts faculty interested in learning more about a technique or strategy being shared, and it shines the spotlight on the collaborative mission of the CTL as facilitators interested in improving teaching and learning (G. Siering, personal communication, July 20, 2017; K. Sagmiller, personal communication, July 18, 2017).

Go-to-them approach: Meeting faculty members where they normally congregate eliminates the need to *hope* faculty members show up to professional development training. A community college in the Bronx, New York, calls this approach the "CTL on Tour" (Rodriguez, Brennan, Varelas, Hutchins, & DiSanto, 2015), highlighting the following aims:

> CTL facilitators aim to initiate conversations on topics of shared concern in informal, seminar-style, often celebratory, meetings. Such gatherings—loosely focused; non-hierarchical; encouraging goal sharing, alternate paths of approach, and even alternate understandings—offer opportunities to overcome barriers between CTL, faculty, staff, and bridge gaps between administrative and instructional roles. It also seems that being centrally located can improve utilization of CTL services by increasing awareness and encouraging foot traffic. (p. 7)

Faculty learning communities: Faculty learning communities are spaces, whether face-to-face or virtual, where experts with common interests gather to share best practices to work smarter and more efficiently. For example, a faculty member with expertise in diversity may recruit like-minded members of the community to share documents, impactful teaching strategies, or other information to promote anti-bias attitudes. These communities exist if there is a need and grow organically based on topics the group deems relevant.

Fellow's programs: Many institutions offer a fellow's program for faculty and/or students. Faculty fellows are experts in an area relevant to teaching and meet regularly to discuss and reflect on trends they witness in the classroom or current research. Student fellows are trained by faculty to handle smaller, but time-consuming, classroom issues to free faculty time for focusing

on other areas. It is a way to identify and spotlight high performing faculty and students and to disseminate best practices simultaneously.

A variety of modalities: It is clearly relevant, and a best practice, to offer faculty a variety of modalities to choose from when providing development. Offering options for faculty members to participate in faculty development increases opportunities for engagement. It is ideal to offer professional development in face-to-face, online, and hybrid formats to increase faculty comfort with emerging technology.

Leverage marketing: Collaborating with marketing promotes CTL initiatives, advertises upcoming events, and acts as a reminder that a large contingency of faculty participates in CTL activities. The OSU CTL provides umbrellas and t-shirts for those who participate in an activity. "On a rainy day in Corvallis, Oregon, you can look out on the campus and get a visual of your impact by counting the number of CTL umbrellas" (K. Sagmiller, personal communication, July 18, 2017).

The Profile of the Faculty Developer

As institutions are becoming more student-centered and accountable to the public, evidence-based faculty development is crucial for universities and colleges. Many faculty developers, as CTL members, are also involved in large-scale institutional change efforts to transform teaching and learning structures and practices within the organization. The role of faculty developers has evolved over the years from being a source of "teacher tips" for faculty to offering comprehensive faculty development programs. With this evolution in offerings comes a need for new knowledge and emerging competencies that enable a faculty developer to effect change not only with the faculty but with the institution.

There does not seem to be a clear pathway into the field of faculty development. One of the faculty developers we spoke with earned a doctorate in composition rhetoric but participated in professional training on using computers to support composition. He then worked for several years with technology and writing, eventually leading to a role in faculty development. Another faculty developer we spoke with started out in agriculture as a soil scientist and then migrated over to faculty development, while another earned a PhD from Harvard University in the Department of Earth and Planetary Sciences, with a focus on atmospheric chemistry and biosphere-atmosphere exchange, and over time assumed more and more responsibility for teaching and learning related initiatives, programs, and centers for faculty, graduate students, and undergraduates.

Institutions that support faculty development typically staff centers by hiring full-time members specifically dedicated to their positions, faculty members with joint appointments in academic units who work part-time at the center, or graduate students who work part-time at the center. While faculty with joint appointments and graduate students may have considerable knowledge of personal and professional development, consulting strategies for instructional improvement, and other skills related to the work of a faculty development center, they may not have followed as clear a pathway as a full-time staff member who is more likely to have these skills being professionals who "devote their careers to giving systematic attention to the study and improvement of instruction" (Sell & Chism, 1991, p. 22).

Perhaps this is changing. Boyd et al. (2015) found through a survey of recent job listings on the POD Network listserv that 75% of instructional developer positions list a degree in

instructional design as an educational requirement, whereas leadership positions within the CTL require a PhD in "a relevant discipline."

According to DiPietro (2014), "Part of the challenge is that our field does not have an official qualification for it, like a degree or a certification, therefore there is no agreed upon body of knowledge or expertise that defines it" (p. 113). Individuals who provide faculty development must work with faculty in many ways, from coach to consultant to collaborator to change agent. All of these roles require knowledge, competencies, and traits to support faculty in their development. They should have not only broad industry knowledge, as many centers offering faculty development support many schools on a campus, but also multidisciplinary knowledge related to conceptual knowledge (related to teaching and learning), methodology for change, and diagnostic knowledge.

Faculty developers must also be able to form productive relationships with faculty based on trust—something that takes time to build but is essential to creating solid relationships. For many faculty trust comes from their perception of the degree to which the faculty developer shares common characteristics (beliefs, values, education, etc.), which makes communication and relationship formation easier. Faculty members with joint appointments in academic units who work part time at the center may be able to establish reliability and credibility faster; however, a full-time staff member can achieve this if he or she has professional qualifications such as a doctorate, has teaching experience, is involved in professional associations, or holds an adjunct faculty appointment.

Faculty developers must possess situational flexibility, that is, an ability to switch roles based on consciously chosen purposes and outcomes. For example, if a faculty member expresses interest in flipped classrooms, the faculty developer assumes the role of a coach by inviting reflection on that faculty member's intentions, values, goals, etc. If the faculty member recognizes a gap in knowledge about a flipped classroom, the CTL member switches role to a consultant who shares expertise about the pedagogical model, perhaps even pointing out quality resources for the faculty member to read.

Effective faculty developers are also committed to professional development; they engage in reflective practice, communicate effectively, and possess productive collaboration skills. On top of this, Baker et al (2017) contend that faculty developers should also have worked toward competence in mediating contextual variables at three levels: the institution (norms, structures, and routines of the institution, in which the faculty developer may have little control), program (format of the development activity), and session (background of the learners, for example).

There are not abundant opportunities for formal academic development of CTL members; however, there are some alternatives, like the faculty developer's certification offered by the Learning Resources Network (LERN; https://lern.org/events-education/faculty-training/), through which some CTL members have successfully earned a faculty developer credential.

How to Measure the Center for Teaching and Learning's Success

CTLs are increasingly called upon to demonstrate the impact of their efforts on faculty practices and student learning. At a minimum, faculty developers should keep careful track of the number of faculty inquiries and consultations, attendance at workshops and symposia, the number of repeat users, and the size of the center's network. Most CTLs also gauge faculty satisfaction with their programming. For instance, Brown University uses a modified Kirkpatrick framework to obtain faculty feedback about the value of the CTL's services. Individual stories

about the impact CTL programs have had on faculty teaching and learning can be an effective way to demonstrate value. "I think qualitative data is important because emotion plays a large role with people implementing new practices in their class" (M. Wright, personal communication, July 28, 2017). Acceptance and satisfaction with the CTL initiatives are key measures for continuous improvement.

Measuring the impact of faculty development and CTLs on student learning is difficult. Attempting to draw a straight line between faculty development efforts and what happens with students in the classroom can be complicated by the many confounding factors. OSU's Sagmiller (K. Sagmiller, personal communication, July 18, 2017) suggested that CTLs could address this question through an embedded assessment in a class or curricular area where there has been a CTL intervention and measuring the difference in student performance. However, most CTLs do not have the capacity for such fine-grained analysis of their direct impact (Schroeder, 2015). The development of the key competencies of faculty, as determined by academic leadership or human resources departments, is also an area where CTLS are expected to have an impact, and therefore, measurements, direct or indirect, should occur.

In budget slashing times comes intense pressure to demonstrate how the educational developer brings additional value at the institution level (Boyd et al., 2015). Under these circumstances CTLs can align their efforts with university priorities, such as retention, graduation rates, accreditation, quality improvement plans, and program reviews (DiPietro, 2014). Many CTL leaders are careful to align their programs with their institution's strategic plan. According to Brown University's CTL director, Wright (M. Wright, personal communication, July 28, 2017), each CTL should look different because each university and its leadership have different priorities. Understanding the institutional context is important if faculty developers wish to contribute in a meaningful way to institutional outcomes (Gravett & Bernhagen, 2015). Whatever the context, CTLs are here to stay and will continue to be an asset in the development of the new 21st century higher education model.

Conclusions and Recommendations

The fast changes in society, related to a much more diverse profile of higher education students, the evolving needs of employers, and the role that technology plays in instruction, are enough justification for institutions to provide faculty with the support they need to be effective educators today. The CTLs, or similar departments, are the units playing that role in many institutions. If faculty are the engine of higher education institutions, then CTLs are the fuel, or at least part of the fuel, that faculty need to function as expected.

The CTLs' work is not exempt from challenges: Resistance to change is very relevant. In many institutions tenure continues to matter most, and, why deny it, faculty sometimes think they know better. But higher learning institutions cannot wait; they must get their CTLs ready, as success in educating students of the 21st century will very much depend on the value these centers bring.

The CTLs cannot simply organize workshops for faculty to attend. A greater variety of resources and modes of delivery is a better approach to engaging educators. For the centers to effectively support faculty professional development, they need to enhance peer interaction: provide opportunities for shadowing, virtual or live observations, promote and define best practices, encourage and facilitate learning communities, and engage faculty as CTL members. Despite the price point and required resources, individualized consultations and interventions are highly appreciated by faculty.

The orientation needs of new and existing, full-time and part-time, domestic and international, on-ground and online faculty need to be addressed, since all of them, some more than others, intervene in the learning experience of students. The more faculty development plans link to performance assessment, tenure requirements, and institutional priorities, the better contribution they will make to overall institutional success. By aligning the activities of the CTLs to institutional or departmental needs, and working in partnership with institutional leaders, a positive, constructive approach will emerge that is far more efficacious than a corrective reaction.

Going beyond the pedagogical skills of faculty, there is room for further support of faculty professional development. Management, leadership, international exposure, research, or industry updates are some areas of indirect but still undoubtedly beneficial impact on students.

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