

Faculty Development Improves Teaching and Learning

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Reformers from all sides of the political spectrum are demanding change in higher education, ranging from more rigorous measurement of learning outcomes to a greater focus on diversity in the classroom. Many colleges and universities have at least a portion of a full-time employee (FTE) devoted to faculty development, also sometimes called "educational development," an inclusive term that reflects the range of centers for teaching and learning (CTL) constituencies (departments, faculty, graduate students, postdocs, and sometimes undergraduates) (POD Network, 2016). Although intended aims of CTLs are diverse – including goals such as faculty career advancement, development of climate and community, and graduate student professional development – most aim to advance teaching and learning in their campus contexts. In light of the current atmosphere of criticism of higher education, how can faculty and administrators make the case that CTLs have a positive impact on campus teaching and learning?

Here, we argue that there is a strong evidence base for the impact of educational development on student learning, and we summarize recent research that comprises this solid

foundation. Second, because evaluation and research often fulfill different demands (Levin-Rozalis, 2003), we describe typical features of individual CTLs' evaluation work. Finally, we offer advice for faculty and administrators who wish to support their own CTL's evaluation.

Faculty Development and Student Learning

Campus stakeholders often ask CTL directors, "What is the impact of your work on student learning?" This is a challenging question to answer because it involves establishing a causal chain of evidence from a CTL's work, to the classroom teaching of individual or groups of faculty, and then to specific student behaviors and outcomes. Despite the complexity of such analysis, in 2015, a rigorous Spencer-funded multi-institutional, longitudinal study examined this question by first studying if faculty learn as intended at teaching development workshops (yes, as indicated by interviews) (Condon, Iverson, Manduca, Rutz, Willett, 2016). The authors next researched if the same faculty translated the ideas learned in workshops to their teaching (again, yes, as suggested by an analysis of syllabi and assignments). Finally, they looked at the "million dollar question": Is improved teaching associated

with enhanced learning for students in the classes taught by these same faculty? Again, the answer was a solid yes, based on analysis of student writing on measures of critical thinking and quantitative reasoning. Similarly, a 2004 study across eight countries found that the students of faculty who taught and concurrently participated in faculty development programs reported fewer surface learning approaches (focus on memorization rather than understanding) over time, while there was no change for the control group (Gibbs & Coffey, 2004). In short, faculty development, done well, enhances student learning.

Faculty Development and "Rigorous" Studies of Impact

Commentators of CTLs point to their perception of a lack of rigor that the field brings to studies of impact. For example, one recent report on improving undergraduate teaching indicated that CTLs are a significant loci of professional development and teaching support in higher education, but claimed that they lack rigorous studies of their effects (Pallas, Neumann, & Campbell, 2017). However, if rigor is defined as randomized control and quasi-experimental designs, then a number of studies establish a compelling link between faculty development and teaching improvement. For example, a 2008 study randomly assigned engineering faculty to six groups, with activities ranging from no action to different types of consultations with CTL staff (Finelli, Ott, Gottfried, Hershock, O'Neal, & Kaplan). As measured

by student ratings and instructor reports of implemented changes, nearly every type of interaction with CTL staff produced statistically significant improvements, except for consultations that combined results from a recorded class video with midterm student ratings. Not surprisingly, the control (no interaction) carried no benefit to instructors and their students.

The picture is similar for graduate students, important because CTLs are identified by both graduate students and graduate schools as key partners in graduate student professional development (Denecke, Feaster, & Stone, 2017). A 2016 NSF-funded study of more than 3,000 doctoral students at three universities found that high participation in educational development activities (defined as 55+ hours) was positively associated with the use of evidence-based teaching approaches - even years after the initial program (Connolly, Savoy, Lee, & Hill, 2016). The doctoral students who engaged deeply in educational development also were more likely to be hired into a faculty position and to express confidence in their capacity to succeed in such a role.

What About My Center? How to Support Your Own CTL's Evaluation Work

Faculty and administrators may reasonably wonder, "Well, these findings may be true elsewhere, but is that the case here? How does my own institution's CTL document the impact of its work?" If you have

questions like this, a good first step would be to ask your center. Like academic departments, CTLs often have reports or publications that are not posted on their websites, and a conversation will likely open up a productive dialogue. Below, we offer a brief preview about what you might expect to learn from such an inquiry, and we offer advice for how to support your center's evaluation work.

Tip #1: Understand resource allocation

CTL evaluation activities differ from faculty development research because the former endeavor tends to be oriented to campus-specific impact and improvement, while research aims to contribute to a public body of knowledge. In addition, not all CTLs are able to conduct research, as institutional priorities and funding structures vary. Robust research on impact takes resources, money, and time. To support your own CTL's evaluation, it is helpful to ask about the difficult calculus a typical center makes, to allocate resources between the dual functions of doing and evaluating its work.

Tip #2: Normalize commonly used approaches in the field

Second, unlike academic departments with a research mandate, CTLs have historically been charged with acting in service of their institution's teaching and learning communities: work which is highly relational and collaborative, involving many individuals, departments, and disciplines. Therefore, it is also quite common - and a well-established metric in the field - for

CTLs to document the number of instructors and/or students engaged in and influenced by their services over a period of time, such as an academic year. Many faculty development practitioners also commonly use satisfaction and other self-report measures because instructors' preliminary feelings about a pedagogical approach matter in their considerations about using it in the classroom (Matthews, 2017; Weiman, 2017).

Some CTLs also record observational data about teaching or measures of student learning, but because faculty developers typically spend a majority of their time collaborating with faculty, students, and administrators, these studies are often prudently reserved for select projects, such as a decanal priority or a signature initiative. Indeed, prominent advocates for higher education teaching improvement including Nobel Prize-winner Carl Wieman (2015) have also made the case for more widespread use of instructor self-report data, and for institutions to rely on what is already well-known about teaching practices that lead to improved student learning when evaluating change. To support your own center's evaluation, it is helpful to understand that participant counts, reliance on the literature for "what works," and use of self-reports are frequently used by many CTLs - and there is a rationale for their presence in the CTL evaluation toolbox.

Tip #3: Support contextually-driven approaches

Finally, like other fields, CTLs rely on a body of existing scholarship to guide their practice, so rather than “reinvent the wheel,” you may be directed to the same resources we name here. Further, many centers rely on a “utilization-focused approach” in their evaluation work, a term coined by evaluation scholar Michael Patton (2008), which looks at intended use by intended users. In other words, key stakeholders (such as provosts, students, or a faculty advisory board) help define what they would want to see in order to know that a program is a success. Interestingly, these metrics often differ from what many would define as “rigorous,” as noted in Tip #2. For example, CTLs typically do not demonstrate the complete causal chain – from faculty engagement to change in teaching practice to impact on student learning – for every program or service, but may instead focus on aspects that are most meaningful or closely related to organizational change efforts or demands within their context. To support your own CTL’s evaluation, it is important to understand that “evaluation is a contextually bound practice” (Montrosse-Moorhead & Griffith, 2017, p. 596), with evaluation metrics that are often defined by those on the campus.

Asking the right questions

There is a rich and growing scholarship about the effectiveness and outcomes of faculty development. There is also room to

grow and discover, and as an organization, the POD Network is committed to improving research and evaluation models – and to using this scholarship to improve practice in the field.

However, to advance the missions of our colleges and universities, we also call for a move beyond simplistic and ill-informed answers to the question, “Is there evidence that faculty development impacts teaching and learning?” The answer to that question is clearly affirmative, and it is time to move to other questions of more practical import, such as that asked in one review, “What are the key features of faculty development that make it effective?” (Amundsen & Wilson, 2012). Using this as a springboard, we would add, “How do these features vary by factors such as institutional context, career stage, and instructor identity?” because faculty development is not a one-size-fits-all endeavor. Finally, with new models of faculty development – such as online and hybrid approaches, team-based course design, and students-as-partners – we would like to recognize that there are new and exciting questions to ask about these innovations. It is time to focus on fundamental challenges like ensuring that all instructors have access to high quality faculty development before and throughout their careers; examining how institutions value and reward excellence in teaching; and creating an evidence-based, inclusive environment where all learners can succeed.

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