Measuring Faculty Learning:

Trends in the Assessment of Faculty Development

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From training new course instructors to broadening the pedagogical depth of the institution, faculty development has become a key function within the academy. Sometimes referred to as "educational development" or "academic development," faculty developers participate in a wide range of activities including individual development (of faculty), instructional development (of courses, curriculum, and student learning), and organizational development (of departments, programs, and units) (Diamond, 1998, 2002). Ouellet (2010) provides an overview of the field of faculty development, clarifying that, within the field, scholars have contributed by developing stage models, creating a shared lexicon, and discussing challenges faced by practitioners (such as navigating the complexity of faculty work). Ouellet notes that the charge of faculty developers is to pinpoint and address issues central to faculty work, and then understand the extent to which faculty development is improving the academy.

Within the field of assessment, faculty development offices have been frequent partners with assessment and institutional research initiatives. We have seen faculty developers work with faculty to assess their own teaching at the Assessment Institute (re: Martin & Williams, 2018; McDevitt, Garza & De Oliveira, 2018) as well as investigated faculty perceptions of assessment and implementing change (Daughtery, 2018). Yet, faculty developers may be just as likely as their faculty participants to practice an "I know it when I see it" standard of measuring learning among the educators they train. Often absent from this work is faculty developer's evaluation of the effectiveness of their own efforts. Although faculty development professionals are experts in guiding educators to measure student learning, further discussion is needed regarding the best strategies for measuring the learning among faculty on campus.

As such, the purpose of this chapter is to contribute to the literature by describing trends and outlining areas for growth related to the assessment of faculty development programs and interventions. We provide historical examples as well as current and future trends, offering guidance in how those in faculty development may monitor achievement of their own programmatic outcomes.

History

Over half a century ago, colleges and universities began offering development programs and reward systems designed to help faculty improve their teaching skills (Centra, 1976; Ouellett, 2010; Skeff et al., 2003; Sutherland, 2018). Faculty developers have since come to be engrained in institutions helping establish rigorous academic cultures by promoting excellence in teaching, scholarship, and long-term career development (Chism, Holley, & Harris, 2012; Hurney, Brantmeier, Good, Harrison, & Meixner, 2016; Sutherland, 2018). Faculty development offices have been instrumental in helping institutions implement numerous high-quality educational practices. This includes activities such as leading institutions to adopt standard learner ratings of instruction, implementing collaborative methods for teaching evaluations like small-group instructional diagnosis (SGID), and providing training for effective peer review of teaching. Curriculum review processes, teaching performance reviews, consulting with individual faculty regarding their courses, and hosting course design boot-camps are common activities for those involved in faculty development (Amundsen & Wilson, 2012). More recently, faculty development offices have been highly involved in helping faculty gain skills around the assessment of student learning outcomes and in developing and measuring institutional learning outcomes. These types of programs related to the assessment of student learning often occur

locally within departments and campuses, as well as on national levels with long-term programs (such as those in STEM) (Derting et al., 2016).

The process of measuring the impact of faculty development has been frequently stymied, as there are countless factors when considering outcomes: the length of the initiative, location, and style (Berbano, Browning, Pangaro & Jackson, 2006; Felten, Kalish, Pingree, & Plank, 2007; Steinert et al., 2016). To date, we largely have assessed our work based on participants' satisfaction with the programs, rather than behavior change or return on investment (ROI) (Kirkpatrick, 1998). By seeing ourselves primarily as catalysts for student learning (i.e. faculty developers teach faculty who teach students), faculty developers may have missed an opportunity to measure the true impact of our own programs.

As the field has developed, so have the research and national conferences focused on faculty development and assessment. The annual Assessment Institute hosted by Indiana University Purdue University-Indianapolis provides an ideal opportunity to examine how the field is moving toward more comprehensive models of assessing the outcomes or ROI of faculty development, while still attending to developing faculty members' assessment expertise.

For example, faculty developers at Wayne State University were concerned about the availability of faculty to participate in development opportunities. To address this issue, the presenter offered assessment training to educators through numerous modes, such as in-person workshops, small group and individual consultations, and static resources (e.g., video tutorials, written instructions, templates). To measure the effectiveness of this new strategy, Barrette (2015) analyzed three different data sources: (1) survey results from workshop participants, (2) changes in participation rates, and (3) comparison of self-reported quality of assessment plans before and after participation in development opportunities. At the University of Northern

Colorado, Sexton and colleagues (2015) offered an assessment leadership institute to improve the ability of participants to measure program-level student learning. In their effort to understand the effectiveness of this intervention, these practitioners developed a pre- and post-test survey to measure the changes in self-reported attitudes, skills, and knowledge regarding this topic. At Ohio Northern University, Hurtig and Kim (2017) employed more objective measures to assess their new peer mentoring program. Using their annual program assessment reports, the authors rated the quality of submissions along six areas (learning outcome statements, assessment methods, results, adjustments to the program, reflection on assessment practices, and overall) and compared the average annual score between the first and second year of the program to the year before the program was initiated. Taken together, these examples illustrate important steps toward measuring and improving the effectiveness of faculty development.

As noted above, there appear to be two distinct ways in which faculty development programs engage with assessment. First, faculty developers are either writing and presenting about how to teach faculty about assessment or discussing the extent to which the participants respond to novel approaches of engaging faculty in assessment efforts. Second, and less frequent, are presentations and scholarship about the impact of faculty development programs on key metrics of interest to the institution, such as student learning outcomes, faculty productivity, and faculty vitality.

This phenomenon is illustrated by the fact that, each year when proposals are submitted for the faculty development track of the Assessment Institute, the vast majority of the sessions (approximately 80%) are about teaching faculty how to assess, rather than assessing the effectiveness of faculty development. This trend does not carry over to other tracks at the conference. For example, in the student affairs track, the emphasis is not on developing student

affairs professionals' assessment skills; rather, the sessions focus on assessing the effectiveness of student affairs programs and services.

We believe this divergence is due, in part, to the challenge of measuring faculty development outcomes. Our collective goal needs to be focused on moving the conversation beyond the description of faculty development programs and toward assessing the outcomes of faculty development. By broadening the scope of faculty development outcomes to include measures such as faculty learning, research productivity, and faculty vitality, we are able to more accurately reflect the scope and impact of our work.

Current Trends

As noted, in recent years, there has been increased efforts to study the effectiveness of faculty development efforts (Hoffmann-Longtin, Merckle, & Palmer, 2018). In their meta-analysis of studies related to the impact of faculty development, Chism, Holley, and Harris (2012) found that faculty developers often determined if their efforts were effective across a wide range of domains. This included measures of importance to those in faculty development such as faculty members' motivation to seek further development and changes in teaching practices. Other measures, important to both faculty developers and the institution as a whole, looked at the impact of faculty development on increased use of interactive teaching strategies, changes in teaching philosophy, gains in faculty using instructional technology, and increased student participation in courses. For example, Lawson, Fazey, and Clancy (as cited in Chism, Holley, & Harris, 2012) examined the extent to which engagement in faculty development lead to more learning centered approaches to teaching as well as positive change in students' approaches to studying. Others have looked at the degree to which grade distributions or student ratings of instruction in courses taught by faculty engaged in faculty development have changed

(McShannon & Hynes, 2005; Piccinin & Moore, 2002). Recently, Condon, Iverson, Manduca, Rutz and Willett (2016) engaged in an extensive study to assess how student learning is affected by faculty who are engaged in teaching development activities.

Other studies on the impact of faculty development attempt to measure the degree to which engagement in communities of practice influence the commitment, teaching skills, and satisfaction of faculty (O'Meara, 2005). Studies of the impact of mentoring have included metrics such as research productivity (Bland et. al, 2005; Miller & Thurston, 2009). Some studies of the effectiveness of faculty development have focused on outcomes such as increased interaction with peers (Bell & Mladenovic, 2008; Morris & Fry, 2006). Within academic medicine, Morzinski and Simpson (2003) studied the results of a two-year faculty development program focused on productivity and retention of faculty. Gjerde et al. (2008) reported that their development program for primary care faculty led to improved teaching and clinical skills, and gains in self-confidence and interdisciplinary networking and mentoring.

Bilal, Guraya, and Chen (2017) provide a meta-analysis of studies looking at the impact of faculty development within the health professions. In their initial review of 525 articles, over 400 of the articles were excluded from the analysis because they described faculty development programs but did not address the impact of those efforts. After deeper review of titles and abstracts, an additional 63 articles were excluded for the same reasons. Ultimately, only 37 of the 525 articles were found relevant and were included in the analysis. As such, while more scholarship is being generated about faculty development and even the assessment of those efforts, there must be a push to examine the impact of the work in a more rigorous fashion.

Many scholars have laid the groundwork for understanding faculty development as a more evidence-based endeavor (Bamber & Stephani, 2016; Bilal et al., 2017; Bothell &

Henderson, 2004; Chism & Szabo, 1997; Chism, et al., 2012; Plank & Kalish, 2010). However, few programs have actually been able to implement these calls. As Chism, Holley, and Harris (2012) note, linking engagement in faculty development to student learning outcomes is difficult. Some may argue that linking the results of faculty development to improved student learning outcomes is the gold standard. However, faculty development spans areas broader than teaching (Sutherland, 2018). Further, one can and should expect that the impact of faculty development to go beyond the classroom. Bothell and Henderson (2004) recommend following an ROI model where the net program benefits are divided by the costs to create a percentage. Kirkpatrick's (1998) four-levels of evaluation provides a framework for faculty developers to understand reactions of intervention on participants, the learning that occurred, any changes in behavior, and new results due to engagement in faculty development.

Given the historical and current trends related to the assessment of faculty development, we believe there is an opportunity to focus assessment activities on articulated faculty learning outcomes linked to important institutional metrics.

Future Trends

As discussed, assessing the impact of faculty development is complex. In this section, we present potential reasons why these calls have yet to be fulfilled and case examples, which use evidence to demonstrate ROI and integrate faculty development (and its assessment) into an institutional culture of learning.

First, faculty development, as a field, has struggled to develop a coherent theory base for the approaches and models used (Steinert et al., 2016; Sutherland, 2018). A few authors have proposed theories about how faculty grow, in particular environments and contexts. For example, Chism (2004) offered a model for how faculty learn about incorporating technology into

teaching. The author's "plan-act-observe-reflect" framework could likely be applied and tested in other contexts. Ramsden (1992) developed a model for understanding how faculty members grow as teachers, which has been combined with other adult learning theories and applied to many teaching development programs (Saroyan, Amundsen, & Li, 1997). Bland et al. (2005) consider a structure for thinking beyond individual faculty productivity, offering a theoretical model of faculty and departmental research productivity. Although this model is situated in academic medicine, it offers promising suggestions for faculty development as a field. By moving the faculty development evidence base beyond teaching development into broader faculty success characteristics (promotion and tenure rates, publication rates, satisfaction and vitality scores), we are able to demonstrate the value of the institutional investment in faculty development. More recently, O'Meara, Terosky, and Neumann (2008) offered a more holistic, growth-oriented model, focusing on the organizational practices which encourage faculty members' success in the areas of teaching, research, and work-life balance. These theories represent the wide breadth of faculty developers' work (Austin & Sorcinelli, 2013) and represent opportunities for developing and testing theoretically-based programs.

Second, creating an organizational culture of learning is not an easy task. It may be that faculty development centers or programs are housed in separate units from institutional research or faculty affairs. However, faculty developers are known for their collaborative nature (Beach et al., 2016; Chism & Szabo, 1997; Felten et al., 2007). If faculty developers are to demonstrate their ability to move beyond improving one faculty member or program to improving departments, centers, and institutions, we must seek partnership with institutional research professionals and others across the institution (Sutherland, 2018). Just as the field of student

affairs has moved to measuring student learning outcomes, faculty developers must measure outcomes as well.

Another problem faculty developers face when collecting evidence is related to unit of analysis. Because faculty development interventions vary widely in length and structure, it is challenging to compare them to one another and to consider what data to collect and what those data mean (Bamber & Stephani, 2016). Since faculty development programs often exist in complex institutions, we must not spend time working in vain to develop the perfect measure for our faculty development programs. As Bamber and Stephani (2016) explain, creating an argument for a program "involves gather a mix of types of evidence, questioning it, making sense of the evidence ... and then harnessing the findings to inform future thinking" (p. 245).

Given the breadth of disciplines that make up an institution, faculty developers may find it challenging to develop collaborative outcomes for faculty growth across programs. However, Hurney et al. (2016) developed a framework for this approach by creating faculty learning outcomes (FLOs) in collaboration with key institutional constituents, and mapping theses outcomes to faculty development center's assessment efforts. By collecting multiple sources of data, the authors were able to gather information on program quality, while simultaneously connecting their work to broader institutional goals. These types of evidence-based approaches are promising because of their ability to demonstrate the impact of faculty development beyond the classroom environment.

Although these challenges are complex, a few scholars have identified creative ways to move toward more evidence-based practice. One clear future trend in assessment of faculty development is focusing programmatic outcomes beyond participant satisfaction. Bamber and Stefani (2016) propose evaluating programs on three levels: raising awareness, increasing

understanding, and changing practice or policy. For example, in 2017, Tarr, Jerolimov, and Rao (2017) presented at the Assessment Institute a new learner-centered faculty development program called the "Faculty Teaching Showcase." In addition to collecting satisfaction data, the presenters measured faculty confidence in their teaching abilities and self-efficacy, thus identifying clearer learning outcomes for their program beyond, "Did they like it?"

Recently, Hurney and colleagues (2016) described methods for scaffolding faculty learning outcomes and mapping them to various faculty development programs and services. Building on the work of Hurney et al., at the 2016 Assessment Institute, Hoffmann-Longtin and colleagues presented their work at the Indiana University School of Medicine. By developing common learning outcomes across faculty development programs, the authors were able to connect program evaluation surveys to broader institutional data such as faculty productivity and promotion rates. Although they could not claim direct causation, the authors argued that these data present a promising case for ROI to higher-level administration.

Broadly speaking, to elevate the importance and stature of faculty development, we must commit ourselves to disseminating our work. Calls for accountability in higher education are not decreasing (Austin & Sorcinelli, 2013). Although the challenges to assessing faculty development efforts are numerous, they are not unique to one institution or discipline. By publishing the results of our faculty development efforts, we provide our colleagues with important evidence they need to garner support for their programs. However, as argued previously, this evidence must be theoretically grounded and methodologically sound. Since faculty are often the most expensive line item in an institution's budget, aligning faculty development work with comprehensive outcomes helps illustrate the value of faculty development across the institution.

Conclusion

Historically, faculty development has played a critical role within the academy for improving quality of education. Developers have substantially studied the successes and drawbacks to many of the measures of teaching used today in higher education, such as student feedback and peer evaluation; however, they have not done enough to measure the effectiveness of their own efforts. How do we know if faculty development efforts, themselves, are successful? Other areas within college campuses, such as student affairs, have already put to practice tried and true tools of assessment (e.g., theory and measures) to evaluate their own efforts. What is needed now is a shift in the spotlight from *how to teach faculty about assessment* to *how to measure the learning of the faculty we are trying to develop.* Evidence of the influence of faculty development will provide developers with the tools to improve services to faculty and further legitimize their role among campus stakeholders. It is time for faculty developers to move beyond "I know it when I see it."

Questions for Consideration

- How has the relationship between the fields of faculty development and assessment changed over time?

- What are some challenges in teaching faculty how to conduct assessment? How can those be addressed?

- Why is it important to assess the outcomes of faculty development efforts?

- What data sources and/or outcomes beyond those listed in the chapter might be used to assess the effectiveness of faculty development?

- How can proven assessment strategies and concepts be employed to measure the effectiveness of faculty development efforts?

Summary of Top Trends

- Historically, faculty developers have been involved in assessing teaching and learning and instructing faculty on those practices.

- As the field of faculty development has expanded, faculty developers must shift their focus to assessing the impact and outcomes of their work.

- Although finding and collecting data on the influence of faculty development may be challenging, some practitioners have been successful.

- Further research and dissemination is needed on the evidence and return on investment of faculty development.

Additional Readings and Resources

- International Consortium for Educational Development (ICED): http://icedonline.net/

- Professional and Organizational Development Network in Higher Education (POD): https://podnetwork.org/

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