TEACHING DEVELOPMENT & PRACTICE

A Multi-Institutional Study of Teaching Development Opportunities & Faculty Practice

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Abstract

To contextualize the myriad of teaching development efforts available to faculty, this large-scale multi-institution study of nearly 4,500 faculty broadens our understandings of who participates in teaching development practices, how their participation relates to their institutional environments, and how their participation connects to their use of effective teaching practices. Results show there are some notable trends by academic field, social identity, the type of courses taught, and institutional characteristics. The overview of professional development participation in this study gives strength to positive findings from smaller-scale research studies and provides a solid base for more specific studies of these practices.

Keywords: *faculty, professional development, teaching and learning, quantitative, survey*

A Multi-Institutional Study of Teaching Development Opportunities & Faculty Practice

Research on faculty teaching development is robust. Much of this research centers on teaching development practices and effectiveness in particular fields, such as medical and health sciences (e.g., Thomas et al., 2016; Steinert et al., 2006; Steinert et al., 2016) or science, engineering, technology, and mathematics (STEM) fields (e.g., Derting et al., 2016; Smith et al., 2008). Research on faculty teaching development also tends to focus on the implementation and effectiveness of specific practices, such as faculty learning communities (e.g., Cox, 2004; Sherer et al., 2003). Regardless of the content, the bulk of this work comes from small-scale studies of individual teaching development practices, while large-scale research on faculty use of teaching development practices and its effects is quite limited (Chism et al., 2012).

While literature reviews, such as Steinert et al. (2006), Chism et al. (2012), and Steinert et al. (2016), help to synthesize the diverse focuses and conclusions of smaller-scale research on particular faculty teaching development practices, research is needed to better contextualize the myriad of teaching development efforts available to faculty and their impacts. This large-scale study seeks to broaden our basic understandings of current faculty development patterns, with an exploratory approach. As such, this paper seeks to answer the following research questions:

- How does participation in teaching professional development opportunities vary by faculty and institutional characteristics?
- What is the relationship between partaking in those opportunities and faculty emphasis on educational classroom practices?

Literature

Faculty development encompasses a wide array of activities and practices that seek to help faculty improve in any aspect of their professional academic careers, including, but not

limited to, their teaching and research (Hoffmann-Longtin et al., 2019). However, Lacey's (1988) review of the then-burgeoning faculty development movement makes clear that teaching was an important early focus of such efforts, such as those studied in Centra's (1976) foundational study of faculty development practices.

Teaching development practices are often formally organized in nature, with faculty developers often ensuring that faculty continue to develop their capacity in teaching, assessment, and administration (Bilal et al., 2017). Steinert et al. (2006), in reviewing teaching development research in medical fields found most programs to be workshops, seminars, courses, or fellowship programs. Similarly, Chism et al.'s (2012) review of teaching development research across a variety of disciplinary areas found most efforts focused on workshops, courses, and communities of practice that were formally organized by faculty developers. Notably, while both Steinert et al. (2006) and Chism et al. (2012) identify some recurring teaching development practices (e.g., workshop series), there is no indication that any of the studies reviewed considered participation in multiple types of opportunities.

Steinert et al. (2016) acknowledge a broadening of this traditional view of formal teaching development put forth by Webster-Wright (2009) to include a broader variety of formats, approaches (formal vs. informal), and contexts (individual vs. group), however their updated literature review still found a majority of teaching development efforts to be formal in nature. Despite its lack of representation in prominent literature reviews, informal teaching development has been studied, particularly informal mentoring of faculty. Sorcinelli (1994) notes that new faculty desire and find helpful informal mentoring from senior faculty, in addition to formal mentoring. Leslie et al. (2005) found that, for junior clinical faculty informal mentoring relationships, while supportive, did not fully qualify as mentoring and needed more formal

organization to ensure equitable access to quality mentoring. Conversely, Goodwin, and colleagues (1998) found that informal mentoring experiences were valuable for faculty in education. Steinert et al. (2016) note the need for further study of informal development efforts as they often contain "key ingredients to effective faculty development" (p. 779) such as peer learning, modeling, and reflection.

Regardless of the format or approach of faculty teaching development practices, research broadly indicates that these programs are effective at improving faculty teaching. Centra's (1976) early study found a wide number of teaching development practices, such as grant and travel funding (e.g., to travel to a conference) and teaching assistance programs (e.g., course development assistance) to be rated as effective by institutions. Steinert et al. (2006) found across 53 studies broad positive impacts of faculty development practices on faculty attitudes toward teaching, teaching skills and knowledge, and self-perceived teaching behavior. Steinert et al. (2016), in reviewing 111 studies, further confirm these broad positive changes in attitudes, knowledge, and teaching behavior, as well as increased faculty confidence, enthusiasm and leadership from development opportunities. Chism et al.'s (2012) review of 149 studies similarly shows positive changes in faculty teaching attitudes and behaviors, as well as student learning (e.g., from formal teaching courses or communities or practice) due to faculty teaching development practices.

These broad positive impacts of faculty teaching development raise questions about the reach of the benefits. Who is participating and do all participants benefit the same? Questions of which faculty members participate in faculty development efforts are not new, though large-scale studies of participation are limited. Centra's (1976) survey of over 700 institutions suggested that newer faculty members participated in faculty development activities more often than faculty

with more than 15 years of teaching experience, that non-tenured faculty participated slightly

more than tenured faculty, and that "good teachers who want to get better" participated far more

than "faculty who really need to improve." Conversely for tenure and non-tenure track faculty,

Chism and Szabó (1996) found that non-tenure track faculty participated slightly less than tenure

track faculty at assistant and associate ranks, though differences were small. Chism and Szabó

(1996) further offered a broad overview of disciplinary participation, with arts and humanities

faculty participating more often than math and physical sciences faculty or professional school

faculty. The relative lack of data on faculty participation is perhaps a result of, or exacerbated by,

the broad range of formal faculty development practices and contexts and the difficulty of

capturing participation in informal practices. Questions of who participates in faculty

development, however, should not continue to be ignored due to the positive benefits for

instructors (and presumably students) and the growing need for faculty development to address

instructional issues resulting from a rapidly changing faculty, particularly the continued increase

of non-tenure track faculty (Austin & Sorcinelli, 2013; Haras et al., 2017).

     With the difficulties in studying the types of faculty who do and do not participate in

faculty development practices, some research has turned to considering motivations behind

participation. Steinert et al. (2009) considered motivations behind why clinical faculty in a

medical program did not participate in faculty development opportunities. These non-participants

saw the value of faculty development opportunities, but cited the volume of work, the lack of

'protected' time for development, the lack of guidance from their administration, the

undervaluing of teaching in faculty recognition and compensation, and logistical issues as

motivations for not participating in formal development activities. Steinert et al. (2010) expanded

on this by considering the motivations of participating faculty in their medical program, who

noted that faculty development enabled personal and professional growth, valued learning and self-improvement, and provided opportunities to network with colleagues. These faculty who participated in development activities, though, noted similar barriers to participation as their colleagues who did not participate, as described in Steinert et al. (2009). Another study highlighted the importance for participation of the forms of faculty development practices and the contexts in which they were situated. Lowenthal et al. (2012) focused on differences in participation and motivation between part-time and full-time faculty at four institutions, noting that while part-time faculty participated in faculty development less, the decreased participation could be a result of their preferred formats of activities (e.g., online, or short sessions) not being valued.

Methods

Data

The data for this study come from the Faculty Survey of Student Engagement (FSSE), a large-scale multi-institutional study focusing on the engagement practices of faculty at four-year baccalaureate-granting institutions. FSSE asks faculty about their use of educational practices that are empirically linked to student learning and development. The data are from the 2014-2018 administrations of FSSE at institutions that opted to include an additional item set measuring faculty involvement in teaching development practices resulting in 4,457 faculty responses from 33 institutions; a variety of sizes, selectivity ratings, and Carnegie types are represented (Table 1). If an institution participated in FSSE in more than one administration in the given timeframe, we only used data from their most recent year of administration.

Respondents

Over one in five faculty reported holding a rank of full professor (22.6%), associate

professor (21.8%), or assistant professor (22.8%). Approximately one in three faculty were

tenured (37.8%) or not on the tenure track but the institution had a tenure system (33.1%).

Faculty from the arts and humanities (20.8%) were the largest disciplinary group with the

smallest being communication, media, and public relations (3.2%). A large proportion of faculty

identified as women (48%) and as straight (heterosexual; 83.3%) while less represented were

faculty of another gender identity (.1%) and those who are questioning or unsure (.1%) about

their sexual orientation. Regarding race and ethnicity, the largest population was White (69.8%)

and the smallest was Native Hawaiian or Other Pacific Islander (.1%). A full list of faculty

background characteristics and response options are found in Table 2.

Measures

The study focuses on a series of items that ask faculty about their experiences with

teaching development opportunities (participating in institution-wide instructor orientations,

partaking in teaching and learning communities, visiting centers for teaching and learning, etc.)

For a full list of the items, see Appendix A. Some items were dichotomous with a "yes" or "no"

for participation, while others asked how often faculty participated on a four-point scale of 1

"Never" participated to 4 "Very often." The four-point items were re-coded into dichotomous

variables of "not participated" or "participated" then combined with the previous variables to

form an additive index, which served as continuous dependent and independent variables in our

analyses.

In addition to faculty development participation serving as an outcome variable, we use a

series of scales capturing effective teaching practices. The Faculty Survey of Student

Engagement created aggregate measures demonstrating numerous psychometrically sound properties that focus on faculty incorporation of practices such as emphasizing higher-order learning and discussions with diverse others (FSSE, n.d.). Each scale is based on responses to four or more items and a brief overview of each is provided below while more information is found online (FSSE, 2019).

- Higher-Order Learning – the amount faculty members courses emphasize synthesizing material, applying theories, and evaluating new perspectives ($\alpha = .731$).

- Reflective and Integrative Learning – the extent that faculty members help students combine ideas from multiple classes, include diverse perspectives, and reflect on their strengths or weaknesses while in class ($\alpha = .880$).

- Learning Strategies – the frequency in which faculty members recommend students review their notes, identify key information from class, and summarize what was learned from a previous class ($\alpha = .771$).

- Quantitative Reasoning – the importance faculty members place on students coming to conclusions through using numerical analysis, examining problems through a numerical lens, and evaluating others' conclusions through data ($\alpha = .881$).

- Collaborative Learning – the amount faculty members emphasize students explain course content to each other, prepare for exams together, and work on team projects ($\alpha = .834$).

- Discussions with Diverse Others – the amount faculty members provide students the opportunity to frequently learn from people of different races, economic backgrounds, or sexual orientations than the student's own ($\alpha = .932$).

- Student-Faculty Interaction - the frequency with which faculty members talk to students about career plans, academic performance, and course content outside the classroom (α = .777).

- Effective Teaching Practices – the amount faculty members use teaching practices that encompass clearly explaining learning objectives, organizing course content systematically, and providing detailed feedback to students (α = .764).

- Quality of Interactions – faculty members' perceptions of students' engagement with academic advisors, students, and student personnel staff (α = .850).

- Supportive Environment – faculty members' perception that their institutions provide students the ability to manage their non-academic responsibilities, partake in co-curricular activities, and encourage cross-cultural relationships (α = .859).

- Course Goals – the amount faculty stress writing clearly, speaking effectively, and acquiring new skills in their courses (α =.794).

Analysis

For the first research question, we examined the extent to which certain sub-groups of faculty were partaking in development opportunities. For the second question, we calculated the strength of the relationship between faculty teaching development participation and their use of effective teaching practices. We used ordinary least squares regressions for both questions. The first model examined the relationship of faculty characteristics to quantity of teaching development opportunities while the second model looked at the relationship between quantity of teaching practices, controlling for characteristics, and a variety of indicators of good teaching practices. We effect coded all covariates prior to entry into the models to allow results to be interpreted in comparison to the average response in the model (Mayhew & Simonoff, 2015).

Further, standardized continuous independent and dependent variables allow for the interpretation of unstandardized coefficients as effect sizes.

Results

Variation in Participation by Faculty and Institutional Characteristics

Faculty in the biological sciences, agriculture, and natural resources; physical sciences, mathematics, and computer science; and engineering (B = -.123, p < .05) participated in fewer teaching development practices than the average faculty member. While Education (B = .284, p < .001) faculty tended to participate in more. By rank, instructors (B = -.168, p < .05) participated in less teaching development opportunities compared to the average response. Faculty who are on the tenure track but not yet tenured (B = .220, p < .01) had higher participation in teaching development practices while those who are already tenured (B = -.187, p < .01) participated less. Additionally, faculty who taught on-campus (B = .128, p < .05) reported less participation while peers teaching using a combination of style (B = .160, p < .05) courses partook in more teaching opportunities than the average faculty respondent. Lastly, faculty at Doctoral/Highest research (B = -.345, p < .001), Doctoral/Higher research (B = -.161, p < .05), and Master's/Large institutions (B = -.160, p < .01) reported participating in fewer teaching development opportunities while colleagues at other Carnegie (B = .492, p < .01) types reported more than the average faculty response. See Tables 3a and 3b for details.

There were less differences among faculty demographics. Noteworthy, Asian (B = .247, p < .05) faculty participated in teaching development practices more than the mean response. Regarding sexual orientation, faculty who preferred not to respond (B = .264, p < .05) participated in teaching development practices more than average. Finally, faculty who obtained a doctorate (B = -.140, p < .05) participated in less teaching development practices.

Relationships between Professional Development and Effective Practice

When examining teaching professional development in relation to various engagement and teaching practices, results are positive overall. The more teaching development opportunities faculty participated in, the more emphasis they placed on higher-order learning, reflective and integrative learning, effective learning strategies, quantitative reasoning, collaborative learning, discussions with diverse others, student-faculty interactions, effective teaching practices, perceptions of students' quality of interactions, values for a students' supportive environment, and faculty course goals for student learning and development while controlling for associated covariates. See Table 4 for details.

Limitations

Although a great diversity in faculty and institution types are represented in this work, institutions opt to participate in FSSE administrations and faculty who are more invested in teaching and learning may have been more motivated to respond. Trends in findings, however, are clear, but generalizations should be made with some caution. Additionally, although we assessed faculty participation in professional development activities, the substance or quality of those interventions were not part of this study. We are also unaware of faculty motivations for participating in these activities as required participation may elicit different results from faculty who proactively participate in professional development activities voluntarily.

Discussion and Implications

Although different types of faculty and faculty in different fields all participate in different amounts of professional development, there are some notable trends. Faculty from STEM fields participated in fewer teaching development opportunities, and faculty in Education participate in more. This finding is unlikely to be surprising but is an important reminder for

faculty developers and academic departments to continue reflecting on the values of improving teaching practice and the norms of disciplinary areas. Given the push for increasing inclusive pedagogies and active learning in STEM fields (Smith et al., 2008), this would be a good place for faculty developers to start or continue efforts. Additionally, faculty who do not have tenure and full rank are participating in more teaching development opportunities. It is likely these faculty are attempting to build a teaching portfolio for the promotion process. Continued support for faculty in lower ranks to improve their practice is important, and institutions should work towards recognizing these efforts in tenure and promotion decisions.

Surprisingly, one might expect faculty who teach on campus to report using teaching development opportunities more as they are closer to teaching resources, yet this was not the case. It's possible that faculty are more confident in traditional classroom settings and don't feel the need to seek out support. Faculty teaching in hybrid courses, however, may be less confident in their skills in this relatively newer teaching environment and so may participate in development opportunities more frequently. It may also be that faculty developers are creating more content for faculty teaching in hybrid course situations allowing for them to have more resources available to them. This leads to questions about the availability of teaching resources and how to make opportunities available for faculty in all teaching situations. Institutions and faculty developers should continue to assess the needs of faculty both on and off campus to assure that the needs of faculty in various teaching situations are met. It is also important for faculty to reflect on their practice, especially in traditional teaching situations, to ensure that they are using effective pedagogies for the ever-changing body of today's students (Derting et al., 2016).

Looking at institutional differences also opens a conversation about faculty teaching practices. Faculty at larger institutions, doctoral-granting and Master's-granting institutions, employ faculty that participate in fewer developmental activities, but these are the types of institutions that tend to have more resources such as funding for innovating teaching and resources for centers of teaching and learning. One might expect that more resourced institutions would provide an environment that fosters more participation in developmental activities, but this doesn't appear to be the case. It's possible the values and goals of these institutions do not encourage a culture that promotes participation in teaching development and improvement. Larger institutions should take a cue from smaller institutions by instituting faculty learning communities and smaller networks of faculty and developers to create closer knit teaching relationships and supportive teaching environments. Additionally, institutions should, again, put more efforts towards supporting faculty in their teaching development through incentives, resources, and flexibility on time and availability as well as recognition for participation in improvement efforts.

Conclusion

Future research may want to consider looking at the quality of teaching development opportunities. The learning obtained from passively attending a session on teaching practices may be different than a faculty who is actively partaking in a reading group. It is also possible that faculty in specific disciplines may derive greater benefits from certain forms of faculty development so this intersection should also be explored. We hope that the general findings and overview of the landscape of professional development participation in this study gives strength to positive findings from smaller-scale research studies and provides a solid base for more specific studies of these practices.

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Tables

Table 1. Institution characteristics by faculty

	N	%
Carnegie Classification		
Doctoral Universities	1446	28.9
Master's Colleges and Universities	2838	56.7
Baccalaureate Colleges	679	13.6
Other	40	0.8
Control		
Public	3680	73.6
Private-not-for-Profit	1323	26.4
Barrons Selectivity		
Noncompetitive	99	2.0
Less competitive	794	16.2
Competitive and competitive plus	3043	62.3
Very competitive and very competitive plus	687	14.1
Highly competitive and highly competitive plus	157	3.2
Most competitive	108	2.2
Institution Size		
Very Small (fewer than 1,000)	69	1.4
Small (1,000-2,499)	986	19.7
Medium (2,500-4,999)	860	17.2
Large (5,000-9,999)	1044	20.9
Very Large (10,000 or more)	2044	40.9

Table 2. Faculty characteristics

	N	%
Rank		
Professor	1051	22.6
Associate Professor	1011	21.8
Assistant Professor	1061	22.8
Instructor	582	12.5
Lecturer	620	13.4
Other	319	6.9
Tenure Status		
No tenure system at this institution	458	9.9
Not on tenure track, but this institution has a tenure system	1525	33.1
On tenure track but not tenured	885	19.2
Tenured	1744	37.8
Disciplinary Area		
Arts & Humanities	1042	20.8
Biological Sciences, Agriculture, & Natural Resources	401	8.0
Physical Sciences, Mathematics, & Computer Sciences	588	11.7
Social Sciences	565	11.3
Business	487	9.7
Communications, Media, & Public Relations	159	3.2
Education	429	8.6
Engineering	353	7.1
Health Professions	501	10.0
Social Service Professions	183	3.7
Other disciplines (not reported)	299	6.0
Gender Identity		
Man	2130	46.4
Woman	2204	48.0
Another gender identity	11	0.2
I prefer not to respond	247	5.4
Sexual Orientation		
Straight (heterosexual)	3114	83.3
Bisexual	66	1.8
Gay	57	1.5
Lesbian	43	1.2
Queer	25	0.7
Questioning or unsure	3	0.1
Another sexual orientation	10	0.3
I prefer not to respond	420	11.2

Race/Ethnicity

American Indian or Alaska Native	16	0.4
Asian	281	6.4
Black or African American	262	5.9
Hispanic or Latino	123	2.8
Native Hawaiian or Other Pacific Islander	6	0.1
White	3084	69.8
Other	100	2.3
Multiracial	119	2.7
I prefer not to respond	430	9.7

Table 3a. Relationship between academic characteristics & participation in teaching development opportunities

	B	Std. Error	Beta	Sig
(Constant)	0.286	0.204		
Disciplinary Area				
Arts & Humanities	0.055	0.048	0.028	
Biological Sciences, Agriculture, & Nat. Res.	0.055	0.066	0.022	
Physical Sciences, Mathematics, & Computer Science	-0.123	0.059	-0.053	*
Social Sciences	-0.047	0.062	-0.019	
Business	-0.036	0.071	-0.013	
Communications, Media, & Public Relations	0.088	0.099	0.027	
Education	0.284	0.069	0.107	***
Engineering	-0.133	0.082	-0.045	
Health Professions	0.029	0.068	0.011	
Social Service Professions	-0.051	0.112	-0.015	
Other disciplines	-0.122	0.085	-0.062	
Rank				
Professor	0.056	0.064	0.029	
Associate Professor	0.073	0.062	0.038	
Assistant Professor	0.093	0.065	0.049	
Instructor	-0.168	0.068	-0.069	*
Lecturer	-0.008	0.062	-0.004	
Rank Other	-0.046	0.073	-0.024	
Tenure Status				
No tenure system at this institution	0.036	0.093	0.021	
Not on tenure track, but this institution has a tenure	-0.074	0.052	-0.066	
On tenure track but not tenured	0.220	0.067	0.167	**
Tenured	-0.181	0.066	-0.104	**
Course Division				
Lower	0.013	0.035	0.008	
Upper	-0.029	0.035	-0.018	
Other	0.015	0.052	0.009	
Course Size				
Small	-0.044	0.032	-0.037	
Medium	0.012	0.030	0.010	
Large	0.032	0.031	0.027	
Class Format				
On-Campus	-0.128	0.062	-0.080	*
Remote-Location	-0.039	0.156	-0.012	
Online	0.007	0.091	0.003	
Combination	0.160	0.075	0.101	*
Private Institution	0.089	0.066	0.038	

Carnegie Classification				
Doctoral Highest	-0.345	0.067	-0.133	***
Doctoral Higher	-0.161	0.063	-0.068	*
Masters Large	-0.160	0.048	-0.085	**
Masters Medium	-0.090	0.090	-0.023	
Masters Small	0.116	0.091	0.029	
Baccalaureate A & S	0.119	0.084	0.035	
Baccalaureate Diverse	0.029	0.094	0.007	
Other Carnegie	0.492	0.185	0.190	**

$*p < .05. **p < .01, ***p < .001$

Table 3b. Relationship between faculty characteristics & participation in teaching development opportunities

	B	Std. Error	Beta	Sig
Gender Identity				
Man	-0.108	0.142	-0.063	
Women	0.015	0.142	0.009	
Another Gender Identity	0.279	0.407	0.060	
I prefer not to respond	-0.187	0.162	-0.110	
Race/Ethnicity				
American Indian or Alaska Native	-0.643	0.353	-0.179	
Asian	0.247	0.110	0.096	*
Black or African American	0.177	0.113	0.066	
Hispanic or Latino	0.107	0.144	0.034	
Middle Eastern or North African	0.170	0.490	0.047	
White	-0.082	0.085	-0.051	
Another race or ethnicity	0.213	0.157	0.066	
Multiracial	-0.036	0.140	-0.012	
Prefer not to respond	-0.152	0.118	-0.042	
Sexual Orientation				
Straight	0.121	0.111	0.077	
Bisexual	0.254	0.171	0.085	
Gay	0.088	0.169	0.030	
Lesbian	-0.042	0.190	-0.014	
Queer	0.006	0.320	0.002	
Another sexual orientation	-0.449	0.498	-0.137	
Questioning	-0.242	0.306	-0.075	
Prefer not to respond	0.264	0.131	0.167	*
Additional				
Doctorate Obtainment	-0.140	0.059	-0.066	*
US Citizen	-0.038	0.120	-0.007	

*$p < .05$. **$p < .01$, ***$p < .001$

Table 4. FSSE Scale Statistics Increase by Teaching Professional Development Opportunities

	B	SE	Beta	Sig.
Higher-Order Learning	0.222	0.023	0.215	***
Reflective & Integrative Learning	0.161	0.020	0.158	***
Learning Strategies	0.157	0.023	0.153	***
Quantitative Reasoning	0.162	0.021	0.157	***
Collaborative Learning	0.227	0.023	0.221	***
Discussions with Diverse Others	0.172	0.022	0.165	***
Student-Faculty Interaction	0.265	0.022	0.262	***
Effective Teaching Practices	0.207	0.022	0.201	***
Quality of Interactions	0.154	0.022	0.153	***
Supportive Environment	0.176	0.022	0.172	***
Course Goals	0.276	0.020	0.272	***

Key: *** $p < .001$; variables standardized before model run; controls include: disciplinary area, rank, tenure status, gender identity, race/ethnicity, sexual orientation, doctorate obtainment, US citizenship, course division, course size, class format, public/private, Carnegie Classification

Appendix

Appendix A. Teaching Professional Development Items

Text	N	Min.	Max.	Mean	SD
Participated in an institution-wide instructor orientation	4403	0	1	0.35	0.48
Participated in an instructor orientation specific to your department	4394	0	1	0.30	0.46
Participated in a faculty learning community devoted to teaching	4396	0	1	0.40	0.49
Been mentored by a faculty member with regard to teaching	4386	0	1	0.26	0.44
Mentored a faculty member with regard to teaching	4393	0	1	0.43	0.49
Attended or presented at a professional conference focused on teaching	4385	0	1	0.35	0.48
Visited an office or center that supports faculty (Center for Teaching and Learning, Center for Teaching Excellence, etc.)	4397	1	4	1.68	0.85
Attended a workshop or training session to enhance your teaching	4403	1	4	2.02	0.88
Had a faculty or staff member observe your teaching and provide feedback	4403	1	4	1.68	0.82
Worked one-on-one with a faculty or staff member to help improve your teaching	4384	1	4	1.60	0.79
Worked with a group of faculty or staff to help improve your teaching	4361	1	4	1.55	0.78