Nurse Educator

Nurse Educator
Vol. 41, No. 6, pp. 324-327

Use of a Needs Assessment in the Development of an Interprofessional Faculty Development Program

Jeri L. Bigbee, PhD, RN, FAAN • Julie Rainwater, PhD • Lavjay Butani, MD, MACM

A needs assessment was conducted regarding an interprofessional faculty development program for promoting excellence in education. Nursing and medical faculty and administrators (N = 156) were surveyed about perceived need, program curriculum, and delivery. The results indicated strong support for the program, particularly related to teaching/learning strategies, leadership, and scholarship. Nursing faculty rated some topical areas significantly higher than did the medical faculty, including innovative classroom teaching, educational technology, interprofessional education, diversity/inclusion, and mentoring graduate students.

Keywords: *faculty development; interdisciplinary collaboration; interprofessional education; needs assessment; teaching and learning*

Promoting excellence in the delivery of education is a priority in health professions education but can be challenging, particularly in research-intensive academic health science institutions.[1] To address this challenge, education-focused faculty development programs, such as Teaching Scholars programs, have been developed at several academic health centers in the United States and Canada over the past 20 years, focusing on teaching/learning, leadership, and educational scholarship.[2] Most of these programs have primarily served faculty in medicine, although a few programs have included an interprofessional focus.[3-6]

Faculty development is defined as the personal and professional development of faculty and administrators based on the goals, vision, and mission of the institution in keeping with the moral and social responsibility to the communities it serves.[7] In their comprehensive faculty development guide, Mclean and his colleagues[7] emphasized the importance of a needs assessment as part of the planning process. Previously reported health professions faculty development needs assessments have focused on teaching skills, teaching with technology, scholarship of teaching and learning, and administration and career development.[8] These previous needs assessments have reflected primarily a uniprofessional focus[9-12]; however, a few have included faculty from several health professions.[8,13] An interprofessional faculty development needs assessment by Schönwetter and his colleagues[8] found more commonalities than differences between the professions, with common areas including motivating learners, engaging in scholarly activities, accessing relevant health information online, and team-building skills. A few discipline-specific areas also were identified, with nursing faculty indicating greater need for development related to cross-cultural teaching and working with learning management systems.

One of the core components of the faculty development program addressed in our needs assessment was interprofessional education (IPE), which has been increasingly recognized as critical in health professions education.[14-16] Effective IPE involves a culture change from traditional uniprofessional education and requires faculty to model interprofessional behaviors and facilitate student engagement and collaboration using creative teaching methods.[17-19] The WHO Study Group[14] and others[1,19-23] have advocated for and reported innovative faculty development programs related to IPE, which focus on changing attitudes and increasing understanding of other professionals' roles and responsibilities and require unique skills in interprofessional teaching and collaboration.

Context

In 2013, the UC Davis Interprofessional Teaching Scholars Program (ITSP) was initiated as a collaboration between the University of California (UC) Davis School of Nursing and School of Medicine. The goal of this education-focused faculty development program is to foster the development of a collaborative and innovative interprofessional teaching and learning community.[24] The ITSP, which was implemented in 2014, is built on a foundation of IPE, practice, and research

Author Affiliations: Adjunct Professor (Dr Bigbee), Betty Irene Moore School of Nursing, Evaluation Director (Dr Rainwater), Schools of Health, and Professor (Dr Butani), School of Medicine, University of California, Davis.
The authors declare no conflicts of interest.
Correspondence: Dr Bigbee, Betty Irene Moore School of Nursing, University of California, Davis, 4610 X St, Sacramento, CA 95817 (jlbigbee@ucdavis.edu).
Accepted for publication: March 6, 2016
Published ahead of print: May 3, 2016
DOI: 10.1097/NNE.0000000000000270

and reflects the university's long-standing commitment to promoting excellence in collaborative teaching and educational scholarship through innovative faculty development in the health sciences.

The UC Davis Schools of Health include the School of Medicine and the School of Nursing. The School of Medicine, established in 1966, offers undergraduate, postgraduate, and fellowships in a variety of medical specialties, along with master's degree programs in informatics and public health. The School of Medicine faculty, which numbers more than 800 members, includes approximately 30% nonphysicians, including basic science, informatics, and public health faculty. The School of Nursing, established in 2009, is unique in that it offers only graduate degrees, including programs in nursing science and health care leadership (PhD and MS) along with a nurse practitioner program and a physician assistant program. The School of Nursing has a particularly strong interprofessional emphasis, with approximately one-third of its faculty members being nonnurses, including sociologists, psychologists, physicians, and physician assistants.

Methods

The purpose of this study was to conduct a needs assessment among UC Davis health science faculty and administrators to guide the development of the ITSP by assessing interest and preferences related to program content and delivery. A cross-sectional survey design was used. In fall 2013, an anonymous electronic needs assessment survey was distributed by e-mail (with one reminder) to all faculty and administrators in the School of Nursing (n = 22) and the School of Medicine (n = 832).

The survey (available upon request) was developed by the investigators based on a review of the literature, curricula of other Teaching Scholars programs, and the priorities of the UC Davis Schools of Health. It included 6 questions that assessed respondent characteristics (rank, academic series, duration of service, and teaching/administrative responsibilities), including 4 fixed-choice questions and 2 open-ended questions. Respondents then were asked to respond to a list of 20 topical areas related to teaching/learning, scholarship, and leadership (Table) using a 5-point Likert-type scale (1 = unimportant to 5 = very important), along with an open-ended question regarding suggestions for content areas not listed. The last set of questions addressed program delivery options, including 3 fixed-choice questions regarding preferred format (online, in class, or hybrid) and scheduling (day/times), followed by an open-ended question regarding additional comments/suggestions. The internal consistency of the survey was evaluated and found to be strong (Cronbach's α = .89).

Quantitative data were analyzed using IBM SPSS version 19 Software (Armonk, New York), providing descriptive findings. The data pertaining to the perceived importance of topical areas were compared between respondents from the Schools of Nursing and Medicine using Mann-Whitney *U* tests (due to the disparity in sample sizes between the 2 schools), with $P < .05$ considered statistically significant. This comparison was included to identify possible school-specific preferences that would need to be considered in the program implementation. Similar comparisons of faculty and administrators' responses were also conducted. Thematic analysis was used to evaluate the qualitative responses, identifying themes and patterns within the data set as described by Braun and Clarke.[24] The study was reviewed by the institutional review board and deemed exempt.

Table. Topical Area Rankings Based on Overall Ratings and School of Nursing and School of Medicine Comparisons

Topic	Rank	Overall Rating	Nursing Rating	Medicine Rating
Providing effective feedback	1	4.60	4.72	4.58
Clinical teaching strategies	2	4.59	4.44	4.61
Evaluation/assessment of learners and programs	3	4.56	4.67	4.54
Curriculum and syllabus development	4	4.39	4.56	4.37
Innovative classroom teaching approaches	5	4.36	4.78	4.30[a]
Mentoring others	6	4.35	4.33	4.35
Stimulating lifelong learning	7	4.33	4.22	4.34
Educational research/scholarship	8	4.26	4.50	4.23
Using educational technology (including simulation)	9	4.26	4.72	4.19[b]
Academic career planning	10	4.26	4.17	4.28
Academic leadership development	11	4.26	4.22	4.26
Work-life balance for faculty	12	4.09	4.28	4.06
Interprofessional education	13	4.08	4.67	3.99[b]
Working with diverse students[c]	14	3.95	4.61	3.86[b]
Test construction and evaluation	15	3.94	4.28	3.89
Distance/online education approaches	16	3.77	4.28	3.70[a]
Incorporating diversity and equity in health professions education	17	3.76	4.61	3.63[b]
Accreditation processes/requirements	18	3.67	3.89	3.63
Educational theories	19	3.64	3.89	3.60
Mentoring thesis/dissertation students	20	3.42	4.61	3.25[b]

[a] $P < .05$.
[b] $P < .01$.
[c] Including multicultural, nontraditional, disabled, and at risk.

Results

A total of 156 responses were received (18.3% overall response rate), including 34 administrators (22%) and 122 faculty (88%). The majority of the respondents were affiliated with the School of Medicine (87%), which was to be expected because the School of Medicine is much larger than the School of Nursing. The response rate among the School of Nursing respondents (n = 20) was 91% and among the School of Medicine participants (n = 136) was 16%. The low response rate from the School of Medicine was not surprising because the majority of the medical faculty are primarily clinicians and/or researchers with limited teaching responsibilities. The sample included predominantly long-term UC Davis employees, with 47% reporting 10 or more years of service at UC Davis, 24% from 5 to 10 years, and 28% less than 5 years. The faculty respondents were fairly evenly distributed across academic ranks, and the majority (81%)

were non–tenure-track faculty, consistent with the overall health sciences faculty. The administrator respondents were predominantly program directors who were responsible for a variety of faculty-related roles. Faculty respondents described a variety of current teaching roles, most commonly teaching residents and medical students, followed by teaching graduate and nursing students. Specific teaching activities included inpatient clinical instruction most commonly, followed by didactic teaching, course organization/administration and thesis mentoring. Of the faculty respondents, 41% indicated that they mentored and/or supervised other faculty.

Overall mean ratings for each of the topics are listed in the Table in rank order. Mean response scores are also included, separated out by respondent self-identified school affiliation (nursing and medicine). Content related to teaching activities such as providing effective feedback, clinical mentoring, and learner assessment received the highest mean ratings overall. Lowest rated were more theoretical concepts and activities applicable to a smaller subset of faculty, such as accreditation and mentoring thesis/dissertation students. Surprisingly, even though the survey explicitly mentioned IPE as being an underlying philosophy of the program, the topic of IPE ranked 13th among the 20 topical areas that were assessed.

When responses related to the topical ratings were compared between administrators (n = 34) and faculty (n = 122), no significant differences in mean ratings were found. However, when responses from participants affiliated with the School of Nursing were compared with those from the School of Medicine, some of the mean topical ratings were significantly different. As shown in the Table, participants from the School of Nursing rated the following content areas significantly higher than did participants from the School of Medicine: innovative classroom teaching approaches ($P = .013$), using education technology (including simulation) ($P = .002$), IPE ($P = .001$), working with diverse students ($P = .001$), distance/online educational approaches ($P = .018$), incorporating diversity and equity in health professions education ($P < .001$), and mentoring thesis/dissertation students ($P < .001$). The highest rated topical areas for the School of Nursing respondents were innovative classroom teaching approaches, providing effective feedback, and using educational technology, whereas the highest rated areas for the School of Medicine respondents were clinical teaching strategies and providing effective feedback. The lowest rated areas also differed; among School of Nursing respondents, accreditation and educational theory ranked lowest in importance, whereas mentoring thesis/dissertation students ranked lowest among School of Medicine respondents.

Thematic analysis of the qualitative comments related to program topics supported the quantitative findings, suggesting that the program should focus specifically on core teaching skill development. Other themes included exploring providing specialized "tracks" for faculty primarily involved in teaching/mentoring professional students and those working with master's degree and doctoral degree students. Analysis of the overall comments and suggestions provided by the participants revealed general support for the program, particularly the importance of enhancing teaching competence. The identified themes included the lack of formal preparation among health professions educators to assume teaching roles, for example, "We are expected to teach, but most of us have limited experience teaching and need to develop teaching methods that are good alternatives to lectures." The comments also focused on the importance of investing in enhancing teaching expertise among faculty to promote the strength of the institution, for example, "This is an investment in faculty satisfaction, longevity, and the future of our institution."

In relation to program delivery options, the majority of respondents indicated that a hybrid format (72%) with weekday meeting times (67%) was preferred. There were no significant differences in relation to delivery option preferences between faculty and administrators or respondents from the School of Medicine versus School of Nursing. Comments related to program delivery expressed the need to make the program as short as possible (primarily from faculty). Several participants emphasized the importance of administrative "buy-in" and providing protected time for faculty to participate fully. The respondents also expressed that the program should be voluntary and available to faculty at all career levels.

Discussion

Well-designed needs assessment strategies are essential components of effective educational program planning. Needs assessment data are essential to inform the curriculum to ensure that faculty development programs are truly learner centered. This is particularly critical when interprofessional learners with differing priorities and needs are included. Needs assessment data also provide critical information to justify the investment of resources by educational institutions in faculty development to support their educational, research, and service missions. The UC Davis ITSP needs assessment results indicated strong support for the proposed program, with particular emphasis on education-related content (including leadership, mentoring, and scholarship related to education and educator roles) using a hybrid format.

The UC Davis ITSP needs assessment results indicated that the faculty and administrators of the 2 schools were aligned with respect to the vital role that education plays in the health sciences. Faculty in all career stages expressed interest and the need for inclusivity. While we were surprised that the underlying theme of IPE was not among the highest rated content areas among respondents, there are 2 possible explanations of this finding: one is that respondents may have assumed that IPE was to be an expected integral component of the program (because it was explicitly mentioned in the survey introduction), and therefore respondents may not have rated it as high as they otherwise would have. However, it is also possible that IPE continues to be a "foreign" concept to some faculty and one that may not be as valued, especially among some medical school faculty who may tend to have a more hierarchical view of clinical practice and teaching. Nevertheless, this finding indicates that promoting the value of IPE is needed among health sciences faculty to ensure new models of interprofessional practice, education, and research in the future.

Overall, the respondents indicated support for most of the program topics and delivery options. The significant differences found between nursing and medical school

respondents suggest the need to address both common and unique learning needs and priorities among diverse participants. The results also highlighted the importance of ensuring strong support from school and departmental leadership with a commitment for protected time for participants to ensure faculty participation. To address this critical concern, support among key academic leaders has been cultivated in the planning and implementation of the program. In addition, as part of the application process, scholars must be nominated by their academic leader/department chair who is required to commit to protected time for faculty selected to participate in the ITSP.

In comparison with previous literature, the results from our study, including the topical priorities, are fairly consistent with previous studies.[8-10,13] However, in our assessment, clinical teaching ranked as one of the highest rated topics, in contrast to Scarbecz and colleagues,[13] who explained their finding of low clinical teaching ratings in terms of seasoned clinicians coming to the academic role feeling comfortable teaching in the clinical setting. Also of note, among the similar previously reported needs assessments, only Schönwetter et al[8] and our study included cultural diversity as a rated topic, with both studies indicating significantly higher interest among nursing faculty compared with other health professional faculty. Similarly, our results are consistent with previous studies indicating higher interest in faculty development addressing technology[13] and IPE[8,25] among nursing faculty. Our study was also one of the few to date that assessed both faculty and administrators, finding no major differences between the 2 groups, in contrast with Pololi and his colleagues.[10] The limitations of our study included the relatively small sample size that was drawn from a single institution. However, the relatively low response rate (18.3%) achieved in our study almost doubled that in Schönwetter and colleagues'[8] similar study.

Based on the results of the needs assessment, the ITSP was implemented in fall 2014. The curriculum is built around 5 primary elements: teaching/learning, leadership, educational scholarship, interprofessionalism, and cognitive diversity/health equity.[23] A cohort of 11 diverse interprofessional scholars, including nursing, physician assistant, basic science, and medicine faculty was recruited. The first year of the program proved highly successful with strong positive feedback from faculty and administrators. Ongoing program evaluation research assessing quality and impact is in progress.

Conclusion

In summary, the UC Davis ITSP needs assessment provided critical information related to program content and delivery that proved essential for program implementation. Further research is indicated to assess the individual and institutional outcomes and impact related to interprofessional faculty development. We look forward to joining with other interprofessional faculty development programs in documenting the benefits, challenges, and best practices in implementing innovative programs in a variety of settings.

References

1. Thibault GE. Reforming health professions education will require culture change and closer ties between classroom and practice. *Health Aff (Millwood)*. 2013;32(11):1928-1932.
2. Fidler DC, Khakoo R, Miller LA. Teaching scholars programs: faculty development for educators in the health professions. *Acad Psych*. 2007;31(6):472-478.
3. Steinert Y, Nasmith L, McLeod P, Conochie L. A Teaching Scholars Program to develop leaders in medical education. *Acad Med*. 2003;78(2):142-149.
4. University of Washington. Teaching Scholars Program. Available at http://www.meded.washington.edu/teaching-scholars. Accessed February 26, 2016.
5. University of California, San Francisco. About the Teaching Scholars Program. Available at http://meded.ucsf.edu/radme/teaching-scholars-program. Accessed February 26, 2016.
6. West Virginia University. Teaching Scholars Program. Available at http://www.hsc.wvu.edu/Faculty-Development/Teaching-Scholars-Program. Accessed February 26, 2016.
7. Mclean M, Cilliers F, van Wyk JM. Faculty development: yesterday, today and tomorrow. *Med Teach*. 2008;30(6):555-584.
8. Schönwetter DJ, Hamilton J, Sawatzky J. Exploring professional development needs of educators in the health sciences professions. *J Dent Educ*. 2015;79(2):113-123.
9. Si J. Needs assessment of teaching competencies among medical educators. *Korean Med Educ*. 2015;27(3):177-186.
10. Pololi LH, Dennis K, Winn GM, Mitchell J. A needs assessment of medical school faculty: caring for the caretakers. *J Contin Educ Health Prof*. 2003;23:21-29.
11. Ali NS, Hodson-Carlton K, Ryan M, Flowers J, Rose MA, Wayda V. Online education: needs assessment for faculty development. *J Contin Educ Nurs*. 2005;36(10):32-38.
12. Foley BJ, Redman RW, Horn EV, Davis GT, Neal EM, Van Riper ML. Determining nursing faculty development needs. *Nurs Outlook*. 2003;51(5):227-232.
13. Scarbecz MA, Russell CK, Shreve RG, Robinson MM, Scheid CR. Faculty development to improve teaching at a health sciences center: a needs assessment. *J Dent Educ*. 2011;75(2):145-159.
14. World Health Organization. Framework for action on interprofessional education and collaborative practice. 2010. Available at http://espace.library.uq.edu.au/view/UQ:23323. Accessed February 26, 2016.
15. Oermann MH. Innovation in nursing education. *Nurse Educ*. 2015;40(6):271.
16. Reeves S, Perrier L, Goldman J, Freeth D, Swarenstein M. Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database Syst Rev*. 2013;28(3):CD002213.
17. Pardue KT. A framework for the design, implementation, and evaluation interprofessional education. *Nurse Educ*. 2015;40(1):10-15.
18. Cranford JS, Bates T. Infusing interprofessional education into the nursing curriculum. *Nurse Educ*. 2015;40(1):16-20.
19. Kahaleh AA, Danielson J, Franson KL, Nuffer WA, Umland EM. An interprofessional education panel on development, implementation, and assessment strategies. *Am J Pharm Educ*. 2015;79(6):1-10.
20. Steinert Y. Learning together to teach together: interprofessional education and faculty development. *J Interprof Care*. 2005;19:60-75.
21. Gordon MA, Lasater K, Brunett P, Dieckmann NF. Interprofessional education: finding a place to start. *Nurse Educ*. 2015;40(5):249-253.
22. Anderson ES, Cox D, Thorpe LN. Preparation of educators involved in interprofessional education. *J Interprof Care*. 2009;23(1):81-94.
23. UC Davis Health System. Interprofessional Teaching Scholars Program. 2015. Available at https://www.ucdmc.ucdavis.edu/teachingscholars/. Accessed February 26, 2016.
24. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psych*. 2006;3(2):77-101.
25. Curran VR, Sharpe D, Forristall J. Attitudes of health sciences faculty members towards interprofessional teamwork and education. *Med Educ*. 2007;41(9):892-896.