Essential Faculty Development Programs for Teaching and Learning Centers in Research-Extensive Universities

Larissa Pchenitchnaia, Bryan R. Cole
Texas A&M University

This research highlights the imperative nature of designing programs to address the full range of faculty development needs. It presents a framework for essential faculty development programs for teaching and learning centers in research-extensive universities for introducing, enhancing, and improving faculty development offerings. The nationwide Delphi study of faculty development programs identified eighteen currently essential and twenty-eight future essential faculty development programs for teaching and learning centers in research-extensive universities. This list of programs may serve as a baseline for evaluating existing faculty development programming and guiding the expansion of established programs and the planning of new ones.

Now is a time of high expectations and demands for colleges and universities. The university of the twenty-first century has to deal with significant reductions in financial resources, increasing accountability for student learning outcomes, a shift in emphasis toward the learner, rising public expectations for institutional involvement in

economic development, expanding faculty workloads, and intense competition among numerous providers of education (Altbach, 2005; Brancato, 2003; Levine, 2001; Lieberman & Guskin, 2003; Morris, 2004; Ruben, 2004; Sorcinelli, Austin, Eddy, & Beach, 2006; Tice, 2005; Wulff & Austin, 2004). The quality of higher education and the ability of colleges and universities to perform their missions are inextricably linked to the quality and commitment of the faculty (Schuster & Wheeler, 1990). Boyer (1990), in *Scholarship Reconsidered*, began the search for a new paradigm of faculty work that could meet the diverse and changing needs of our society. According to Shulman (2004),

[T]he intellectual and political message of *Scholarship Reconsidered* is that we need a broader conception of scholarship—one that points to the power of scholarship to discover and invent, to make sense and connect, to engage with the world, and to teach what we have learned to others. . . . Boyer and his colleagues wanted these different scholarly activities to be seen as of equal value to the broader community. (p. 165)

Gaff and Simpson (1994) noted that faculty work includes teaching and advising, designing curricula, serving the community, and participating in the governance of their institutions. All these roles are proper foci for development. Brancato (2003) commented that increased attention is being given to faculty development programs that address today's demands on higher education. Faculty members are being encouraged to transform their roles and responsibilities in order to enhance student learning, and faculty development initiatives can offer them strategies for a successful transition.

In a recent work Sorcinelli and colleagues (2006) proffered that faculty development has, from its inception, proven its capacity to anticipate and respond to changes and to act as a lever of change in higher education. It has evolved from individual to collective development, from singular to multidimensional purposes, from largely uncoordinated activities to centralized units, from "soft" funding to foundation, association, government, and institutional support, and from a small network of developers in the United States to a global faculty development profession.

Millis (1994) contended that faculty development programs are essential if campuses are to respond to complex changes in 1) expectations about the quality of undergraduate education, 2) views regarding the nature and value of assessment, 3) societal needs, 4) technology and its impact on education, 5) the diverse student populations, and 6) paradigms in teaching and learning (p. 458). Because such changes are ongoing, faculty development programs should never remain static. They must adjust creatively and responsively to meet changing student, faculty, institutional, and societal needs.

Some researchers argued for expanding the role of faculty developers to that of institutional change agents (Eckel, 2002; Diamond, 2005; Zahorski, 2002). Eckel (2002) maintained that a central role for faculty developers is to help the institution decide how much change is needed and to develop appropriate strategies to affect the level and breadth of change. Faculty developers have an important institution-wide perspective on the complexity of problems, opportunities, and constraints. They can create opportunities for facilitated, institution-wide conversations about key elements of change and what they mean for faculty and staff.

Today, an identifiable, centralized unit with professional staff typically coordinates faculty development programming (Millis, 1994; Singer, 2002; Sorcinelli et al., 2006; Wright, 2000, 2002). According to Wright (2002), the activities of campuswide teaching and learning centers take a variety of approaches to serving a large audience. Program offerings are numerous and may include varying combinations of activities (Eble & McKeachie, 1985; Frantz, Beebe, Horvath, Canales, & Swee, 2005; Millis, 1994; Schuster & Wheeler, 1990; Sorcinelli et al., 2006; Wright, 2002). Recent studies endorse comprehensive faculty development programs (Schuster & Wheeler, 1990) and holistic faculty development (Zahorski, 2002) that supports a faculty member's growth into a "complete scholar" (Rice, 1996). In Zahorski's (2002) view, a holistic approach assumes that "whereas individual program components do help foster and support scholarship, even more powerful is the synergy resulting from components working together and interacting with other institutional agencies" (pp. 29-30).

Research Purpose

This research highlights the importance of designing programs that address the full range of faculty development needs. According to Wright (2000) and Frantz and colleagues (2005), only a handful of studies have examined the functions and resources of teaching and learning centers and other faculty development units (Centra, 1976; Crawley, 1995; Diamond, 2002; Erickson, 1986; Frantz et al., 2005; Gullatt & Weaver, 1997; Sorcinelli et al., 2006; Wright, 2002). This study seeks to identify a list of current and future essential faculty development programs for teaching and learning centers from the viewpoint of the current center directors in selected research-extensive universities. It is the first Delphi study with a panel of knowledgeable members—center directors—that reached consensus on the essential programs for teaching and learning centers in research-extensive universities.

The Delphi Methodology

Linstone and Turoff (1975) defined the Delphi technique as “a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem” (p. 3). Delbecq, Van de Ven, and Gustafson (1975, as cited in Murry and Hammons, 1995, p. 423) characterize it as “a method for the systematic solicitation and collection of judgments on a particular topic through a set of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses.” Originally developed by Dalkey and Helmer (1963) to technologically forecast future events, this technique is now considered a reliable qualitative research method for use in problem solving, decision making, and group consensus-reaching in many areas (Eggers & Jones, 1998; Linstone & Turoff, 1975; Murry & Hammons, 1995; Wilhelm, 2001). In higher education, the Delphi method has been used primarily in four areas: 1) developing educational goals and objectives, 2) improving curriculum, 3) assisting in strategic planning, and 4) developing criteria for evaluation (Judd, 1972, as cited in Eggers & Jones, 1998; Murry & Hammons, 1995). In this study, we apply it to the identification of current and future essential faculty development

programs for teaching and learning centers in research-extensive universities.

The Delphi data collection approach offers the benefit of being participant led. It is an iterative process that shows respondents how their ideas and opinions are influencing the research process and shaping the results, which usually creates goodwill between the participants and research team (Garavalia & Gredler, 2004). According to Ziglio (1996), the Delphi method is intended to structure information for which there is some evidence in a way that achieves informed judgment and decision making.

In a Delphi study, the research population must be a panel of experts (Linstone & Turoff, 1975; Wilhelm, 2001). Panel size depends on the purpose and complexity of the study and the expertise required, not statistical issues (Clayton, 1997; Ziglio, 1996). Unlike other research designs, randomization is neither warranted nor needed (Stone Fish, & Busby, 1996). Respondents may represent a random or nonbiased sample of various types of expertise (Clayton, 1997). According to Linstone and Turoff (1975) and Ziglio (1996), a homogeneous panel of experts required only ten to fifteen individuals. For this study an appropriate Delphi panel is a national sample of twelve to fifteen faculty development experts who know the theory and practice of faculty professional development in a research-extensive university setting.

The Study Population

We identified 102 public research-extensive universities from the year 2000 Carnegie Classification of Institutions of Higher Education and matched them against those in the 2005 Professional and Organizational Development Network in Higher Education (POD) Membership Directory and Networking Guide, yielding 70 public research-extensive universities with formal faculty development programs. A research-extensive university is an institution that typically offers a wide range of baccalaureate programs and is committed to graduate education through the doctorate. We limited this study to this type of institution to ensure that the expert panel members brought comparable perspectives on faculty development to the table. We also anticipated that teaching and

learning centers in research-extensive universities would have the most comprehensive faculty development programming and thus could serve as a reference point, not only for research-extensive universities but for other institutional types as well. From this list of 70, we chose 22 teaching and learning centers for this study on these criteria: 1) a centrally located unit with an administrative staff managed by a director, 2) a minimum of five years in existence, 3) geographically dispersed locations, 4) the variety of faculty development programs (from the center Web site), and 5) the identification of teaching and learning centers with a national reputation made by a past POD president. Each of the 22 center directors was professionally competent and actively involved in faculty development initiatives at the national level. These panel member nominees were asked to participate by e-mail and received a description of the study emphasizing the importance of their contribution to the study. Fifteen of the 22 directors agreed to participate and completed all four rounds of the Delphi study.

The Data-Collection Questionnaires

We collected data through a series of four questionnaires. The first round of program items was derived from the faculty development literature, then evaluated by a review panel of experts. A pilot instrument review panel included three experts in the area of faculty development: a past POD president, an associate director of a teaching and learning center in a research-extensive university, and a research professor working in a teaching and learning center in a research-extensive university. This pilot evaluation by an expert panel and the Delphi experts' rankings of the programs during the survey rounds established the content validity of the survey instrument. After we made all the revisions suggested by the reviewers, we sent the first questionnaire to the study participants requesting them to rank various faculty development programs by how essential they were. The programs fell into seven categories: consultations; university-wide orientations; university-wide workshops; intensive programs; grants, awards, and exchange programs; resources and publications; and other services.

Appendix A shows an example of a page from the first-round questionnaire. The tables provided checkboxes for ranking the essentiality (current and future) of the programs listed on a four-level scale. We defined an “essential” program as one that a director thought any research-extensive university should have. During this first round, each expert was free to add any missing essential programs they believed should be included, and the panel of fifteen added a total of thirty-two new programs.

For each survey round, we computed the descriptive statistics (mean scores and standard deviations) for each program item, then prepared the next individual survey instrument for each panel member with his or her rankings and the descriptive statistics on each program, allowing each member to compare his or her responses to the aggregate responses. We then invited the panel members to change any rankings they wished. The Delphi procedure ended when the panel achieved consensus or panel member responses stabilized. Scheibe, Skutsch, and Schofer (1975) reasoned that opinion stability—stability of the respondents’ vote distribution curve over successive rounds of the Delphi—serves as a measure of consensus. Using the 15 percent change level to represent a state of equilibrium, any two distributions showing marginal changes of less than 15 percent have reached stability. Items with successive distributions showing more than 15 percent change are included in later rounds of the Delphi, as they have not reached equilibrium.

Findings

In interpreting the results, we defined faculty development programs with a consensus group mean between 1.49 and 1.00 as “unimportant and should not be included” for teaching and learning centers in research-extensive universities. We considered programs with a consensus group mean between 1.50 and 2.49 as “helpful but not very important” for centers in research-extensive universities. We defined programs with a consensus group mean between 2.50 and 3.49 as “important but not essential,” and only those with a consensus group mean between 3.50 and 4.00 as “essential.”

The Delphi panel members considered eighteen faculty development programs in five program categories as “essential” for teaching and learning centers: consultations, university-wide orientations, university-wide workshops, resources and publications, and other services. None of the programs in the remaining two categories—Intensive Programs and Grants, Awards, and Exchange Programs—emerged as essential. The findings are presented in Table 15.1.

**Table 15.1. Essential Faculty Development Programs,
Final Framework**

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean</i>	<i>Consensus SD</i>
1. Consultations	1.1. classroom videotaping, observations and critique of classroom instruction for individual faculty	3.53	0.52
	1.2. consultation on enhancing teaching practices for individual faculty	4.00	0.00
	1.5. individual consultations for TAs	3.80	0.41
	1.11. consultation with campus groups or departmental units on teaching related issues	3.93	0.26
	1.12. consulting with departments on TA programs	3.60	0.63
2. University-wide Orientations	2.1. organized, campus-wide programs for new TAs	3.67	0.49
	2.3. organized, campus-wide programs for new faculty	3.60	0.63

**Table 15.1. Essential Faculty Development Programs,
Final Framework (Continued)**

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean</i>	<i>Consensus SD</i>
3. University-wide Workshops	3.1. enhancing teaching strategies	3.87	0.35
	3.2. course and syllabus design	3.80	0.41
	3.3. testing, test construction and evaluating student performance	3.67	0.49
	3.5. assessing student learning outcomes	3.80	0.41
	3.16. college teaching for TAs	3.53	0.64
	3.17. developing teaching strategies and methods of active and cooperative learning	3.87	0.35
	3.20. teaching for student-centered learning	3.87	0.35
	3.37. teaching large classes	3.80	0.41
6. Resources and Publications	6.3. updated Web site (with resources to download and links to other Web-based resources)	3.87	0.35
7. Other Services	7.14. service on university, college, and departmental committees in support of teaching and learning	3.53	0.64
	7.17. faculty-facilitated sessions for colleagues on issues of teaching and teaching methods	3.60	0.63

As far as the future is concerned, the Delphi panel forecasted that twenty-eight faculty development programs in five program categories would be “essential”: Consultations, University-wide Orientations, University-wide Workshops, Resources and Publications, and Other Services. Again, no program within Intensive Programs or Grants, Awards, and Exchange Programs emerged as essential for centers in the future. Table 15.2 displays these results,

Table 15.2. Future Essential Faculty Development Programs, Final Framework

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean</i>	<i>Consensus SD</i>
1. Consultations	1.1.f. classroom videotaping, observations and critique of classroom instruction for individual faculty	3.60	0.51
	1.2.f. consultation on enhancing teaching practices for individual faculty	4.00	0.00
	1.5.f. individual consultations for TAs	3.87	0.35
	1.11.f. consultation with campus groups or departmental units on teaching related issues	3.93	0.26
	1.12.f. consulting with departments on TA programs	3.53	0.64
2. University-wide Orientations	2.1.f. organized, campus-wide programs for new TAs	3.60	0.51
	2.2.f. organized, campus-wide programs for international TAs	3.53	0.52
	2.3.f. organized, campus-wide programs for new faculty	3.73	0.46

Table 15.2. Future Essential Faculty Development Programs, Final Framework (*Continued*)

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean</i>	<i>Consensus SD</i>
3. University-wide Workshops	3.1.f. enhancing teaching strategies	3.80	0.56
	3.2.f. course and syllabus design	3.87	0.35
	3.3.f. testing, test construction, and evaluating student performance	3.67	0.82
	3.4.f. developing effective writing assignments	3.53	0.64
	3.5.f. assessing student learning outcomes	3.87	0.52
	3.7.f. understanding college students (learning styles, developmental patterns, diversity)	3.67	0.49
	3.11.f. multicultural teaching and learning; infusing multiculturalism into a course	3.67	0.49
	3.12.f. application of instructional technology; teaching with technology; using various multimedia software	3.73	0.46
	3.16.f. college teaching for TAs	3.53	0.74
	3.17.f. developing teaching strategies and methods of active and cooperative learning	3.87	0.35
	3.20.f. teaching for student-centered learning	3.87	0.35

(*Continued*)

Table 15.2. Future Essential Faculty Development Programs, Final Framework (*Continued*)

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean</i>	<i>Consensus SD</i>
	3.30.f. part-time/adjunct faculty development	3.60	0.74
	3.36.f. developing faculty in the scholarship of teaching	3.73	0.46
	3.37.f. teaching large classes	3.87	0.35
	3.38.f. peer review as a form of assessment; training faculty and TAs in the peer review process	3.53	0.74
	3.40.f. critical thinking and inquiry	3.60	0.51
6. Resources and Publications	6.3.f. updated Web site (with resources to download and links to other Web-based resources)	4.00	0.00
7. Other Services	7.3.f. customized programs on instructional issues for individual academic departments	3.60	0.63
	7.14.f. service on university, college, and departmental committees in support of teaching and learning	3.87	0.35
	7.17.f. faculty-facilitated sessions for colleagues on issues of teaching and teaching methods	3.73	0.46

where "f" designates "future." The panel ranked ten more programs as essential for the future than they did for the past, and these are bolded in the table.

Table 15.3 compares the consensus group means for the current and the future essential programs for teaching and learning centers. Again, the ten programs deemed essential in the future

Table 15.3. Comparison Between Consensus Group Means for Current and Future Essential Faculty Development Programs

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean Current</i>	<i>Consensus SD Current</i>	<i>Consensus Mean Future</i>	<i>Consensus SD Future</i>
1. Consultations	1.1. classroom video-taping, observations, and critique of classroom instruction for individual faculty	3.53	0.52	3.60	0.51
	1.2. consultation on enhancing teaching practices for individual faculty	4.00	0.00	4.00	0.00
	1.5. individual consultations for TAs	3.80	0.41	3.87	0.35
	1.11. consultation with campus groups or departmental units on teaching related issues	3.93	0.26	3.93	0.26
	1.12. consulting with departments on TA programs	3.60	0.63	3.53	0.64
2. University-wide Orientations	2.1. organized, campus-wide programs for new TAs	3.67	0.49	3.60	0.51
	2.2. organized, campus-wide programs for international TAs	3.47	0.52	3.53	0.52
	2.3. organized, campus-wide programs for new faculty	3.60	0.63	3.73	0.46

(Continued)

Table 15.3. Comparison Between Consensus Group Means for Current and Future Essential Faculty Development Programs (*Continued*)

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean Current</i>	<i>Consensus SD Current</i>	<i>Consensus Mean Future</i>	<i>Consensus SD Future</i>
3. University-wide Workshops	3.1. enhancing teaching strategies	3.87	0.35	3.80	0.56
	3.2. course and syllabus design	3.80	0.41	3.87	0.35
	3.3. testing, test construction, and evaluating student performance	3.67	0.49	3.67	0.82
3. University-wide Workshops	3.4. developing effective writing assignments	3.47	0.64	3.53	0.64
	3.5. assessing student learning outcomes	3.80	0.41	3.87	0.52
	3.7. understanding college students (learning styles, developmental patterns, diversity)	3.40	0.51	3.67	0.49
	3.11. multicultural teaching and learning; infusing multiculturalism into a course	3.33	0.72	3.67	0.49
	3.12. application of instructional technology; teaching with technology; using various multimedia software	3.33	0.62	3.73	0.46
	3.16. college teaching for TAs	3.53	0.64	3.53	0.74
	3.17. developing teaching strategies and methods of active and cooperative learning	3.87	0.35	3.87	0.35

Table 15.3. Comparison Between Consensus Group Means for Current and Future Essential Faculty Development Programs (Continued)

<i>Program Category</i>	<i>Program</i>	<i>Consensus Mean Current</i>	<i>Consensus SD Current</i>	<i>Consensus Mean Future</i>	<i>Consensus SD Future</i>
	3.20. teaching for student-centered learning	3.87	0.35	3.87	0.35
	3.30. part-time/adjunct faculty development	3.13	0.83	3.60	0.74
	3.36. developing faculty in the scholarship of teaching	3.40	0.63	3.73	0.46
	3.37. teaching large classes	3.80	0.41	3.87	0.35
	3.38. peer review as a form of assessment; training faculty and TAs in the peer review process	3.20	0.68	3.53	0.74
	3.40. critical thinking and inquiry	3.40	0.51	3.60	0.51
6. Resources and Publications	6.3. updated Web site (with resources to download and links to other Web-based resources)	3.87	0.35	4.00	0.00
7. Other Services	7.3. customized programs on instructional issues for individual academic departments	3.47	0.52	3.60	0.63
	7.14. service on university, college, and departmental committees in support of teaching and learning	3.53	0.64	3.87	0.35
	7.17. faculty-facilitated sessions for colleagues on issues of teaching and teaching methods	3.60	0.63	3.73	0.46

but not currently are bolded in the table. We see dramatic differences between current and future group consensus means for most of these programs:

- Understanding college students (learning styles, developmental patterns, diversity)
- Multicultural teaching and learning; infusing multiculturalism into a course
- Application of instructional technology; teaching with technology; using various multimedia software
- Part-time/adjunct faculty development
- Developing faculty in the scholarship of teaching
- Peer review as a form of assessment; training faculty and TAs in the peer-review process
- Critical thinking and inquiry
- Customized programs on instructional issues for individual academic departments

Conclusion

According to center directors themselves, some types of faculty development programming are essential in fulfilling their mission. The Delphi panel identified individual consultations, whether simple discussions on teaching strategies or follow-ups of classroom videotapings and observations of individual faculty, as essential programs. These consultations may extend to advising with other units and groups on campus. Another critical type of program is the university-wide orientation for new faculty and TAs. Directors expect such orientations for international TAs to become essential in time. Also considered essential, both now and in the future, are university-wide workshops on topics important to faculty. For the present, the essential topics are these: enhancing teaching strategies; course and syllabus design; testing, test construction, and evaluating student performance; assessing student learning outcomes; college teaching for TAs; developing teaching strategies and methods of active and cooperative learning; teaching for student-centered learning; and teaching large classes. But in the future, the directors anticipate that a changing educational environment will require workshops

on different topics, such as developing effective writing assignments, understanding college students (learning styles, developmental patterns, diversity), introducing multiculturalism into a course, teaching with technology, developing part-time and adjunct faculty, developing faculty in the scholarship of teaching, using peer review as a form of assessment, and developing critical thinking and inquiry. In addition, directors see their centers as information, research, and resource centers, making an updated, library-like Web site essential.

Finally, as Sorcinelli and colleagues (2006) have argued, faculty development has recently entered a new age—the Age of the Network. In support of this claim, directors consider designing customized instructional programs for individual academic departments an essential mode of faculty development; so is recruiting faculty to facilitate instructional sessions for their colleagues and using committee service at all levels in support of teaching and learning, which may also involve planning and coordinating faculty development activities with other campus units on institutional initiatives (for example, assessing student learning outcomes, multiculturalism, diversity, changing faculty roles).

The inventory of essential faculty development programs that we have assembled for both the present and the future can serve as a yardstick for evaluating existing faculty development programming and guiding both the expansion of established programs and the planning of new ones, at least at research-extensive universities. Our results suggest that teaching and learning centers need to respond flexibly to the changing needs of faculty and to offer a variety of programs to serve a large and diverse university community. They must stay current with research on faculty careers, adult learning, organizational change, educational reform, and faculty development. They must also assess their program offerings regularly, as the roles and the needs of faculty and institutions continue to change.

Appendix A

Example Page from First-Round Questionnaire

Ranking: “4” represents a program that is “essential”; “3” represents a program that is “important but not essential”; “2” represents a program that maybe “helpful but not very important;” “1” represents a program that is “unimportant and should not be included.” Please **CLICK** the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.

<i>Program Category</i>	<i>Program</i>	<i>Rank Current Essentiality</i>			<i>Rank Future Essentiality</i>		
1. Consultations	classroom videotaping, observations and critique of classroom instruction for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	consultation on enhancing teaching practices for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	consultation on career goals and other personal questions for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	consultations on ethical conduct and teacher-student relationships for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2

(Continued)

<i>Program Category</i>	<i>Program</i>	<i>Rank Current Essentiality</i>			<i>Rank Future Essentiality</i>		
	individual consultations for TAs	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	mentoring services for TAs	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	mentoring services for new faculty members	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	pre-tenure review support for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	post-tenure review support for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2
	consultation on preparing teaching and course portfolios for individual faculty	☐ 4 ☐ 1	☐ 3	☐ 2	☐ 4 ☐ 1	☐ 3	☐ 2

References

- Altbach, P. (2005). Academic challenges: The American professoriate in comparative perspective. In A. Welch (Ed.), *The professoriate: Profile of a profession* (pp. 147–165). New York: Springer.
- Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.
- Brancato, V. C. (2003, Summer). Professional development in higher education. *New Directions for Adult and Continuing Education*, 98, 59–65.
- Centra, J. A. (1976). *Faculty development practices in U.S. colleges and universities*. Princeton, NJ: Educational Testing Service.
- Clayton, M. J. (1997). Delphi: A technique to harness expert opinion for critical decision-making tasks in education. *Educational Psychology*, 17(4), 373–386.
- Crawley, A. (1995). Faculty development programs at research universities: Implications for senior faculty renewal. In E. Neal & L. Richlin (Eds.), *To improve the academy: Vol. 14. Resources for faculty, instructional, and organizational development* (pp. 65–90). Stillwater, OK: New Forums Press.
- Dalkey, N. C., & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management Science*, 9, 458–467.
- Diamond, R. M. (2002). Faculty, instructional, and organizational development: Options and choices. In K. H. Gillespie (Ed.), *A guide to faculty development: Practical advice, examples, and resources* (pp. 2–8). Bolton, MA: Anker.
- Diamond, R. M. (2005). The institutional change agency: The expanding role of academic support centers. In S. Chadwick-Blossey & D. R. Robertson (Eds.), *To improve the academy: Vol. 23. Resources for faculty, instructional, and organizational development* (pp. 24–37). Bolton, MA: Anker.
- Eble, K. E., & McKeachie, W. J. (1985). *Improving undergraduate education through faculty development: An analysis of effective programs and practices*. San Francisco: Jossey-Bass.
- Eckel, P. D. (2002). Institutional transformation and change: Insights for faculty developers. In D. Lieberman & C. Wehlburg (Eds.), *To improve the academy: Vol. 20. Resources for faculty, instructional, and organizational development* (pp. 3–19). Bolton, MA: Anker.
- Eggers, R. M., & Jones, C. M. (1998). Practical considerations for conducting Delphi studies: The oracle enters a new age. *Educational Research Quarterly*, 21(3), 53–66.

- Erickson, G. (1986). A survey of faculty development practices. In M. Svinicki (Ed.), *To improve the academy: Vol. 5. Resources for student, faculty, and institutional development* (pp. 182–196). Stillwater, OK: New Forums Press.
- Frantz, A. C., Beebe, S. A., Horvath, V. S., Canales, J., & Swee, D. E. (2005). The roles of teaching and learning centers. In S. Chadwick-Blossey & D. R. Robertson (Eds.), *To improve the academy: Vol. 23. Resources for faculty, instructional, and organizational development* (pp. 72–90). Bolton, MA: Anker.
- Gaff, J. G., & Simpson, R. D. (1994, Spring). Faculty development in the United States. *Innovative Higher Education*, 18(3), 167–176.
- Garavalia, L., & Gredler, M. (2004). Teaching evaluation through modeling: Using the Delphi technique to assess problems in academic programs. *American Journal of Evaluation*, 25(3), 375–380.
- Gullatt, D. E., & Weaver, S. W. (1997, October). *Use of faculty development activities to improve the effectiveness of U.S. institutions of higher education*. Paper presented at the 22nd annual meeting of the Professional and Organizational Development Network in Higher Education, Hines City, FL. (ERIC Document Reproduction Service No. ED 414 796)
- Levine, A. (2001). The remaking of the American university. *Innovative Higher Education*, 25(4), 253–267.
- Lieberman, D. A., & Guskin, A. E. (2003). The essential role of faculty development in new higher education models. In C. M. Wehlburg & S. Chadwick-Blossey (Eds.), *To improve the academy: Vol. 21. Resources for faculty, instructional, and organizational development* (pp. 257–272). Bolton, MA: Anker.
- Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi method: Techniques and applications*. Reading, MA: Addison-Wesley.
- Millis, B. J. (1994). Faculty development in the 1990s: What it is and why we can't wait. *Journal of Counseling and Development*, 72, 454–464.
- Morris, L. V. (2004). Changing institutions and changing faculty. *Innovative Higher Education*, 29(1), 3–6.
- Murry, J. W., & Hammons, J. O. (1995). Delphi: A versatile methodology for conducting qualitative research. *The Review of Higher Education*, 18(4), 423–436.
- Rice, R. E. (1996). *Making a place for the new American scholar: Inquiry #1*. Washington, DC: American Association for Higher Education.
- Ruben, B. D. (2004). *Pursuing excellence in higher education*. San Francisco: Jossey-Bass.

- Scheibe, M., Skutsch, M., & Schofer, J. (1975). Experiments in Delphi methodology. In H. A. Linstone & M. Turoff (Eds.), *The Delphi method: Techniques and applications* (pp. 262–287). Reading, MA: Addison-Wesley.
- Shulman, L. S. (2004). *Teaching as community property: Essays on higher education*. San Francisco: Jossey-Bass.
- Singer, S. R. (2002, Fall). Learning and teaching centers: Hubs of educational reform. In J. L. Narum & K. Conover (Eds.), *New directions for higher education: No. 119. Building robust learning environments in undergraduate science, technology, engineering, and mathematics* (pp. 59–64). San Francisco: Jossey-Bass.
- Sorcinielli, M. D., Austin, A. E., Eddy, P. L., & Beach, A. L. (2006). *Creating the future of faculty development: Learning from the past, understanding the present*. Bolton, MA: Anker.
- Stone Fish, L. S., & Busby, D. M. (1996). The Delphi method. In D. H. Sprenkle & S. M. Moon (Eds.), *Research methods in family therapy* (pp. 469–482). New York: Guilford Press.
- Tice, S. L. (2005). Preface. In S. L. Tice, N. Jackson, L. M. Lambert, & P. Englot (Eds.), *University teaching: A reference guide for graduate students and faculty* (pp. xi–xii). Syracuse, NY: Syracuse University Press.
- Wilhelm, W. J. (2001). Alchemy of the oracle: The Delphi technique. *Delta Pi Epsilon Journal*, 43(1), 6–26.
- Wright, D. L. (2000). Faculty development centers in research universities: A study of resources and programs. In M. Kaplan & D. Lieberman (Eds.), *To improve the academy: Vol. 18. Resources for faculty, instructional, and organizational development* (pp. 291–301). Bolton, MA: Anker.
- Wright, D. L. (2002). Program types and prototypes. In K. H. Gillespie (Ed.), *A guide to faculty development: Practical advice, examples, and resources* (pp. 24–34). Bolton, MA: Anker.
- Wulff, D. H., & Austin, A. E. (Eds.). (2004). *Paths to the professoriate: Strategies for enriching the preparation of future faculty*. San Francisco: Jossey-Bass.
- Zahorski, K. J. (2002). Nurturing scholarship through holistic faculty development: A synergistic approach. In K. J. Zahorski (Ed.), *New directions for teaching and learning: No. 90. Scholarship in the postmodern era* (pp. 29–37). San Francisco: Jossey-Bass.
- Ziglio, E. (1996). The Delphi method and its contribution to decision-making. In M. Adler & E. Ziglio (Eds.), *Gazing into the oracle: The Delphi method and its application to social policy and public health* (pp. 3–33). London: Jessica Kingsley Publishers.