

**ESSENTIAL AND MODEL PROGRAMS FOR TEACHING AND LEARNING  
CENTERS AS REPORTED BY DIRECTORS IN SELECTED RESEARCH  
EXTENSIVE UNIVERSITIES: A DELPHI STUDY**

A Dissertation

by

LARISSA V. PCHENITCHNAIA

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

**DOCTOR OF PHILOSOPHY**

May 2007

Major Subject: Educational Administration

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Approved by:

Chair of Committee,	Bryan R. Cole
Committee Members,	Yvonna S. Lincoln
	Christine A. Stanley
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## ABSTRACT

Essential and Model Programs for Teaching and Learning Centers as Reported by Directors in Selected Research Extensive Universities: A Delphi Study. (May 2007)

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This dissertation presents an essential faculty development program framework for teaching and learning centers in research extensive universities for introducing, enhancing, and improving faculty development programs.

In this study, the Delphi method was used to gain consensus from the study experts on essential and model faculty development programs, key goals and biggest challenges for teaching and learning centers in research extensive universities. This study included two major phases: (1) creation of the original survey instrument, and (2) conducting the surveys with the identified experts. The first phase utilized three experts in the field of faculty development to validate the questionnaire instrument. The second phase was completed by a panel of 15 experts representing 14 states and was conducted in four iterations. The study answered five research questions: (1) What are essential faculty development programs for teaching and learning centers as reported by directors in selected research extensive universities? (2) What are model faculty development programs for teaching and learning centers as reported by directors in selected research

extensive universities? (3) What programs will be essential for faculty development in the future as forecasted by faculty professional development experts on the Delphi panel? (4) What should be the key goals for teaching and learning centers as reported by directors in selected research extensive universities? (5) What are the biggest challenges for teaching and learning centers as reported by directors in selected research extensive universities?

This dissertation study identified 18 currently essential faculty development programs and 28 future essential faculty development programs for teaching and learning centers in research extensive universities. Additionally, the Delphi panel members provided descriptions of model programs for identified essential faculty development programs that are considered as successful best practices to faculty development. The Delphi panel also provided insights into key goals and key challenges for teaching and learning centers that can be used by directors to plan essential faculty development programs.

This dissertation is significant because the results are expected to serve as a means for evaluating existing faculty development programming and guiding the planning of new faculty development programs to enhance teaching and learning on research extensive university campuses.

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## CHAPTER I

### INTRODUCTION

Higher education is considered one of the most important social institutions in our society. Nowadays universities are facing numerous societal and organizational challenges. Institutions have to deal with significant reductions in financial resources, increases in costs, demands for accountable student learning outcomes, increased student enrollment, more diverse student populations, globalization, advancements in information technologies, and intense competition among numerous providers of education (Brancato, 2003; Lieberman & Guskin, 2003). To accommodate these challenges there is a need for new educational environments and new conceptions of scholarship. New educational settings are characterized by the shift from a faculty and teaching centered orientation to a student and learning centered model (Angelo, 2001; Barr & Tagg, 1995; Bowden & Marton, 1998). The primary purpose of higher education in this new paradigm will be producing learning, not providing instruction. This shift has began manifesting itself in the form of learning communities. Learning communities emphasize collaborative learning, the social context of learning, and the integration of knowledge (Oates, 2001).

Boyer (1990) offered a new paradigm of scholarly work. The new approach to scholarly work enlarged its meaning, proposing four forms of scholarship that should

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This dissertation follows the style of *The Journal of Educational Research*.

be valued equally: discovery, integration, engagement, and teaching and learning (Sorcinelli, 2002a; Diamond, 2002a).

New higher education environments call for major changes in the role faculty members play and in what they are asked to do. Change, in many ways, is the engine that drives the academic enterprises of colleges and universities; and it is a cardinal responsibility of faculty to be the primary innovators and initiators of change in academe (Camblin & Steger, 2000, p. 1). A college or university's faculty is often a common criterion for determining institutional prestige and quality; and faculty are the most prominent feature in determining the quality level of instruction (Kang & Miller, 2000, p. 4). Studies are increasing their focus on the roles and work of higher education faculty as belonging to a larger, more comprehensive meta-profession model (Arreola, Theall, Aleamoni, 2003). A growing body of research contributes to the belief that a faculty member must perform at a professional level in a variety of roles that require a number of expertises and skills. According to Angelo (2001), "the faculty member's primary role shifts from delivering content to designing learning environments and experiences, and to serving as coach, expert guide, and role model for learners" (p. 102). Faculty must be taught how to educate—in relevant, flexible, creative ways—learners entering the workforce, who will need critical thinking, writing, and social skills for immediate success and who will need to have acquired a spirit of inquiry enabling them to develop intellectually over a lifetime (Millis, 1994, p. 455). In enhancing learning and individual student development, the key is not simply for faculty to teach more and better, but to create conditions that motivate and inspire students to educationally purposive activities.

Faculty who encourage deep and relational learning must have the institutional support to do so (Gayle, Tewarie, & White, 2003). New challenges require faculty to expand their views of education and to grow professionally themselves. The reforms of faculty roles and student learning will not be successful without major efforts to provide faculty with the necessary skills, training, technology, and support to perform their new roles (Lieberman & Guskin, 2003, p. 261). Confronted by diverse student needs and expectations, educators must continuously learn in order to keep up with current trends and demands (McGuire & Williams, 2002). The natural place to provide ongoing support in gaining needed learning, skills, and support for educators is professional development (King & Lawler, 2003, p. 5).

Professional development for faculty in higher education takes many forms and has a number of definitions. Gaff and Simpson (1994) give an overview of faculty development activities in the US. The authors state that in the 1960s professional development for faculty came to mean developing expertise in their discipline. In 1970s, new approaches to the professional development were devised, emphasizing the teaching role. Colleges and universities established new faculty and instructional development programs. A wide variety of mechanisms were used to promote greater sophistication and skill regarding teaching and learning, which Gaff in his earlier work (1975) conceptualized as faculty, instructional, and organizational development.

A third phase of campus-based faculty development started early in the 1980s. During this phase a series of additional academic challenges arose that centered on the curriculum and curricular change (p.167-169). These different phases influence the way

many institutions operate faculty development programs today. The faculty development movement in the 1990s and the beginning of the 21<sup>st</sup> century brought a new body of research on holistic faculty development, broader and more integrated perspectives on professional development, and life-long learning (Baiocco & DeWaters, 1995; King & Lawler, 2003; Schuster & Wheeler, 1990; Zahorski, 2002). Describing a holistic faculty development program, Zahorski (2002) states that “the faculty development program having the best chance of creating a transformative gestalt is one that casts its net wide, incorporating opportunities not only for instructional but also for organizational and personal development” (p. 30). Millis (1994) claims that “many scholars prefer a broad definition of the term faculty development to encompass research and teaching activities, personal health and growth, and the management of a professional career over time” (p. 454). The notion of faculty development is generally based on a faculty member’s voluntary effort for self-improvement, and humanistically accepts the notion that faculty are life-long learners and are capable of improving their content knowledge and performance abilities (Kang & Miller, 2000, p. 4).

To address faculty development needs successfully and implement new higher education models will require the commitment of a number of significant groups in the institution. Among the most important would be the work of faculty development professionals and the centers they lead (Lieberman & Guskin, 2003). Cross (2001) noted that establishing centers for teaching and learning has been the most common approach nationwide to improve teaching and learning. By the 1990s, centers on many campuses provided the resources for faculty orientation, mentoring programs, peer support groups,

individual consultations, workshops, seminars, resource libraries, and newsletters (Graf, Albright, & Wheeler, 1992). With new challenges to faculty, studies are increasing their focus on new opportunities for centers for teaching and learning. Singer (2002) states that “formalization of these centers has increased campus conversations on learning and institutional cross-fertilization of ideas” (p. 60). Centers for teaching and learning continue moving through a process of professionalization, especially with the continued growth of the Professional and Organizational Development Network in Higher Education (POD). Advances in cognitive sciences applied to learning and the growing body of literature on the multiple dimensions of learning are key to increased value of centers for teaching and learning to the constituents they serve (Singer, 2002, p. 61). Sorcinelli (2002b) supports this point stating that as more universities have accorded higher priority to student learning, they have also begun to offer enhanced teaching support through faculty, instructional, and organizational development undertakings (p. 9).

Successful faculty development programs provide training that will provoke, stimulate, and guide educators to use and integrate new concepts (Imants & Tillema, 1995 as cited in Dickey & Davis, 1998, p. 345). Faculty development initiatives that are strategically planned, implemented, and sustainable over time encourage a perspective on teaching as a lifelong endeavor and necessitate continuous learning by faculty (Brancato, 2003, p. 61). Newly-designed faculty development programs are intended to initiate, infuse, and sustain change in targeted faculty (Sullivan, 1983 in Camblin &

Steger, 2000). New challenges signal the need for continual expansion and re-examination of faculty development programs (Millis, 1994).

### **Statement of the Problem**

Nowadays institutions of higher learning are facing numerous societal, organizational, academic and cultural challenges. New challenges require faculty to expand their views of education and to grow professionally themselves. The reforms of faculty roles and student learning will not be successful without major efforts to provide faculty with the necessary skills, training, technology, and support to perform their new roles (Lieberman & Guskin, 2003, p. 261). The natural place to provide ongoing support in gaining needed learning, skills, and support for educators is professional development (King & Lawler, 2003, p. 5). New challenges signal the need for continual expansion and re-examination of faculty development programs (Millis, 1994). Successful faculty development programs provide training that will provoke, stimulate, and guide educators to use and integrate new concepts (Imants & Tillema, 1995 as cited in Dickey & Davis, 1998, p. 345). Brinko, Atkins, and Miller (2005) state that more than ever, faculty development professionals are called upon to work as institutional agents of transformational change, helping faculty members to design environments for learning, embracing ideas of learning communities, and navigating faculty development as a dialectic between individuals and the organizational system. Teaching and learning centers take on the responsibility of administering faculty development initiatives

(Sorcinelli, 2002b). The literature shows that addressing the needs of faculty through professional training at centers for teaching and learning will serve to enhance their learning and teaching excellence (Cross, 2001; Singer, 2002). One such need that is cited is in having holistic faculty development programs at campuses' centers for teaching and learning (Zahorski, 2002).

The research highlights the imperative nature of designing programs to address the full range of faculty development needs. According to Wright (2000) and Frantz, Beebe, Horvath, Canales, and Swee (2005), although there appears to be a widely disseminated understanding of what teaching and learning centers are, there have been only a handful of studies that have examined the functions and resources of teaching and learning centers and other faculty development programs (Centra, 1976; Crawley, 1995; Diamond, 2002b; Erickson, 1986; Frantz et al., 2005; Gullatt & Weaver, 1997; Sorcinelli, Austin, Eddy, & Beach, 2006; Wright, 2002). This study seeks to identify a specific list of essential and model faculty development programs for teaching and learning centers as identified by current directors of these centers in selected research extensive universities. This study is the first Delphi study that was designed to include a panel of knowledgeable members—directors for teaching and learning centers—to reach consensus on a list of essential programs for teaching and learning centers in a research extensive university.



## **Purpose of the Dissertation**

The purpose of this study is to identify essential and model faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities. The study will further identify future professional development programs essential to centers for teaching and learning as reported by directors in selected research extensive universities. In addition, the study will determine the key goals and most important challenges for centers for teaching and learning as reported by directors in selected research extensive universities.

## **Research Questions**

The study will be guided by the following research questions:

1. What are essential faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities?
2. What are model faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities?
3. What programs will be essential for faculty development in the future as forecasted by faculty professional development experts on the Delphi panel?
4. What should be the key goals for centers for teaching and learning as reported by directors in selected research extensive universities?

5. What are the biggest challenges for centers for teaching and learning as reported by directors in selected research extensive universities?

### **Operational Definitions**

**Challenges** - Difficulties or problems that exist in everyday activities in centers for teaching and learning as reported by directors.

**Consensus** - stability of the respondents' vote distribution curve over successive rounds of the Delphi. Using the 15% change level to represent a state of equilibrium, any two distributions that show marginal changes of less than 15% are said to have reached stability; any successive distributions with more than 15% change are included in later rounds of the Delphi, since they have not come to the equilibrium position (Scheibe, Skutsch & Schofer, 1975).

**Essential Program** - For purposes of this study this is a program that a director for a teaching and learning center considers as a core program that any research extensive university should have.

**Delphi Study** - A method used to investigate consensus amongst a panel of experts using repeated rounds of a questionnaire instrument. This method is used in many fields of education theory and practice, when a consensus must be reached on problems under conditions of uncertainty, with insufficient data, or the studied phenomenon/a are incompletely defined (Linstone & Turoff, 1975).

**Director of Teaching and Learning Center** - A coordinator who manages faculty development activities of a teaching and learning center at a research extensive university.

**Faculty Development** - defined broadly, any developmental activity designed to improve faculty performance in all aspects of their professional lives. The Professional and Organizational Development Network in Higher Education (POD) states that the arena of faculty development consists of three major areas: faculty development, instructional development, and organizational development or combination of all three. The three areas on which faculty development programs focus are: faculty member as a teacher, faculty member as a researcher, and faculty member as a person. Instructional development focuses on the course, the curriculum and student learning. Organizational development focuses on the organizational structure of the institution and its sub components. In reality many programs offer activities in all of these areas (“Definitions”, POD, 2002).

Faculty development is the theory and practice of facilitating improved faculty performance in a variety of domains, including the intellectual, the institutional, the personal, the social, and the pedagogical. Optimal weightings of these components vary from situation to situation (Menges, Svinicki, et al., 1988).

**Faculty Development Program** - A program that incorporates opportunities for instructional, organizational, and personal development (Zahorski, 2002). For purposes of this study faculty will include both faculty and graduate teaching assistants.

**Key Goals** – Most important objectives that a teaching and learning center should accomplish or attain as perceived by a director.

**Model Program** – For purposes of this study this is a specific program that is currently operating in a teaching and learning center and that a director for teaching and learning center perceives represents best practice.

**Teaching and Learning Center** - Centrally located unit in an institution of higher education that has an administrative staff managed by a director. The unit is staffed by professionals who are responsible for development activities. The number of staff members varies depending on the types and extent of the programs. These centers are usually administratively located under the Office of Academic Affairs (“Definitions”, POD, 2002).

**Research Extensive University** - an institution that typically offers a wide range of baccalaureate programs, and it is committed to graduate education through the doctorate. During the period studied, it awarded 50 or more doctoral degrees per year across at least 15 disciplines. The category definition is based on The 2000 Carnegie Classification of Institutions of Higher Education, which includes all colleges and universities in the United States that are degree-granting and accredited by an agency recognized by the U.S. Secretary of Education (“The 2000 Carnegie Classification”, 2000).

In November 2005, The Carnegie Foundation for the Advancement of Teaching reassessed its classification and introduced five new classification schemes. These 5 new classification categories include (1) undergraduate instructional program, (2) graduate

instructional program, (3) enrollment profile, (4) undergraduate profile, and (5) size and setting. There are also category-specific changes. Using the new methodology, the Foundation identified three categories of doctorate-granting institutions:

- RU/VH: Research Universities (very high research activity)
- RU/H: Research Universities (high research activity)
- DRU: Doctoral/Research Universities (“The 2005 Carnegie Classification”, 2005).

### **Assumptions**

1. The study methodology offers the most logical and appropriate design for this particular research project.
2. The Delphi experts understand the language of the instrument, are highly competent in the field of faculty professional development, and respond objectively and honestly.

### **Limitations**

1. This study is limited to information acquired from literature review and the perceptions and expertise of the Delphi panel.

2. This study is limited to the expertise provided by the Delphi panel, consisting of faculty professional development experts – directors of centers for teaching and learning at selected research extensive universities.

### **Significance of the Dissertation**

A growing body of research contributes to the belief that there is a lack of attention to teaching and learning effectiveness and to teaching-related activities at many colleges and universities. There is a pressing need to address matters of faculty, instructional, and organizational development in order to enhance institutional effectiveness (Diamond, 2002b). 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 their teaching and student learning, and faculty development initiatives can offer them strategies for a successful transition (Brancato, 2003). Sorcinelli et al. (2006) argue that the current changing context of higher education requires faculty developers to rethink the ways faculty development is approached, organized, and supported. This study seeks to identify a specific list of essential and model faculty development programs for teaching and learning centers that would assist in decision-making about developing or enhancing a comprehensive teaching and learning center in a research extensive university. This study may provide basic information and insights that can be used by directors for centers for teaching and learning in research extensive universities

to plan essential faculty development programs. The results of the study may also provide centers for teaching and learning a comprehensive foundation on which to build formal faculty development programs that can be structured to meet the needs of all faculty in order to maintain high standards of faculty, instructional and organizational quality. This study may assist directors for centers for teaching and learning in research extensive universities in initiating, improving or expanding their faculty development initiatives to enhance faculty performance and achieve greater institutional effectiveness.

### **Organization of the Dissertation**

This study consists of five chapters. Chapter I is an introduction of the topic of faculty development programs for teaching and learning centers in selected research extensive universities. Chapter II provides a review of the relevant literature on faculty development programs and centers for teaching and learning in research extensive universities. Chapter III describes the research methodology used in the study. Chapter IV explains and analyses the results of the study. A summary of findings, conclusions and recommendations for further research are presented in Chapter V.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **Introduction**

Higher education is considered one of the most important social institutions in our society. Colleges and universities today are exceedingly complex, providing an increasing range of educational services to a broad array of constituencies. A university is a dynamic social institution nourished and nurtured by society. It evolves and adapts as time moves on. As knowledge becomes the major dominant economic force, the importance of the university can only grow and this growth will occur in a rapidly changing environment (Rhodes, 2001; Scott, 2006; Simpson, 1998; Van Patten, 1999). The rise of an information economy reshapes modern higher education. According to Levine (2001), “an information society is global and puts an emphasis on intellectual capital—knowledge and the people who produce it. As a result, education is fundamental to an information society, which demands a higher level of skills and knowledge of its workforce and citizenry than does an industrial economy” (p. 255). The lifespan of knowledge is shorter in the current environment, and there is unparalleled pressure to remain at the forefront of knowledge use and production. This requires education throughout a career and the rising use of continuing education and professional development programs (Levine, 2001).



Modern universities are facing numerous social and organizational challenges. The 21<sup>st</sup> century university is “much more an intellectual space, underpinned by instructional technologies, values, ideas, revenue flows, and sociopolitical legitimacy than a physical space with a specific set of buildings” (Gayle et al., 2003, p. 5). Nowadays institutions have to deal with significant reductions in financial resources, increases in costs, demands for accountable student learning outcomes, globalization, advancements in information technologies, and intense competition among numerous providers of education (Brancato, 2003; Lieberman & Guskin, 2003; Ruben, 2004). Universities are asked to produce graduates who are skilled in higher-order cognition, such as critical thinking and complex problem solving; behave in a principled ethical fashion; can accept and work harmoniously and productively with people unlike themselves; have the ability to adapt to diverse and changing situations; and take responsibility for their work (Gardiner, 2005; Sorcinelli et al., 2006). New educational settings are characterized by the shift from a faculty and teaching centered orientation to a student and learning centered model (Angelo, 2001; Barr & Tagg, 1995; Bowden & Marton, 1998). The primary purpose of higher education in this new paradigm will be producing learning, not providing instruction. This shift has began manifesting itself in the form of learning communities. Learning communities emphasize collaborative learning, the social context of learning, and the integration of knowledge (Gillespie, 2001; Oates, 2001). Boyer (1990) offered a new paradigm of scholarly work. The new approach to scholarly work enlarged its meaning, proposing four forms of scholarship

that should be valued equally: discovery, integration, engagement, and teaching and learning (Sorcinelli, 2002a; Diamond, 2002a).

At the heart of the university or college are its faculty members—the men and women who devote their lives to research, teaching and service missions of higher education institutions. A college or university's faculty is often a common criterion for determining institutional prestige and quality. Their expertise, commitment, energy, and creativity directly shape the experiences of students, the nature of research, and the impact of the institution on the broader community (Kang & Miller, 2000; Sorcinelli et al., 2006). Schuster and Wheeler (1990) underline that the quality of higher education and the ability of colleges and universities to perform their respective missions is inextricably linked to the quality and commitment of the faculty (p. 3). New higher education environments call for major changes in the role faculty members play and in what they are asked to do. Change, in many ways, is the engine that drives the academic enterprises of colleges and universities; and it is a cardinal responsibility of faculty to be the primary innovators and initiators of change in academe. “Higher educational institutions must redefine themselves—that means the faculty must either face obsolescence or continuously be participating in developmental activities” (Camblin & Steger, 2000, p. 2). Sorcinelli et al. (2006) support this view stating that efforts to support and enrich faculty work—particularly in a changing context—are critically important to faculty members, institutional leaders, and higher education itself. Faculty development is the vehicle by which higher education faculty may continually improve its efforts toward achieving the desired outcomes stated in its mission and objectives

(Gullatt & Weaver, 1997). McGriff (2001) states that addressing the needs for faculty development has a significant holistic impact on the institution and can act as an energizing catalyst for the systemic change and transformation of higher education (p. 309). Nowadays knowledge and understanding are advancing very quickly. According to Camblin and Steger (2000), “the life span for the standard of excellence grows shorter and shorter; and the likelihood that either junior or senior faculty members can maintain distinctive levels of performance without the full support of their college or university is preposterous. Higher educational institutions must develop a sustained long-term faculty development strategy” (p. 2). New challenges require faculty to expand continuously their views of education and to grow professionally themselves. The reforms of faculty roles and student learning will not be successful without major efforts to provide faculty with the necessary skills, training, technology, and support to perform their new roles (Lieberman & Guskin, 2003, p. 261). Confronted by diverse student needs and expectations, educators must continuously learn in order to keep up with current trends and demands (McGuire & Williams, 2002).

The natural place to provide ongoing support in gaining needed learning, skills, and support for educators is professional development (King & Lawler, 2003, p. 5). To address faculty development needs and implement new higher education models successfully will require the commitment of a number of significant groups in the institution. Among the most important would be the work of faculty development professionals and the centers they lead (Lieberman & Guskin, 2003). Cross (2001) noted that establishing centers for teaching and learning has been the most common approach

nationwide to improving teaching and learning. By the 1990s, centers on many campuses provided the resources for faculty orientation, mentoring programs, peer support groups, individual consultations, workshops, seminars, resource libraries, and newsletters (Graf, Albright, & Wheeler, 1992). With new challenges to faculty, studies are increasing their focus on new opportunities for centers for teaching and learning. Singer (2002) states that “formalization of these centers has increased campus conversations on learning and institutional cross-fertilization of ideas” (p. 60).

Centers for teaching and learning continue moving through a process of professionalization, especially with the continued growth of the Professional and Organizational Development Network in Higher Education (POD). Advances in cognitive sciences applied to learning and the growing body of literature on the multiple dimensions of learning are key to increased value of centers for teaching and learning to the constituents they serve (Singer, 2002, p. 61). Sorcinelli (2002b) supports this point stating that as more universities have accorded higher priority to student learning, they have also begun to offer enhanced teaching support through faculty, instructional, and organizational development undertakings (p. 9).

Successful faculty development programs provide training that will provoke, stimulate, and guide educators to use and integrate new concepts (Imants & Tillema, 1995 as cited in Dickey & Davis, 1998, p. 345). Faculty development initiatives that are strategically planned, implemented, and sustainable over time encourage a perspective on teaching as a lifelong endeavor and necessitate continuous learning by faculty (Brancato, 2003, p. 61). Newly-designed faculty development programs are intended to

initiate, infuse, and sustain change in targeted faculty (Sullivan, 1983 in Camblin & Steger, 2000). New challenges signal the need for continual expansion and re-examination of faculty development programs (Millis, 1994).

### **New Trends in Higher Education and Challenges to the Academic Profession**

Higher education has changed significantly in the areas of technology, diversity, and expectations for faculty in teaching and learning in the past three decades. The modern academic workplace is characterized by student diversity, new technologies, changing societal expectations, a shift in emphasis toward the learner, increasing emphasis on learning outcomes, increasing public expectations for institutional involvement in economic development, expanding faculty workloads, and a new labor market for faculty (Altbach, 2005; Austin, 2002b; Wulff & Austin, 2004; Morris, 2004; Schuster, 1999; Sorcinelli et al., 2006).

Attention to diversity and multiculturalism is high on the agenda of many colleges and universities (Sorcinelli et al., 2006). Morris (2004) underscores this issue stating that “concurrent with the changes in technology and pedagogical alternatives is the growing diversity in student populations and expectation and desire by faculty to develop proficiency in teaching and mentoring students from diverse cultural, social, economic, ethnic, and racial groups” (p. 3). The need for multicultural understanding and skills in dealing with diversity is illustrated by the changing demographics of U.S. higher education. Non-Hispanic whites represent a shrinking share of the higher

education marketplace and degrees conferred each year: in 1977 white non-Hispanics received 90% of the bachelor's degrees awarded to U.S. citizens, and by 2001 this number had dropped to 74% (Mortenson, 2004 as cited in Morris, 2004).

Many researchers underscore dramatic changes in the students' demographics (Brancato, 2003; Keller, 2006; Levine, 2001; Morris, 2004). Keller (2006) states that today America's 3,900 accredited colleges and universities enroll 15.3 million students; more than one-fourth of U.S. citizens 25 years or older now hold a college degree; and that the United States currently has double the college and university participation of most other countries (p. 63). The majority of enrollment growth are older students, women, part-time students, working adults and students at a distance and online (Brancato, 2003; Keller, 2006; Levine, 2001; Morris, 2004). Levine (2001) specifically talks about "the dramatic growth in the number of students seeking higher education, the globalization of the student body, and the desire of nontraditional students for new forms of higher education" (p. 257). Accordingly, faculty and instructional practices and teaching strategies must adjust to these changes in campus and class makeup, pre-college preparation, course-level expectations, and college responsibilities (Austin, 2002b; Morris, 2004). Faced with a diverse array of students, faculty members must understand how teaching and learning processes occur, and they must be effective teachers (Wulff & Austin, 2004). Educators are challenged to employ more diverse and interactive teaching strategies in order to meet the unique needs of diverse student populations (Brancato, 2003).

Technological advances have revolutionized the way students obtain information; the way students and professors interact; and the way information is taught, learned and shared (Honan & Teferra, 2001; Morris, 2004; Sorcinelli et al., 2006). The explosion in information technology has created and continues to create great quantity of resources and techniques that, if properly incorporated into a teaching program, can inspire innovative approaches to both “teaching” and “learning” (Svinicki, 1998 as cited in Brancato, 2003). As more academic institutions and their competitors incorporate virtual education into degree programs, faculty members will be expected to use technology-mediated teaching and learning strategies, as well as provide distance-learning opportunities (Austin, 2002b; Levine, 2001).

Modern educational organizations are no longer viewed as formal, rational and hierarchically closed systems with hierarchical control patterns. The way to deal with old organizational structures is to build learning organizations. For Senge (1990) it is “an organization that is continually expanding its capacity to create its future...it is not enough merely to survive (survival learning or adaptive learning)...adaptive learning must be joined by generative learning, learning that enhances our capacity to create” (p. 14). The primary purpose of higher education in this new paradigm will be producing learning, not providing instruction. The focus is shifting on campus from faculty teaching to student learning (Barr & Tagg, 1995; Levine, 2001; Patrick and Fletcher, 1998 as cited in Brancato, 2003), with emphasis on active learning and assessment of learning outcomes. According to Rhodes (2001), the future for the university is to restore

the community of learning, based on engagement with the current issues within the context of enduring values that have shaped both universities and human civilization.

Focusing on the learner, rather than the teacher, leads to new expectations for how the faculty will enact their roles. Faculty members are likely to need to know how to support and advise students, and how to facilitate learning through discussions, utilize a range of collaborative and other innovative learning processes, and link classroom learning with life experiences and service in the community (Austin, 2002a; Austin, 2002b; Lieberman & Guskin, 2003). The challenges faced by faculty are compounded by the increasing demands from stakeholders (e.g. accrediting bodies and employers) for documenting and improving student learning outcomes. Levine (2001) states that “with the individualization of education, growing diversity of students and the multiplication of providers, the emphasis will shift from standardizing process to measuring outcomes...the emphasis will change from how students are taught to determining how much students have learned” (p. 265). Specifically, faculty are expected to “teach better”, connect more directly to public needs, and in certain institutional sectors to increase research productivity, elevate in department “rankings”, and bring in contracts and grants to offset rising costs and diminishing public assistance (Morris, 2004). Sorcinelli et al. (2006) talk about a current trend toward community outreach and problem solving at every level—from local to global. Faculty members are encouraged to become more engaged scholars, linking their research more closely with problems in the local, national or international community. Faculty require new skills for engaging with the needs and concerns of constituencies on and off campus, in skillfully



communicating a range of ideas to diverse audiences, and in documenting how their time is allocated (pp. xvi-xvii).

The modern academic environment is defined in part by new expectations and pressures from the broader society (Fairweather, 1996 as cited in Austin, 2002b; Wulff & Austin, 2004). Parents raise questions about the quality of undergraduate education; employers express concern about the skills and abilities of recent college graduates; community leaders ask how the university and its faculty contribute to public service. As they seek to respond to societal expectations and to demonstrate accountability, many campuses have adopted Boyer's (1990) notions of scholarship (Altbach, 2005; Austin, 2002b).

A lot of recent research literature in the educational field is devoted to discussions of the notion of scholarship (Braxton, Luckey, & Helland, 2002; Glassick, Huber, & Maeroff, 1997; Huber & Hutchings, 2005; Nicholls, 2005; Shulman, 2004). Boyer, in *Scholarship Reconsidered* (1990), offered a new paradigm of scholarly work. The goal of his work was to move beyond the debate over "teaching versus research" as faculty priorities in order to give scholarly work a more efficacious and enlarged meaning. Boyer proposed four forms of scholarship that should be valued equally: discovery, integration, engagement, and teaching and learning (Sorcinelli, 2002a; Berberet, 2002). Boyer (1990) argued that the professoriate should pay more attention to teaching and learning, stating that "teaching is...a dynamic endeavor involving all the analogies, metaphors and images that build bridges between the teacher's understanding

and the student's learning. Pedagogical procedures must be carefully planned, continuously examined, and relate directly to the subject taught" (pp. 23-24).

Boyer's *Scholarship Reconsidered* stimulated a rethinking of scholarship and faculty roles across higher education. In addition to the traditional expectations for teaching, research, and service, faculty members must understand the broader expectations for scholarship and develop expertise in the different forms of scholarly work. Increasingly, faculty members must be able to collaborate with colleagues in other disciplines and with individuals and organizations outside the academic environment (Austin, 2002b; Wulff & Austin, 2004). Sorcinelli et al. (2006) support this view stating that "in many fields there is a growing recognition and acceptance of new ways of understanding and conducting research—what Lincoln (1999) calls the emergence of "postmodern understandings" (p. xvi). Austin (2002a) explains that for faculty members, the emergence of "postmodern understandings" has meant encountering multiple ways of knowing and multiple ways of seeking understanding and conducting research (p. 122-123). Faculty members are becoming engaged in cross-disciplinary or multidisciplinary work, framing questions in new ways, using methodologies in which they were not originally trained, and seeking out deeper expertise in new knowledge domains (Lattuca, 2002, cited in Sorcinelli et al., 2006). As faculty members pursue new scholarly interests, the cost of doing research and the competition for federal and foundation-sponsored research and development dollars continue to escalate (Sorcinelli et al., 2006).

Institutions expect full-time faculty members to demonstrate multiple skills and abilities as they engage in a full range of academic work assignments (Austin, 2002b; Arreola et al., 2003). Studies are increasing their focus on the roles and work of higher education faculty as belonging to a larger, more comprehensive meta-profession model (Arreola et al., 2003; Arreola, 2006). The researcher argues that in order to succeed and thrive in the new educational environments it is necessary to redefine the teaching professoriate as a meta-profession—a profession that is recognized as building upon, and going significantly beyond, scholarship. Faculty are required not only to have high levels of content expertise but also demonstrate high levels of expertise in instructional design, instructional delivery, and instructional assessment (Arreola, 2006, p. 26). Rice (1996) proposed a faculty professional model, which he characterized as the “complete scholar”, in which he conceives faculty roles as a complementary whole and relates them to institutional and community well being. Rice (1996) argues that the faculty career should be viewed as a continuum in which needs and interests may change over time. The constant is a process of scholarly maturation reflective of an increasingly sophisticated integration of research, teaching, and campus and community service. McMillin (2004) states that a complete scholar cultivates “a multidimensional sense of the professional self” (p. 42). Morris (2004) argues that all these pressures and multiple expectations make the role of faculty member increasingly difficult and challenging.

## **New Trends in Faculty Demographics**

Higher education faculty are currently undergoing a transformation. The audience for professional development conferences and campus-based faculty development programs is large (Finkelstein & Schuster, 2004 interview in Rice, 2004; Keller, 2006; Morris 2004, 2005; Sorcinelli et al., 2006). According to Finkelstein et al. (1998), “the extent to which the faculty’s demographic profile has changed in very recent years is unprecedented” (p. xi). Morris (2005) stresses the fact that contrary to some popular beliefs, the number of U.S. faculty has increased substantially in the past three decades. According to the U.S. Department of Education, the faculty workforce grew from 705, 000 in 1981 to over 1,100,000 in 2001 (Morris, 2005). Adding to the need for faculty development, approximately 45,000 students receive the Ph.D. in the United States each year; and almost half of these graduates assume faculty roles in colleges and universities (U.S. Department of Education, National Center for Education Statistics, 2003 as cited in Morris, 2004). These graduates are largely unprepared for instructional roles as doctoral programs emphasize research-based skills (Austin, 2002a; 2002b). The literature on graduate education acknowledges the dissonance between intensive graduate student preparation for research, increased requirements for teaching effectiveness across all sectors, and faculty work responsibilities especially in teaching-intensive institutions (Morris, 2005).

Sorcinelli et al. (2006) give a quick overview of the faculty demographics stating that between the end of World War II and the early 1970s the number of college and

university professors tripled, the most rapid growth occurring during the 1960s. The 1970s and 1980s were a time of constrained mobility and hiring; faculty development was seen as one way to help maintain professors' vitality during a period of retrenchment (p. xvi). Currently, large groups of faculty who began their careers following World War II are retiring and leaving large vacancies in colleges and universities (Austin, 2002a; Sorcinelli et al., 2006).

A significant trend in higher education employment patterns is the dramatic increase in the number of part-time faculty and the number of full-time, non-tenure-track term appointments (Finkelstein et al., 1998; Finkelstein et al., 1999; Finkelstein & Schuster, 2004 interview in Rice, 2004). Finkelstein and Schuster (2004 interview in Rice, 2004) talk about "silent revolution" in types of academic appointments: new appointments are increasingly non-traditional. One part of the revolution is the increase in part-time appointments with almost 50% of the current one million faculty members nationwide in part-time positions. A second part of the silent revolution is the dramatic increase in full-time, off-tenure-track employment amounting to one-half of all full-time hires (p. 28). As reported by Finkelstein et al., (1998) almost 41% of the new entrants are women as compared to 29% of the senior faculty. The new cohort of U.S. faculty is also more racially and ethnically diverse, approximately 17% being a member of a U.S. minority group. Also, reflecting the internationalization of higher education, more than 1 in 6 of the new entrants were non-native born US citizens. In terms of their academic program affiliations, a considerably larger proportion of the new entrants hold appointments outside the traditional liberal arts (51%) compared with their senior

colleagues (45%). According to Schuster and Finkelstein (2006), the past several decades have seen major changes in how faculty are allocated among academic fields. The researchers point out a gradual migration of undergraduate students to majors in the professional and vocational fields and the associated shift of enrollment-driven demand for faculty. Schuster and Finkelstein (2006) state that “in 1969 two-thirds (67.8%) of the full-time professoriate identified the traditional arts and sciences as their disciplinary home, with less than one-third (31.3%) being situated in the professions (business, education, engineering, health sciences) or other fields. By 1998, however, faculty in the liberal arts fields had shrunk to 56.4% while faculty in the professions and other fields had increased to 43.6%” (p. 47). According to Finkelstein et al. (1998) and Schuster and Finkelstein (2006), if focus is on the newest entrants to the professoriate, the shifts among program areas are accentuated even more dramatically.

The changing demographics of the workforce present special challenges in faculty development. In addition to individual development and assistance, faculty development will need to embrace organizational development as the 21<sup>st</sup> century unfolds (Morris, 2005). Novice faculty and/or part-time faculty will be faced with assuming positions previously held by “expert professors”. Mid-career faculty development is also a concern for higher education institutions as faculty struggle in trying to balance the myriad responsibilities inherent in the academy. No less difficult is assuming “senior” status and divesting oneself of responsibilities in the last years of a long career (Morris, 2004). The research on faculty development programs for senior faculty describes some programs that are relevant to senior faculty (Crawley, 1995;

Seldin, 2006). These programs could be organized around two topics : (1) the need to leave behind a meaningful legacy (providing opportunities for senior faculty to mentor young colleagues; offering a convenient way for senior faculty to give something back to the community, both within and outside of the institution); and (2) preparation for retirement (providing an opportunity for senior faculty to get together for dialogue about the financial aspects of retirement; providing an opportunity for senior faculty to address the important psychological aspects of retirement; and facilitating structured meetings between those who will retire shortly and those who have already retired) (Seldin, 2006). Universities and colleges must be prepared to help faculty—both those in traditional positions and those in term and part-time appointments—succeed in their professional roles (Sorcinelli et al., 2006). According to Camblin and Steger (2000), “both the faculty and institutions must not only seek out the means of rekindling faculty energies and forestalling burnout but they must also develop strategies which promote opportunities for life-long learning and self-renewal activities. One reality is absolute, if higher education environments are to continue to be relevant, faculty development programs must evolve or faculty will become outdated in the rapidly changing work environment” (p. 4). Marchese (1998 as cited in Brancato, 2003) underlines that faculty development has the enormous task of providing relevant learning opportunities to assist faculty in accessing and linking the world to the classroom (p. 60).

## **Definitions of Faculty Development**

In the study of human behavior, the term development broadly refers to changes in individuals over time (Feldman, 1998 as cited in Camblin & Steger, 2000). More narrowly, in an organizational context, development means targeted enhancement of an individual or a collective set of individuals to serve better the mission of the organization (Camblin & Steger, 2000, p. 1). Gaff (1975) defined faculty development as a process that “enhances the talents, expands the interests, improves competence and otherwise facilitates the professional and personal growth of faculty members” (p. 14). Faculty development can take many guises (Alstete, 2000; Millis, 1994). Gaff (1975) and Bergquist and Phillips (1975) offered the seminal frameworks for effective faculty development. Gaff (1975) identified three conceptions of improvement: faculty development, instructional development, and organizational development. In this model, faculty development concentrates on faculty members to promote faculty growth and help faculty members acquire knowledge and skills related to teaching and learning. Instructional development focuses on courses and curricular, with goals that include improvement of students’ learning and preparation of learning material by the faculty. Organizational development helps to create an effective environment for teaching and learning through improved interpersonal relationships, team building, and policies that generally support effective teaching and learning. Bergquist and Phillips (1975) offered a faculty development model that is similar to Gaff’s (1975), and that included personal development, instructional development, and organizational development. Alstete (200)



states that “an important difference between the two models is that Gaff believes that any of the three aspects (personal, instructional, and organizational) can be implemented without reference to the other two... Bergquist and Phillips believe that all three elements should be present in a mature faculty development program” (p. 36).

Millis (1994) states that distinctions have traditionally been made between three terms: (a) faculty development (activities such as classroom visits or one-on-one counseling intended to improve the teaching skills of an individual faculty member); (b) instructional development (activities such as media support or curriculum design focused on the student, the course, or the curriculum); and (c) organizational development (activities such as campus-wide retreats intended to improve institutional resources or climate) (p. 454). Millis (1994) argues that in practice these definitions overlap and virtually all activities affect the individual faculty member.

Many scholars (Alstete, 2000; Eble & McKeachie, 1985; Schuster & Wheeler, 1990) give a broad definition of the term faculty development. Eble & McKeachie (1985) argue that “faculty development is both a comprehensive term that covers a wide range of activities ultimately designed to improve student learning and a less broad term that describes a purposeful attempt to help faculty members improve their competence as teachers and scholars” (p. 11). Schuster and Wheeler (1990) enlarged the previous definitions of faculty development and introduced the concept of enhanced faculty development. The scholars state that “an enhanced approach to faculty development is predicated on three clusters of issues: (1) assisting faculty to reconceptualize how they view their career; (2) providing the means to facilitate significant career shifts; and (3)

blending or fusing personal and professional development agendas in efforts to revitalize faculty careers in an organizational context” (Schuster & Wheeler 1990, p. 281).

The premier professional organization associated with faculty development is the Professional and Organizational Development Network in Higher Education (POD). POD Network asserts that the arena of faculty development consists of the three major areas of faculty development, instructional development, and organizational development; or some combination of all three (POD Network, 2002). POD Network defines faculty development as follows: “faculty development generally refers to those programs which focus on the individual faculty member. The most common focus for programs of this type is **the faculty member as a teacher**. Faculty development specialists provide consultation on teaching, including class organization, evaluation of students, in-class presentation skills, questioning and all the aspects of design and presentation. They also advise faculty on other aspects of teacher/student interaction, such as advising, tutoring, discipline policies and administration. A second frequent focus of such programs is **the faculty member as a scholar and professional**. A third area on which faculty development programs focus is **the faculty member as a person**” (POD Network, 2002). Baron (2006) states that this very broad definition has allowed faculty development to expand in many diverse ways in various types of institutions. Since its formulation, many additional aspects have been added in practice to the ones enumerated under consultation and advice. As new insights into teaching and learning have evolved, the scope of faculty development activities has expanded. POD Network describes two additional categories of activities that in its view round out the broadest

scope of faculty development. These two areas are instructional development and organizational development. POD Network argues that “**instructional development** usually takes a different approach for the improvement of instruction. These programs have as their focus **the course, the curriculum and student learning**...The philosophy behind these programs is that members of the institution should work as teams to design the best possible courses within the restrictions of the resources available.

**Organizational development** takes a third perspective on maximizing institutional effectiveness. The focus of these programs is **the organizational structure of the institution and its sub components**. The philosophy is that one can build an organizational structure which will be efficient and effective in supporting the faculty and students, the teaching/learning process will naturally thrive” (POD Network, 2002). POD Network states that “in reality many programs offer activities in all of these areas...each program must define for itself what is appropriate for the institutional needs and philosophy” (POD Network, 2002). This point of view that these definitions overlap in practice is shared by many scholars (Alstete, 2000; Millis, 1994; Zahorski, 2002). Zahorski (2002) argues for a synergistic approach to faculty development: “it is an approach based on the premise that whereas individual components of a faculty development program 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). Brew (2002) supports this point of view stating that faculty development nowadays refers not just to the development of individuals, but variously to the development of academic institutions, and the development of courses

and curricula, course teams, faculties and departments. Describing a holistic faculty development program, Zahorski (2002) states that “the faculty development program having the best chance of creating a transformative gestalt is one that casts its net wide, incorporating opportunities not only for instructional but also for organizational and personal development” (p. 30).

### **History of Faculty Professional Development**

Faculty development has long been an integral part of higher education’s strategy for self-renewal and increased vitality (Camblin & Steger, 2000). Although the oldest form of organized faculty support—sabbatical leaves—can be traced to Harvard in 1810 (Eble & McKeachie, 1985), faculty development movement emerged and crystallized as a systematic campus priority only in the late 1960s to the mid 1970s (Schuster & Wheeler, 1990). Before the 1960s, colleges and universities did not have well defined and comprehensive faculty development programs; the main practices involved orientation for new faculty, sabbaticals, and support to attend conferences (Baiocco & DeWaters; 1995; Centra, 1976; Centra 1985 as cited in Alstete, 2000). Bergquist and Phillips (1977 as cited in Schuster & Wheeler, 1990) described the limited agenda of faculty development efforts prior to the mid 1960s as consisting of additional research possibilities, reduced teaching loads, lower student faculty ratios, sabbaticals and leaves of absence (p. 5). Sorcinelli et al. (2006) state that from the mid 1950s well into the 1960s, American higher education grew rapidly in size and affluence. Equally striking

was the prestige and status afforded to the academic profession. Being a scholar became synonymous with being an academic professional. Sorcinelli et al. (2006) call this period the Age of the Scholar, and state that faculty development efforts were directed almost entirely toward improving and advancing scholarly competence. Faculty development has typically been concerned with the advancement of subject matter competence and the mastery of one's own discipline as it related to teaching (Gaff & Simpson, 1994; Tiberius, 2002). The first faculty development unit was introduced in 1962 with the Center for Research on Learning and Teaching in Michigan (Tiberius, 2002).

The 1970s saw significant changes in faculty development programs (Alstete, 2000; Graf, Albright, & Wheeler, 1992; Schuster & Wheeler, 1990). Faced with declining and changing enrollment patterns, increased requirements for accountability, declining financial resources, and a faculty adversely affected by these conditions, many colleges and universities in the 1970s turned to faculty development as a major responsibility (Eble & McKeachie, 1985). Based on research by Sullivan (1983) and Centra (1976), Tiberius (2002) states that there were fewer than 50 faculty development programs in the United States at the end of the 1960s but by 1975, 41% of all four-year institutions had faculty development programs. This growth was driven by the campus unrest of the 1960s, an influx of challenging students, the stagnation in new hiring, and new discoveries about learning and memory by cognitive science. A transformation had taken place in the late 1960s and early 1970s in the normative beliefs about the role of teaching (Gaff & Simpson, 1994; Tiberius, 2002). Gaff (1975) argued for a new set of assumptions about the role of a teacher: that instructional competencies are learned; that

these competencies include a complex set of knowledge, attitudes, values, motivations, skills, and sensitivities; and that teachers had a responsibility to learn the competencies. Sorcinelli et al. (2006) call this period the Age of the Teacher, when teaching development was viewed as key to faculty vitality and renewal. During this time campus centers designed to facilitate more effective teaching sprang up by the score across the higher education landscape (Schuster & Wheeler, 1990; Gaff & Simpson, 1994). A wide variety of mechanisms were used to promote greater sophistication and skill regarding teaching and learning, which Gaff (1975) conceptualized as faculty, instructional, and organizational development (Gaff & Simpson, 1994). Many books on university teaching appeared during this period. A number of new journals and societies appeared that were devoted directly to teaching in higher education, including *The Chronicle of Higher Education* (1966); Jossey-Bass publishers (1967); ERIC Clearinghouse on Higher Education (1968); *Change: The Magazine of Higher Learning* (1969); and the Professional and Organizational Development Network in Higher Education (POD) (1975) (Tiberius, 2002). The title of this organization reflects the connection between the institution's human resources (the faculty) and the organization itself (Alstete, 2000).

The 1980s began the Age of the Developer; with an upsurge in faculty development programs, the profession came of age (Sorcinelli et al., 2006). According to Tiberius (2002), in 1980s the skilled performance approach to teaching was still alive and well but “you would be likely to find developers who would be eager to engage you in exploring your attitudes, intuitions, feelings, sensitivities, and values...developers might attend to your interaction with your learners...they might talk about matching

your teaching strategies to student needs” (p. 27). The metaphors of teaching and learning were changing from teaching as transfer of information to teaching and learning as an interaction or conversation (Tiberius, 2002). Concerned about faculty vitality, foundations such as Danforth, W. K. Kellogg, Exxon Education, Mellon, Bush, Ford, and Lilly have provided external support and helped fund faculty development programs (Alstete, 2000; Gaff & Simpson, 1994; Sorcinelli et al., 2006). Gaff and Simpson (1994) argue that 1980s was the phase of additional academic challenges centered on the curriculum: “transforming the curriculum by attending to gender, race...incorporating global perspectives...and teaching skills such as writing and critical thinking across the curriculum” (p. 169). Faculty development for curriculum change required groups of faculty to work together and to see their own individual interests within the context of the department or institution (Gaff & Simpson, 1994). According to Sorcinelli et al. (2006), “while some researchers continued to explore the question of who was participating in faculty development and what services were offered, others began to study the usefulness and measurable outcomes of development activities” (p. 3).

The 1990s saw accelerated changes in academic work that had enormous implications for faculty development. In order to be truly effective in contemporary society, faculty development was required to integrate all aspects of development: personal, professional, and organizational (Schuster & Wheeler, 1990). Student learning rather than teaching took center stage and that is why Sorcinelli et al. (2006) called this period the Age of the Learner. According to Millis (1994), much of the research focused on involvement with learning. Millis (1994) also talked about a paradigm shift in

teaching, which was “prompted by a new vision of the classroom, one predicated on student-centered, interactive teaching methods” (p. 457). Faculty development programs were no longer specific to individual faculty fields of expertise or teaching skills but were related to faculty wellness and institutional quality of life and opportunities for personal growth and career renewal (Camblin and Steger, 2000). The role of new technologies, both in teaching and research, continued to evolve. There was a veritable explosion of technology use in college teaching, including presentation tools, websites, classroom communication systems, and online courses (McKeachie, 2002 as cited in Sorcinelli et al., 2006; Millis, 1994). Teaching and learning centers and entire campuses witnessed the growing phenomenon of assessment and performance measurement—from the individual faculty member in his or her own classroom to the departmental, institutional, and state levels (Sorcinelli et al., 2006).

According to Sorcinelli et al. (2006), with the new millennium faculty development entered the Age of the Network: faculty, developers, and institutions alike are facing heightened expectations, and meeting these expectations will require a collaborative effort among all stakeholders in higher education.

### **Importance of Faculty Development Nowadays**

The natural place to provide ongoing support in gaining needed learning, skills, and support for educators is professional development (King & Lawler, 2003). Rhoades et al. (2003) state that the rapid rate of change heightens the need for professional



development opportunities for all academic employees (p. 67). According to Gillespie (2002) “as our academic world and the challenges with which we are presented become ever more complex, it becomes increasingly critical that we undertake expanded efforts to assist faculty members in fulfilling their responsibilities. This is the task of faculty development and of faculty developers as well as the administrators who support them” (p. ix). Diamond (2002b) argues that a growing number of institutions have begun to explore ways in which they can improve both the quality and the effectiveness of their academic programs; thus the issue is a pressing need to address matters of faculty, instructional, and organizational development in order to enhance institutional effectiveness (p. 2). As more colleges and universities have accorded higher priority to student learning, they have also begun to offer enhanced teaching support through consultation services, funding incentives, workshops, and institutes—faculty, instructional, and organizational development undertakings (Sorcinelli, 2002b). Schuster and Wheeler (1990) stated that the careers of faculty members today are evolving in circumstances that cry out for more effective ways to facilitate faculty commitment and reinvigoration (p. 14).

According to Brancato (2003), increased attention is being given to faculty development programs that address today’s demands on higher education. The researcher states that “faculty members are being encouraged to transform their roles and responsibilities in order to enhance their teaching and student learning, and faculty development initiatives can offer them strategies for a successful transition (Brancato, 2003, p. 64). Faculty development initiatives that are strategically planned, implemented

and sustainable over time encourage a perspective on teaching as a lifelong endeavor and necessitate continuous learning by faculty (Brancato, 2003, p. 61). Sorcinelli et al. (2006) underline that in a current changing context, universities require committed, competent, energetic, and effective faculty members who can respond to multiple expectations, engage in revenue-producing activities, and maintain the highest level of quality in their work. Faculty development thus becomes essential to both the individual faculty member and the higher education institution as a whole. To meet shifting expectations for which they may not be fully prepared, faculty may need academic support systems and professional learning opportunities beyond those traditionally offered. Providing institutional support for faculty members facing changing contexts and new demands becomes an essential strategic choice. Change requires faculty developers to rethink the ways faculty development is approached, organized, and supported (pp. xvii-xviii).

### **Teaching and Learning Centers**

To address faculty development needs and implement new higher education models successfully will require the commitment of a number of significant groups in the institution. Among the most important is the work of faculty development professionals and the centers they lead (Lieberman & Guskin, 2003). The formalization of such centers at both small and large institutions has increased campus conversations on learning and institutional cross-fertilization of ideas (Singer, 2002). Cross (2001)

supports this view stating that establishing teaching and learning centers has been the most common approach nationwide to improving teaching and learning. Singer (2002) points out that there has been a three-hundred-fold increase in teaching and learning centers in the past thirty years. The two most significant contributions teaching and learning centers can make to educational reform are (1) maintaining high-visibility, high-credibility, campus-wide conversations focused on forward-looking learning and teaching and (2) providing quality support for all teachers, from beginning instructors to experienced, highly-regarded faculty members (Singer, 2002, p. 59). King and Lawler (2003) comment that proliferation of centers for teaching and learning has been very important to higher education. With changing faculty needs, these centers are focusing on several trends in higher education. First, there is an ongoing shift from an emphasis on teaching to an emphasis on learning. Second, there is a movement from individualized professional development centering on one's discipline and research to a more student-centered, process-oriented focus on teaching and the enhancement of learning. For those creating and conducting faculty development in campus centers, increased number of faculty and the diversity of faculty needs create new dilemmas.

### *History and Structures*

During the late 1960s and early 1970s most faculty development programs were conceptualized and the majority of them were administered by means of a separate office (Gaff & Simpson 1994; Schuster & Wheeler, 1990). Gaff and Simpson (1994) provide a

brief overview of how these centers were organized and governed. The researchers state that typically the leaders of these offices were respected faculty members who took on this assignment temporarily while still doing some teaching. To provide administrative support, the directors usually reported to the chief academic officer. To encourage open and frank discussions, the offices were removed from the formal authority structure and from the performance review process. To foster faculty ownership, the program usually had faculty advisory committees and were responsive to faculty interests (Gaff & Simpson, 1994). These first units concentrated primarily on assisting faculty in solving instructional problems or in generating and disseminating research knowledge and information about teaching and learning (Tiberius, 2002). In the 1980s, institutional commitment and resources increased, leading to a new emphasis on organizational issues: establishing faculty development priorities, obtaining a wider range of staff expertise, deciding the location of the office—both physically and within the organizational hierarchy—and locating sources of funding (Sorcinelli et al., 2006). Many centers developed guiding principles that made sure the program was voluntary, confidential, and developmental, rather than evaluative, and built a firewall between teaching development work and personnel decision-making processes (Sorcinelli et al., 2006). Millis (1994) supports this point of view stating that it is very important that faculty development efforts emphasize positive change, not “band-aids” for troubled faculty (p. 457). According to Sorcinelli et al. (2006), the 1990s saw continued growth in faculty development programs. Critical to the success of many centers was a high-quality staff of instructional developers who may or may not have come from faculty

ranks but typically had Ph.D.s in a variety of fields, college experience, and experience working with colleagues on teaching improvements. Some had specialized expertise in instructional technology, evaluation research, course and program assessment, and multicultural education to promote inclusivity. Many centers continued to collaborate with other campus offices (e.g., graduate school, academic computing, library, community service-learning) on institutional priorities, but still relied on institutional funds and private foundations to support their work (Sorcinelli et al., 2006). Millis (1994) states that nowadays campuswide centers usually address a broad range of institutional goals and typically employ faculty development specialists whose efforts are often enhanced by a dedicated group of local faculty respected for their teaching and research expertise and leadership.

According to Wright (2002), programs for faculty development all have a common theme: improving the quality of education by working with faculty. However, there has been considerable variety in program types, depending on institutional leadership, institutional community, local faculty, age and historical evolution of faculty development in a given institution, and availability of resources. Wright (2002) argues that structural variations among programs occur both in how and where they are organized:

- A single, campus-wide center is named, staffed, and budgeted within the institution to accomplish targeted development goals. It serves the entire institution or a substantial segment of it, in a variety of ways.

- A multicampus, cooperative program coordinates programs and resources to serve several campuses in meeting their faculty development needs in a number of ways.
- A special purpose center serves a specifically defined audience to accomplish more narrowly defined development goals.
- Development components are a part of a broader academic program. These often occur when resources or numbers to be served are relatively small (p. 26).

Sorcinelli et al. (2006) describe more types:

- An office that serves as a clearinghouse for programs and offerings that are sponsored across the institution, but which offers few programs itself.
- A committee charged with supporting faculty development, usually made up of unpaid volunteer faculty who oversee faculty development offerings.
- Single individual programs often run by an administrator responsible for faculty matters or a faculty member with a part-time assignment for development activities (p. 19).

Millis (1994) states that “campuswide faculty development initiatives can begin through administrative or faculty impetus, often resulting in a single campuswide center that addresses specific developmental goals of the entire institution” (p. 457). Alstete (2000) argues that campus-wide centers are often the most comprehensive, with a full-time staff and a budget for activities. Programs at these kind of centers are designed to serve a large audience and to stimulate change (p. 39). Sorcinelli (2002b) points out that increasingly, institutions have looked to teaching and learning centers to take on the

responsibility of administering faculty, instructional, and organizational development initiatives because centers are in a unique position to help teachers put new knowledge about pedagogy to work.

### *Principles of Good Practice*

According to Gaff and Simpson (1994), with the increase and development of teaching and learning centers several principles of good practice were formed. Some researchers (Gaff & Simpson, 1994; Millis, 1994; Schuster & Wheeler, 1990; Sorcinelli, 2002b; Wright, 2000, 2002) offer principles of good practice for developing and maintaining teaching and learning centers. One of them underlines *the importance of building stakeholders by listening to all perspectives*. Teaching centers often occupy a unique place in the structure of an institution because their mission is to address the interests and needs of the entire academic community in support of the education that students receive. In determining issues to address and priorities to set, a center stands a better chance if it is designed in direct response to the concerns of all constituencies—faculty, teaching assistants, administrators and students (Sorcinelli, 2002b, pp. 10-11). Wright (2002) states that campus-wide centers serve faculty in all stages of careers: new, tenure-seeking, and tenured senior faculty. Millis (1994) supports this point of view stating that the centers often serve a varied clientele with differing needs: TAs new to teaching, new tenure-track faculty, junior faculty, tenure senior faculty and adjuncts. Wright (2002) argues that increasingly, part-time faculty needs are being addressed as

well. Sorcinelli (2002b) underlines that it is important for a center to know the concerns of various constituencies. This could be done through interviews, focus groups, and surveys of faculty, teaching assistants, students, and academic leaders.

*Ensuring effective program leadership and management* is critical for success of a center. Studies of teaching development programs indicate that having someone in the position to both manage and lead a program is critical for success (Sorcinelli, 2002b). The leadership to direct the typical campus-wide center's program is often selected from the local faculty on the basis of special expertise, demonstrated leadership, or personal interest. Wright (2002) argues that a growing pool of experienced faculty developers can be found nationwide, which increases the availability of external expertise for these positions. Staff in campus-wide centers typically include a director, perhaps an associate director, one or two professional faculty developers, a part-time graduate assistant, and a secretary. Professional staff may hold faculty rank, which is usually negotiated in an appropriate department. In some instances, the director holds faculty rank while other faculty developers are professional staff with no responsibilities in other departments. Both academic year and calendar year appointments are found in these centers (Wright, 2002). Sorcinelli (2002b) states that it is essential to have an individual—ideally, a full-time director—who has the vision, commitment, time, and energy to take the lead in creating, developing, maintaining, and evaluating services.

Faculty development researchers indicate that faculty development programs are most effective when they have *strong faculty ownership and involvement* (Eble & McKeachie, 1985; Gaff & Simpson, 1994; Schuster & Wheeler, 1990; Sorcinelli,



2002b). Successful centers aim more at meeting the multidimensional and ever-changing needs of the total faculty. The best operations enjoy support from the central administration and are guided by grass-roots support from the faculty (Gaff & Simpson, 1994). Millis (1994) argues that campuses wishing to begin faculty development efforts would be wise to involve well-respected campus leaders and build a solid base of faculty support. Faculty planning committees whose roots stretch throughout a campus help build faculty ownership of new initiatives. Schuster and Wheeler (1990) support this view stating that establishing a dedicated faculty advisory committee can be helpful in ongoing governance. Such committees always have representation from faculty, and some include administrators as well. While the director of a center must oversee and guide initiatives, the final product needs to be faculty inspired.

*Administrative commitment* is as important as faculty involvement (Eble & McKeachie, 1985; Gaff & Simpson, 1994; Millis, 1994; Schuster & Wheeler, 1990; Sorcinelli, 2002b). “Academic chairs are the key agents for enhancing the quality of undergraduate education and ...department chairs can be most effective when they are supported by academic administrators who are working toward the same goals and who agree on appropriate strategies for improving teaching” (Lucus, 1990 as cited in Millis, 1994, p. 457). Centers can involve chairs and deans in developing and encouraging participation in important faculty development programs. Also senior academic officers give tremendous credibility and visibility to the program by participating in its activities (e.g., programs, award ceremonies) and by naming these activities as important values of the institution. Key academic officers play a crucial role in indicating the value of

teaching. Centers are well served by the support of an institutional administrator who is genuinely interested in faculty development and understands the needs and accomplishments of the center. This individual can serve as a liaison between the chief academic officer, other campus administrators, and the center (Sorcinelli, 2002b).

Administrative support is crucial as well because funding must come through dedicated institutional commitment (Millis, 1994). Wright (2002) points out that most campus-wide centers are supported by the institution's teaching budget, but some are supplemented by grant funds for special aspects of the program. Wright (2002) argues that external grants funds for faculty and instructional development efforts have shrunk in recent years and dependence on such monies present difficulties. Budgets vary greatly in relation to program elements, and amounts depend upon whether they include grants to faculty or other special categories of expenses. Most have adequate funds to support a multifaceted program.

*Developing guiding principles, clear goals, and assessment procedures* is important for any director of a teaching and learning center (Schuster & Wheeler, 1990; Sorcinelli, 2002b). It is important that the rationale and goals of the center be laid out clearly and communicated regularly to the institution (e.g., through an annual report, a program brochure, a unit plan). The center is similar to a research institute where the best faculty come together for professional opportunities to learn (Sorcinelli, 2002b).

*Strategically placing the center within the organizational structure* is an important factor for center's success (Diamond, 2005; Schuster & Wheeler, 1990; Sorcinelli, 2002b). According to Wright (2000; 2002), the typical campus-wide center is

organized administratively under the chief academic office of the institution. Although every program and institution has its unique features, a number of institutions with successful programs place the director of the center in a direct reporting line to the top—usually the provost or vice provost for academic or faculty affairs. This reporting structure lets faculty know that the staff of the center have a direct line to the academic agenda and financial support of the central academic affairs administration (Shuster & Wheeler, 1990; Sorcinelli, 2002b). The actual physical location of the center is also very important. While space is often tight at most institutions, it is important that the center develop a presence and identity on campus, that it is accessible, and that it be allocated enough space to allow for individual consultation and group seminars (Sorcinelli, 2002b).

Another sound practice is that centers for faculty development should demonstrate *breadth of purpose and strive for comprehensiveness*. Instead of focusing on single issues such as retrenchment, TA training or computer-based instruction, many programs flourished because they were multidimensional in nature and offered a wider range of needed services to faculty (Gaff & Simpson, 1994). Studies show that faculty have different needs at different stages of their careers (Alstete, 2000; Crawley, 1995; Seldin, 2006; Singer, 2002; Sorcinelli, 1985 as cited in Sorcinelli, 2002b). Thus it is important that a center creates programs to address a range of differing needs and encompass as many faculty as possible (Millis, 1994; Schuster & Wheeler, 1990; Sorcinelli, 2002b). At the same time, Sorcinelli (2002b) points out that the director of the center would be wise to prioritize commitments, lead with staffing strengths, and insist

on quality programming. Credibility with faculty is better fostered by offering a small group of carefully focused, planned and conducted programs than a breadth of program offerings which do not maintain distinction.

*Encouraging collegiality and community* is an important factor for a center's success. Studies confirm that faculty members need each other's support and that many faculty members express the desire to work with colleagues within and outside their disciplines. Getting to know other faculty members and sharing ideas about teaching is described as one of the primary benefits of participation in faculty development programs (Eble & Mckeachie, 1985; Sorcinelli, 2002b). The faculty development center can take an important role in convening faculty members so that important discussions on teaching can occur. Over time, faculty, as well as deans and chairs, become advocates of the center, urging their colleagues to engage voluntarily in activities that support teaching. A central goal here is to reduce the isolation in which faculty teach their classes and to provide a means of letting colleagues know about useful innovations (Sorcinelli, 2002b).

*Creating collaborative systems of support* is another principle of best practice for a teaching and learning center. Faculty development activities can be enhanced through a planned strategy of collaboration—of ideas, staff, resources, and funds—with other campus agencies (e.g., Provost's Office, Academic Dean's office, Writing Program, Office of Academic computing, Graduate School, Office of Research Affairs, or Office of Academic Planning and Assessment (Sorcinelli, 2002b). Schuster and Wheeler (1990) comment that it is important to create an informed administration, i.e. faculty

developers should seek periodic opportunities to acquaint key administrators of developments “in the field” (pp. 282-283).

*Providing measures of recognition and rewards* is an important principle of good practice for a teaching and learning center. Successful faculty development programs use a range of informal and formal means to motivate participation and involvement: provisions for class-free time, release time, or other such time-enhancing resources for developing a teaching innovation; small teaching grant programs; appreciation and recognition of faculty contributions to the center through a note, a plaque, a luncheon, or a designation as a mentor (Schuster & Wheeler, 1990; Sorcinelli, 2002b).

### *Future Trends*

According to Singer (2002) the formalization of teaching and learning centers at both small and large institutions has increased campus conversations on learning and institutional cross-fertilization of ideas. Teaching and learning centers play a crucial role in integrating and disseminating information about educational reform to and from the campus community. The centers today share a common assumption that excellence in teaching and learning is attainable with support, information, and practice. Centers continue moving through a process of professionalization, especially with the continued growth of POD. Advances in cognitive science applied to learning and a growing body of literature on the multiple dimensions of learning are key to the increased value of teaching and learning centers to the constituencies they serve. Teaching and learning

centers foster an environment for open communications on faculty issues. The centers have a growing track record of steady education reform, and the trajectory for the future is exciting (Singer, 2002). Colleges and universities are increasingly being confronted by forces that call for major changes in their structures, their priorities, and the roles of faculty, students, and staff. Diamond (2005) argues for expanding the roles of teaching and learning centers so that they become “institutional change agencies” that facilitate and support various interrelated change activities for faculty, administrators, and staff.

According to Singer (2002), teaching and learning centers will need to be flexible and visionary to meet faculty changing needs. Integrating and applying new findings in the learning sciences to curriculum development are important ways teaching and learning centers can serve their institutions. Asking whether curricular innovations are enhancing student learning is becoming increasingly possible. Teaching and learning centers can serve as liaisons between faculty innovators and resources for designing and implementing assessment of programmatic or curricular reform efforts. As technology and pedagogy interfaces are becoming increasingly complex, teaching and learning centers can bridge explorations of appropriate technologies and effective technologies to enhance learning among faculty, information technology specialists, and librarians. On the horizon are virtual teaching and learning centers that will complement the work of physical centers and include online workshops and teaching and learning courses for a broader net of faculty (Shea, Sherer, & Kristensen, 2002).

The directors for teaching and learning centers also have a role to play as faculty search for synergies or balance between their scholarly pursuits and commitment to

teaching excellence. Real educational reform requires sustained high-quality efforts. The physical presence of teaching and learning centers on campus lends credibility and support to the mission of maximizing the learning of all students. As repositories of institutional memory, coordinators of campus conversations on learning and teaching, and part of larger national and international conversations on education, the centers maximize the forward momentum of educational reform (Singer, 2002).

### **Studies on Faculty Development Programs**

Wright (2002) states that programs for faculty development all have a common theme: improving the quality of education by working with faculty. According to Frantz et al. (2005), although there appears to be a widely disseminated understanding of what teaching and learning centers are, there have been only a handful of studies that have examined the functions of teaching and learning centers and other faculty development programs.

Centra (1976) conducted the first national study of 756 colleges and universities regarding types of faculty development activities. The goals of the research were to identify faculty development activities, to evaluate their effectiveness, to determine funding sources, and to identify various organizational structures for faculty development programs. This study identified the groups of services and activities that institutions used and considered particularly effective in promoting faculty development.

Centra's (1976) questionnaire included 45 development practices grouped in the following categories:

- *Workshops, seminars, or similar presentations* (e.g., on exploring various methods or techniques of instruction; on reviewing subject matter or introducing new knowledge in the field; on approaches to develop curricular; on improving faculty advising and counseling skills; on improving the management of departmental operations, etc.).
- *Analysis of assessment procedures* ( e.g., systematic ratings of instruction by students; formal assessment by colleagues for teaching; informal assessment by colleagues for teaching; systematic teaching or course evaluations by an administrator for improvement purposes; classroom visitation by an instructional resource person; analysis of in-class video tapes to improve instruction; faculty with expertise consult with other faculty on teaching or course improvement; professional or personal development plan for individual faculty members; etc.).
- *Activities that involved media, technology, or course development* (e.g., specialists on campus to assist faculty in the use of audiovisual aids in instruction; assistance to faculty in the use of instructional technology as a teaching aid; specialists to assist faculty in constructing tests or evaluating student performance; specialists to help faculty develop teaching skills; etc.).
- *Institution-wide policies or practices* (annual awards to faculty for excellence in teaching; circulations of newsletter, articles, etc., that are pertinent to teaching improvement or faculty development; sabbatical leaves with at least half salary; a



policy of unpaid leaves that covers educational or development purposes; lighter teaching load for first year faculty; travel grants to refresh knowledge in a particular field; travel funds to attend professional conferences, etc.).

- *A miscellaneous set of five practices* ( use of grants by faculty members for developing new or different approaches to course or teaching; visitations to other institutions to review educational programs; faculty exchange programs with other institutions; faculty take courses offered by colleagues; personal counseling on career goals) (pp. 71-76).

According to Sorcinelli et al. (2006), it was not until the 1980s that the literature was further enriched with more evidence of the systematic evaluation of programs. On behalf of the POD network, Erickson (1986) conducted a survey of faculty development practices. Erickson (1986) adapted Centra's (1976) survey by regrouping the categories of faculty development activities and identifying the new ones. The survey listed 40 different activities in five categories:

- *Workshops and seminars* (course on curricular planning; testing and evaluating student performance; research and scholarship skills; general issues or trends in higher education; theories and principles of instruction, etc.).
- *Assessment practices* (student ratings of instruction; classroom observation by peers; systematic self assessment techniques; videotaping and critique of classroom instruction; etc.).

- *Individual consultations* (interpreting student ratings of instruction; course planning or development; developing teaching skills; use of instructional technology; etc.).
- *Grants, leaves and exchanges* (grants for faculty developing new or different approaches to courses or teaching; faculty exchange programs with other institutions; sabbatical leaves with at least half salary; travel grants to refresh or update knowledge in a particular field; etc.).
- *Other practices* (special professional library readily accessible to faculty concerned with instructional methodology, teaching skills, psychology of learning, and similar topics; annual awards to faculty for excellence in teaching; a visiting scholars program that brings people to the campus for some period of time; a campus committee on faculty development; etc) (pp.186-189).

Erickson (1986) received responses from some more than 630 faculty development coordinators, directors, committee chairs, and administrators. The survey assessed the availability of these faculty development services. Erickson (1986), similar to Centra (1976), found that “traditional” programs like grants, awards, leaves, and exchanges were the most frequently offered services. Individual consultation services were available at the fewest numbers of institutions. Larger institutions offered a greater variety of services than smaller ones.

Eble and McKeachie (1985) studied a wide variety of faculty development programs in 24 different institutions: public and private, small liberal arts colleges to research universities. They found that while traditional practices such as leaves and

grants were still valued by faculty, instructional development activities and projects involving course development and curricular change were both popular and highly effective. Describing faculty development programs at large public universities, Eble and McKeachie (1985) stated that the size and the diversity of large public institutions create needs and problems that help shape their faculty development programs. Within the large public universities, research productivity is expected of most of the faculty. Recognition of the complex relationships that exist between research and teaching is important to faculty development within these universities. The researchers state that “as faculties in the large public universities are oriented toward specialized research, so must faculty development programs that emphasize teaching find ways to declare the value of teaching, ways it might be improved upon, and means to assist faculty in carrying both scholarly and instructional responsibilities ...in addition, finding specific ways to affect the large numbers of faculty strongly identified with different colleges and departments maybe the most difficult problem faculty development in the large university faces“ (Eble & McKeachie, 1985, p. 155). According to Eble and McKeachie (1985), given the pressures that particularly affect faculty members of public institutions to meet commitments to research and teaching, faculty development may be vitally important to these places in the years ahead.

According to Sorcinelli et al. (2006), during the 1990s there were no large scale studies in the field to follow up research of Centra (1976) and Erickson (1986). There were, however, a number of studies and reviews that explored various aspects of faculty development practices. Hellyer and Boschmann (1993 as cited in Sorcinelli et al., 2006,

pp. 24-25) reviewed information on faculty development programs gathered from 94 institutions of higher education. As in earlier studies, the authors found great variance in the depth and breadth of programs. By far, the most common faculty development practices were workshops and discussions (93%). Other activities included individual consultations (63%), new faculty orientations and teaching assistant training (60%), research on teaching (51%), and teaching grants (34%). The authors concluded that faculty strongly supported the existence of faculty development offices. By the 1990s, teaching and learning centers on many campuses provided the resources for faculty orientation, mentoring programs, peer support groups, individual consultations, workshops, seminars, resource libraries, and newsletters (Graf, Albright, & Wheeler, 1992).

Crawley (1995) surveyed research universities to study their senior faculty renewal programs. According to Crawley (1995), the findings revealed a high level of support for the traditional approaches to faculty development (e.g., sabbaticals, unpaid leaves, grants) for senior faculty in the context of their teaching and research. The findings also suggested that faculty development approaches that are targeted to enhance senior faculty careers by either expanding employment options or by creating new roles and responsibilities were more limited. A survey by Gullatt and Weaver (1997) studied faculty development activities used in 116 institutions. It was found that all responding institutions included a faculty development component within their institutional effectiveness efforts, and that most institutions used guest speakers, informal “brown bag” gatherings, on-campus faculty development centers, or retreats to provide faculty

development. Topics most often addressed in faculty development programs included technology enhancement, new theories of teaching and learning, grant writing, institutional faculty evaluation processes, and teaching portfolios. The results also indicated that more faculty development centers and more frequent faculty development activities were found on campuses having larger institutional operating budgets. Chambers (1998 as cited in Wright, 2000) reported results of a survey of 1,350 two-year and four-year institutions finding similarity of services regardless of size or mission of the institution.

Wright (2000) compiled updated information on kinds of resources and services of faculty development centers in research universities (Carnegie classification Research I and Research II universities). The results indicated that size of institution, mission, resources, budgets, and staffing vary greatly, while activities and services have a greater degree of similarity. All 33 (100%) reporting centers provided consultation services. Workshops were provided to faculty on 32 (97%) campuses. Other group activities sponsored by centers included general-interest discussion groups on teaching, special-interest groups, breakfast-luncheon groups, and book groups. Another frequently provided service was a newsletter on teaching or faculty development, distributed by 21 (63.6%) centers. Resource rooms provided materials for faculty as well as developers on pertinent topics, and 28 (84.8%) centers reported having resource rooms. The study also showed that centers engage in the selection process for campus teaching awards and grant programs. Centers' services for graduate teaching assistants included individual consultations for TAs, mentoring services for TAs, consultations with departments on

TA programs, organized campus-wide programs for TAs (orientations, workshops, and courses on college teaching), and special services for international TAs (ESL classes, intercultural communications workshops, videotaped microteaching, and individual consultations). The study showed that instructionally related evaluation and assessment work occurs in the centers in several ways: by consultations on student evaluation of teaching instruments and by providing computerized examination services. Respondents from 27 (81.8%) indicated that they support instructional technology development in a variety of ways, including workshops, individual consultations, consultations with departments, and technical equipment assistance (Wright, 2000, pp. 296-299). In a more recent description of faculty development programs of campus-wide centers, Wright (2002) states that in most cases, the activities of campus-wide centers have gone beyond the traditional grants, leaves, and travel for faculty development. They have incorporated innovations to stimulate change for targeted improvements.

The programs of campus-wide centers are designed to utilize a variety of approaches to serve a large audience. Therefore, program offerings are numerous and may include varying combinations of activities. New information or skill-building workshops, seminars, conferences, and individual consultation are found in most program designs. Retreats maybe included in the programming as well. Workshops and seminars might be two hours to several days in length and provide an opportunity to stimulate thinking and communication about pertinent topics. Communication about instruction can also be encouraged with luncheon-discussion or study groups. Flyers, brochures, newsletters, electronic notification, and handout materials can be used to

announce development activities as well as to maintain visibility of the program. A resource library of articles, books, and bibliographies can be important in providing information for faculty on instructional topics. Wright (2002) points out that increasingly, centers are using web pages for the dissemination of resource materials. Assisting in curricular review and revision, from single courses to whole programs, is another emphasis the programs of a campus-wide center may take. Production of course manuals as well as media materials often result from this approach. Wright (2002) states that in recent years, campus-wide centers have begun to be more involved in partnering relationships with other offices/units within their institutions to enhance the focus on institutional initiatives (e.g., outcomes assessment, diversity, and writing/speaking across the curriculum). Recognition and reward elements of a faculty development program can take the form of teaching awards programs or special grants to faculty. Faculty developers often serve on faculty or administrative committees charged with responsibility for instructional quality. Some centers also include an associated program such as student learning skill assistance, examinations and evaluations services, media services, career development, or faculty exchange programs.

Frantz et al. (2005) surveyed 109 centers for teaching and learning in public and private doctoral institutions, public and private master's universities, private liberal arts colleges and public associate's colleges. Topics addressed included organizational infrastructure, assessment and accountability, factors contributing to successful implementation, and a 45-item list of offerings found in teaching and learning centers across the country. Some of these offerings include:

- Advisory boards
- New faculty orientations
- Peer tutor training
- TA or GA training
- ESL for international TAs
- Outstanding teacher awards
- Assessment coordination at the institutional level
- Assessment assistance at the course level
- Community-based learning
- Community connections
- Service learning
- Consultation on teaching for individual faculty
- Tenure/promotion portfolio assistance
- Course/instructor evaluations
- Public presentation assistance
- Faculty mentoring program
- Faculty development grants
- Teaching with technology grants
- Course redesign grants
- Chairing a department
- Responding to diversity in the classroom



- Integrating technology and teaching
- Understanding intercultural communication
- Developing skills in graphics and publications
- Enhancing teaching strategies
- Assisting with post-tenure review
- Writing grant proposals and reports
- Writing for publication
- Engaging in small group process
- Developing the scholarship of teaching
- Developing the scholarship of engagement
- Developing effective writing assignments (Frantz et al., 2005, pp. 76-78).

In addition identifying the range of programs at various institutions, this study also identified factors that helped teaching and learning centers achieve its goals and obstacles to teaching and learning centers. Strategies for achieving the goals include (starting with the one that got the biggest number of responses):

- Strong administrative support
- Engaged and supportive faculty
- Cultural tradition of support and climate of collaboration/cooperation
- Adequate budget
- Skilled and dedicated staff support
- Grant funding
- Location and physical facilities

- Strategic planning and goal setting
- Providing food and refreshments
- Student support (Frantz et al., 2005, p. 82).

Obstacles to teaching and learning centers include (starting with the one that got the biggest number of responses):

- Budget constraints and budget cuts
- Faculty perceptions of a research culture rather than an emphasis on a teaching enhancement
- Lack of adequate staff support
- Lack of faculty time to devote to development activities
- General lack of administrative support
- General lack of faculty support and interest; faculty inertia
- Facility problems: poor location or lack of space (Frantz et al., 2005, p. 83).

Based on the prior studies by Centra (1976), Eickson (1986), Gullatt and Weaver (1997), Wright (2002), Sorcinelli et al. (2006) provide the following classification of services that are typically offered by faculty development programs:

- *Consultations for individual instructors.* The consultation process may include several phases: clarification of instructional goals; assessment of teaching (e.g., review of course materials, feedback from students, classroom observation, videotaping); analysis of information gathered; establishment of improvement efforts; and review of progress.

- *University-wide orientations.* Many centers offer orientation programs for new faculty, and separately, for new teaching assistants. They may include keynote speakers, workshops with tips on “getting started” in teaching, graduate school, and faculty careers.
- *University-wide workshops.* Centers and programs also present, on an ongoing basis, a variety of workshops for full-time faculty, TAs, and/or part-time faculty. Subject matter ranges from interactive lecturing to building web pages to infusing multiculturalism into a course and the teaching of it. Workshop leaders vary from in-house and campus facilitators to external experts. Individual academic departments and schools may request customized programs to address instructional questions or problems identified by a unit.
- *Intensive programs.* Some programs offer intensive seminars (from a weeklong institute to yearlong learning communities) for faculty at different career stages or those interested in a particular teaching and learning topic. Signature aspects of yearlong seminars include an immersion retreat at the outset, a monthly seminar on teaching and learning, individual consultations, mentoring, and a teaching development project. Other intensive programs include teaching and learning institutes, faculty learning communities, book clubs, special interest communities, and regular meetings of groups in a breakfast or luncheon format.
- *Grants and awards for individuals and departments.* Programs often offer grant competitions to encourage exploration of new and improved instructional approaches, for conference presentations of successful teaching methods, or for

reporting on research findings. Programs may also engage in the selection process for campus teaching awards and in the preparation of nominees for external awards such as the Hesburgh Award or the U.S. Professor of the Year Award.

- *Resources and publications.* Faculty development programs often have a resource room that offers books, videotapes, CD-ROMs, and other instructional materials. Many centers offer on their web sites a range of resources that can be viewed or downloaded, including handbooks, annotated bibliographies, articles, teaching tips, newsletters and links to other web-based resources.
- *Other services.* Some programs offer specialized services related to instruction, such as student evaluation of teaching instruments, computerized examination and test scoring, programs to assess student learning outcomes, resources in instructional technology, classroom/audio-visual, and distance learning services (pp. 14-16).

According to Wright (2002), while no one program incorporates all of these activities, most campus-wide centers do provide a variety which fit the needs, goals, and resources of their own institution. Many researchers (Schuster & Wheeler, 1990; Zahorski, 2002; Sorcinelli et al., 2006) argue for providing breadth in program offerings. “It is important to recognize early on that a truly effective program for professional development must span all three major developmental aspects—professional (including instructional) development, personal development, and organizational development...thus it is crucial to recognize the long-term objective: a coordinated,

systematic approach that embodies all three facets of development” (Schuster & Wheeler, 1990. pp. 275-276).

Exploring the directions of faculty development programs of teaching and learning centers in the next five years, Wright (2000) found out that some new initiatives may include: increasing services related to instructional technology, enhancement of graduate student programs, assessment services, peer review, and preparing future faculty or a formal professional development program.

## **Conclusion**

Now is a time of high expectation and demand for colleges and universities. Ours is a world of rapid technological transformation and globalization, pressing issues of diversity, increasingly rigorous standards of accountability, and hectic current events that leave no one unaffected. This changing world constitutes a great challenge to those in institutions of higher learning, whether they are students, faculty, or administrators. The university of the 21<sup>st</sup> century has to deal with significant reductions in financial resources, increasing demands for accountable student learning outcomes, a shift in emphasis toward the learner, increasing public expectations for institutional involvement in economic development, expanding faculty workloads, and intense competition among numerous providers of education (Altbach, 2005; Brancato, 2003; Levin, 2001; Lieberman & Guskin, 2003; Morris, 2004; Ruben, 2004; Tice, 2005; Sorcinelli et al., 2006; Wulff & Austin, 2004). The quality of higher education and the ability of colleges

and universities to perform their missions is inextricably linked to the quality and commitment of the faculty (Schuster & Wheeler, 1990). A decade ago, in *Scholarship Reconsidered*, Boyer (1990) 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), “the 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). According to Gaff and Simpson (1994), faculty work includes teaching and advising, curriculum design, community service, and participating in the governance of their institutions. All of these roles are proper foci for development. Brancato (2003) comments 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 their teaching and student learning, and faculty development initiatives can offer them strategies for a successful transition.

According to Sorcinelli et al. (2006), since its inception, faculty development has proven its capacity to anticipate and respond to changes and to act as a lever of change in higher education. Faculty development 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) argues that faculty development programs are essential if campuses are to respond to complex changes in (a) expectations about the quality of undergraduate education, (b) views regarding the nature and value of assessment, (c) societal needs, (d) technology and its impact on education, (e) the diverse student populations and (f) 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 argue for expanding the roles of faculty developers and the centers they lead to become institutional change agents (Eckel, 2002, Diamond, 2005; Zahorski, 2002). Eckel (2002) points out that an important role for faculty developers is to help the institution think about how much change is needed and develop appropriate strategies to effect the level and breadth of change. Faculty developers have an important institution-wide perspective to understand the complexity of problems, opportunities, and constraints. They are uniquely positioned to be a conduit between faculty and administrators and have contact with a range of faculty from different departments and disciplines. Because of their primary responsibilities, faculty developers can help faculty and staff develop new skills and knowledge. By aligning development opportunities with the needs of the change agenda, they can facilitate change. Faculty developers can help people think differently. They can create opportunities for facilitated, institution-wide conversations about key elements of change and what it means for faculty and staff. Diamond (2005)

supports these ideas and argues for expanding the roles of teaching and learning centers so that they become “institutional change agencies” that facilitate and support various interrelated change activities for faculty, administrators, and staff.

The organizational structure for faculty development is now more often one in which programming is coordinated by an identifiable, centralized unit with professional staff (Cook & Sorcinelli, 2002; Millis, 1994; Singer, 2002; Wright, 2000, 2002; Sorcinelli et al., 2006). According to Wright (2002), the activities of campus-wide teaching and learning centers are designed to utilize a variety of approaches to serve a large audience. Program offerings are numerous and may include varying combination of activities (Eble & Mckeachie, 1985; Frantz et al., 2005; Millis, 1994; Schuster & Wheeler, 1990; Sorcinelli, 2006; Wright, 2002). Recent research on faculty development focuses on promoting ideas of comprehensive faculty development programs (Schuster & Wheeler, 1990) and holistic faculty development (Zahorski, 2002) that would support a faculty member in becoming a “complete scholar” (Rice, 1996). According to Zahorski (2002), a holistic faculty development program approach is based on the premise that whereas individual components of a faculty development program 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). Faculty development programs should never remain static. They must adjust creatively and responsively to meet changing student, faculty, institutional, and societal needs (Millis, 1994).



Reflecting on the future of the field of faculty development, Sorcinelli et al. (2006) offer a working agenda that can guide faculty developers in higher education institutions. The seven agenda items that are closely interrelated with each other include: (1) promoting professional preparation and development of faculty developers; (2) informing faculty development practice with scholarship concerning faculty careers, professional development, and work experiences, as well as the scholarship of organizational development and change; (3) broadening the scope of faculty development; (4) linking individual and institutional needs: faculty developers should attend not only to the interests of individual faculty but also to larger institutional concerns; (5) needing exemplars of effective faculty development programs and strategies from the widest range of institutional types; (6) working with a more sophisticated definition of faculty diversity (different career stages, appointment types); (7) acknowledging the fact that faculty development is everyone's work at higher education institutions.

## CHAPTER III

### RESEARCH METHODOLOGY

#### **Introduction**

According to Stone Fish and Busby (1996) and Linstone and Turoff (1975), the Delphi method is a procedure designed to have a panel of knowledgeable persons reach consensus on a particular topic. As originally developed by Dalkey and Helmer (1963), the Delphi technique was designed for the technological forecasting of future events. Today a review of literature indicates that it is considered a reliable qualitative research method with potential for use in problem solving, decision making, and group consensus reaching in a wide variety of 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 (3) developing criteria (Judd, 1972 as cited in Eggers & Jones, 1998; Murry & Hammons, 1995). In this study, the Delphi method was used to identify essential and model faculty development programs for teaching and learning centers in research extensive universities, to identify faculty development programs that would be essential for teaching and learning centers in the future, and to identify key goals and biggest challenges for teaching and learning centers. To achieve these purposes the following research questions were studied:

1. What are essential faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities?
2. What are model faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities?
3. What programs will be essential for faculty development in the future as forecasted by faculty professional development experts on the Delphi panel?
4. What should be the key goals for centers for teaching and learning as reported by directors in selected research extensive universities?
5. What are the biggest challenges for centers for teaching and learning as reported by directors in selected research extensive universities?

This chapter outlines the Delphi technique used to gain consensus from the study experts on essential and model faculty development programs, key goals and biggest challenges for teaching and learning centers in research extensive universities, and defines the methods utilized for selection of the study participants, determination of when consensus was reached, selection of essentiality and importance ranking scales and the means of data analysis. The Delphi method is neither true qualitative nor quantitative method. It is an additional method that draws upon aspects of qualitative method in that it relies on expert opinions to address an issue and it relies on simple quantitative techniques to rank/order the points related to an issue.

## **The Delphi Method**

According to Linstone and Turoff (1975), “the Delphi technique may be characterized 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) define Delphi “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”. The Delphi technique was developed by Dalkey and Helmer at the Rand Corporation during the 1950s as a tool for forecasting military priorities. As they envisioned Delphi, its objective was to improve group decision making by obtaining consensus of opinion but without face-to-face interaction (Dalkey and Helmer, 1963; Doyle, 1993; Eggers & Jones, 1998; Linstone & Turoff, 1975; Wilhelm, 2001; Ziglio, 1996). The Delphi technique permits the collection of rich evaluation data. Benefits of using the Delphi include the collection of data that is generated by participants with minimal leading by researchers, an iterative process that demonstrates to participants how their ideas and opinions are being utilized in the research process, and a planned interaction to share results with participants, which usually creates good will between the participants and research team (Garavalia & Gredler, 2004). According to Ziglio (1996), the Delphi method is intended to structure

and detail the expansive information for which there is some evidence in an attempt to achieve informed judgment and decision-making. The merits of the method include:

- focuses attention directly on the issue under investigation;
- provides a framework to conduct a study in geographically dispersed locations without physically bringing the respondents together;
- permits discussion of broad and complex problems;
- enables a group of experts with no prior history of communication with one another to effectively discuss a problem as a group;
- allows participants time to synthesize their ideas;
- allows participants to respond at their convenience;
- provides a record of the group activity that can be further reviewed;
- produces precise documented records of the distillation process through which informed judgment has been achieved;
- provides participants with anonymity so that they have the opportunity to express opinions and positions freely;
- permits independent thought among participants and assists them in the gradual formation of a considered opinion;
- the process has proven to be effective in a variety of fields, problems, and situations (Blair & Uhl, 1993; Clayton, 1997; Linstone & Turoff, 1975; Rotondi & Gustafson, 1996; Ziglio, 1996).

According to Turoff and Hiltz (1996), “the Delphi method is a communication structure aimed at producing detailed critical examination and discussion, not at forcing

a quick compromise...quantification is a property of the method, but only insofar as it serves the goal of quickly identifying agreement and disagreement in order to focus attention on significant issues” (pp. 56-57). Ziglio (1996) points out that the Delphi technique attempts to draw on a wide reservoir of knowledge, experience and expertise in a systematic manner instead of relying on ad hoc communications with selected individuals (p. 21).

The Delphi method has been used in many different areas of study, such as transportation, health, government, education and academia (Murry & Hammons, 1995; Eggers & Jones, 1998; Wilhelm, 2001). Murry and Hammons (1995) comment that 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 (3) developing criteria (p. 425). According to Cyphert and Grant (1971 as cited in Simpson & Smith, 1993), the Delphi approach is a useful tool in educational planning. Delbecq, Van de Ven, and Gustafson (1975 as cited in Eggers & Jones, 1998, pp. 56-57) identified five recognized areas of research which have effectively utilized Delphi methodology:

- To determine or develop a range of possible program alternatives.
- To explore or expose underlying assumptions or information leading to different judgments.
- To seek out information which may generate a consensus on the part of the respondent group.

- To correlate informed judgments on a topic spanning a wide range of disciplines.
- To educate the respondent group as to the diverse interrelated aspects of the topic.

In the area of education theory and practice, Delphi studies have been utilized to identify characteristics of successful community college vocational education programs (Dagenais, 1975); to determine skills and knowledges for the adult educator (Bunning, 1976); to identify alternative futures for continuing education (Masters, 1978); to develop higher education curriculum (Reeves & Jauch, 1978); to establish institutional research needs and priorities (Hecht, 1979); to develop and establish local school district goals (Connecticut State Department of Education, 1980); to validate teaching competencies of graduate teaching assistants (Simpson & Smith, 1993); to determine necessary improvements to the curriculum (Blair & Uhl, 1993); to develop sample outcome measures for information literacy (Doyle, 1993); to validate teaching competencies for faculty members in higher education (Smith & Simpson, 1995); to develop a set of management audit assessment criteria and to determine the practicality of implementing a management audit program for community colleges (Murry & Hammons, 1995); to identify essential components of doctoral programs for industrial technology education (Paige, Dugger, & Wolansky, 1996); to identify and explore values and views that might underlie the essential ethic for teaching science in the new millennium (Hays, 1997); to forecast future trends among counselors in schools (Stickel, 1999); to determine the guidelines for designing a web-based art-teacher education

curriculum (Yang, 2000); to identify the features and unresolved issues associated with the scholarship of teaching (Kreber, 2002); to develop the standards of knowledge and skills for university success (Conley, 2003); to determine teacher beliefs about educational software (Williams, Boone & Kingsley, 2004).

### *Conventional Delphi*

According to Linstone and Turoff (1975), Delphi usually undergoes four distinct phases:

- initial exploration of the subject under discussion, wherein each individual contributes additional information he feels is pertinent to the issue;
- the process of reaching an understanding of how the group views the issue;
- in case of disagreement, the disagreement is explored and evaluated;
- final evaluation of the information (pp. 5-6).

In a conventional Delphi, a team designs a questionnaire which is sent to a larger respondent group. Eggers and Jones (1998) point out that Delphi studies may begin with a structured questionnaire or open-ended questions. Although traditional Delphi studies began with open-ended questions, Uhl (1975 as cited in Eggers & Jones, 1998) suggested that a structured questionnaire, in which panel members were asked to modify statements or add items they believed to be important, provided for the consideration of a larger number of items and produced less statistical mortality in the study.



Items to be ranked in this modified Delphi study were developed from a careful review of the literature and validated by a pilot study including three professionals in the field of faculty development. Then the Round One questionnaire is transmitted to the members of the panel. The researcher requests the panel of experts to consider, to rank and/or rate, to edit, and to comment upon the items. Typically the ranking and/or rating is done on a Likert scale (Turoff, 1975; Murry & Hammons, 1995). After the questionnaire is returned, the monitor team summarizes the results, and based upon the results, develops a new questionnaire for the respondent group. During the second and any future questionnaire round, the panel is given feedback about the previous round. This information includes panel comments and composite and individual rankings and/or ratings for each questionnaire item. Panel members are again asked to rank and/or rate, edit, and comment upon each item. The goal of the third round and any other subsequent round of questionnaires is to achieve consensus or stability of panel member responses. Once consensus and/or stability is gained, the Delphi procedure ends (Linstone & Turoff, 1975; Murry & Hammons, 1995; Wilhelm, 2001).

Parente and Anderson-Parente (1987 as cited in Murry & Hammons, 1995, p. 429) concluded that “it is generally assumed that a decrease in variability that occurs over successive rounds is correlated with accuracy of the group prediction...consequently, iterative polling continues until variability has stabilized”. Typically, the modified Delphi procedure requires a minimum of two rounds but usually no more than four to achieve either consensus or stability (Linstone & Turoff, 1975; Uhl, 1983; Murry & Hammons, 1995). According to Scheibe, Skutsch & Schofer (1975),

opinion stability—stability of the respondents’ vote distribution curve over successive rounds of the Delphi—may serve as a method of consensus measurement. The researchers state that “using the 15% change level to represent a state of equilibrium, any two distributions that show marginal changes of less than 15% may be said to have reached stability; any successive distributions with more than 15% change should be included in later rounds of the Delphi, since they have not come to the equilibrium position (Scheibe, Skutsch & Schofer, 1975, p. 278).

### *Selection of Delphi Experts*

In a Delphi study the research population is known as a panel of experts or respondents (Wilhelm, 2001). According to Clayton (1997), the process of selecting experts is critical to the Delphi and serves to authorize the Delphi’s superiority and validity over other less painstaking and rigorous survey procedures. Dawson and Brucker (2001) support this point of view stating that the selection of panelists is important because the validity of the study is directly related to this selection process; that is knowledge of the panelists must be relevant to the questions being posed (p. 127). The selection of the appropriate experts must not be a matter of personal preference. It must follow a procedure governed by explicit criteria. These criteria may vary from one application to another, depending on the aims and context within which the Delphi process is carried out (Ziglio, 1996). Some of the general criteria include:

- knowledge and practical engagement with the issue under investigation;

- capacity and willingness to contribute to the exploration of a particular problem;
- assurance from experts that sufficient time will be dedicated to the Delphi exercise;
- good written communication skills (Ziglio, 1996, p. 14).

Expertise is the key requirement in selecting members of the panel (Linstone & Turoff, 1975), and it is this feature which sets Delphi apart from other general forms of survey research (Clayton, 1997). Expertise implies that the individual panelists have more knowledge about the subject matter than most people, or that they possess certain work experience, or are members in a relevant professional association (Murry & Hammons, 1995). Respondents' motivation is critical to the success of a Delphi exercise (Clayton, 1997; Wilhelm, 2001). Experts who have a keen interest in the focus topic should be selected for the panel. Because Delphi is a tool to aid understanding or decision-making, it will only be an effective process if those decision-makers who will ultimately act upon the results of the Delphi are actively involved throughout the process (Clayton, 1997). Once a prospective panelist has been qualified as an expert in the field of interest, he or she should receive a personal invitation to participate in the study. The invitation should take the form of a written letter or phone call which explains and discusses the objectives, procedures and timelines of the Delphi inquiry (Murry & Hammons, 1995).

Clayton (1997) suggests that there are no definite criteria regarding the panel size, depending on the purpose of the study, the complexity and the expertise required, the panel may be large or small and local, state, national or international. The criterion

for deciding on sample size for constructing a panel of experts is not a statistical one (Ziglio, 1996). Unlike almost any other research design, randomization is neither warranted nor needed (Stone Fish & Busby, 1996). Clayton (1997) underlines that all experts may be included or a random or nonbiased sample of various types of expertise may be sought. According to Linstone and Turoff (1975) and Ziglio (1996), the size of a panel will be variable and, with homogeneous groups of experts, good results can be obtained even with small panels of 10-15 individuals.

#### *Using Electronic Means of Communication in Delphi Studies*

The use of electronic means of communication has been recommended in cases when the group of experts is spread out geographically, the individuals are busy and frequent meetings are difficult, and the topics require reflection and contemplation from the participants (Linstone & Turoff, 1975). According to Ziglio (1996), many innovations are now available to enrich Delphi processes ranging from the use of fax machines to computerized Delphi as a substitute for traditional mail questionnaires. Eggers and Jones (1998) suggest various ways of invitation letters and questionnaire distribution, including fax, email and mail.

In this dissertation study, electronic means of communication (email) was used for keeping in contact with all study participants and for distribution (and receipt) of questionnaires to 13 of the 15 study experts. Two study experts chose traditional Delphi distribution method via mail.

### *Importance Rating Scale*

Scheibe, Skutsch & Schofer (1975) state that Likert-type rating scale is one of the most common methods used in a Delphi. According to Turoff (1975), to establish some means of evaluating the ideas expressed by the respondent group, rating scales must be established for such items as the relative importance, desirability, confidence, and feasibility of various issues. Turoff (1975) underlines that rating scales must be carefully defined so that there is some reasonable degree of assurance that the individual respondents make compatible distinctions between concepts such as “very important” and “important”. Clayton (1997) comments that the use of a Likert scale allows the researcher to work within an interval or quasi-interval scale of measurement.

This study utilized a four-rank scale for assessing the current essentiality of suggested faculty development programs for teaching and learning centers in research extensive universities and for assessing the future essentiality of suggested faculty development programs for teaching and learning centers in research extensive universities. The ranking scale was modeled according to the original Turoff’s importance-rating scale (Turoff, 1975). The participants in the study were asked to rank the current and future essentiality of each suggested faculty development program from “1” to “4” where “4” represented a program that is “*essential*” to teaching and learning centers in a research extensive university, and “1” represented a program that is “*unimportant and should not be included*” to teaching and learning centers in a research extensive university. Additionally, in the second, third and fourth rounds, two similar 4-

rank scales were utilized. One of them was applied towards assessing the importance of goals for teaching and learning centers identified by the experts during the first round questionnaire, where “4” represented a goal that is “*very important*” to teaching and learning centers in a research extensive university and “1” represented a goal that is “*unimportant*” to teaching and learning centers in a research extensive university. The other scale was applied towards assessing the level of impact of challenges on teaching and learning centers in a research extensive university, where “4” represented a challenge with “*major impact*” on teaching and learning centers in a research extensive university and “1” represented a challenge with “*no impact*” on teaching and learning centers in a research extensive university.

#### *Description of Study Questionnaires*

The Delphi technique for gaining consensus from a group of experts and forecasting significant issues in the field of the Delphi panel expertise was used. Data collection included a series of four questionnaires, where the first round questionnaire was based on a literature review in the field of faculty professional development, and was evaluated by an instrument review panel of experts. The questionnaire evaluation by the pilot instrument review panel and the Delphi experts’ rankings of the variables during the survey rounds established the content validity of the survey instrument.

The *initial questionnaire* was organized based on a careful review of the literature and validated by a pilot study which included three knowledgeable people in

the field of faculty development. The pilot instrument was evaluated by a panel of three experts in the area of faculty professional development. The instrument review panel included one representative from the POD (a past president of the POD), one associate director of a teaching and learning center, and faculty professional development expert, working as a research professor in a teaching and learning center. The instrument reviewers made valuable suggestions and comments regarding needed wording changes in the formulated essential faculty development programs, inclusion of additional essential faculty development programs, and formulation of program categories. After all revisions suggested by the instrument reviewers were made, the first survey instrument was sent out to the study participants.

The *Information Sheet (Appendix 2)* to each Delphi panel member provided detailed description of the time and effort commitment needed for successful conduct of the study and outlined a timeframe for the study. The *Information Sheet* was placed to appear first in the two mailed surveys and to appear as a first attachment to an email that also included the first round questionnaire (Appendix 3). The email letter included the brief review of the instructions for the first round and the instructions for saving the questionnaire and emailing it back to the researcher. The questionnaire tables presented suggested faculty development programs for teaching and learning centers in a research extensive university as identified in current literature on faculty professional development. All suggested programs were organized according to seven program categories: Consultations; University-wide Orientations; University-wide Workshops; Intensive Programs; Grants, Awards, and Exchange Programs; Resources and

Publications; and Other Services. The tables provided checkboxes for ranking of the essentiality of the relevant faculty development programs for teaching and learning centers in a research extensive university. The essentiality of the programs was ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality. Four checkboxes were suggested for ranking of the current essentiality and four checkboxes for ranking of the future essentiality of each suggested faculty development program. For the electronic version, the panel members were asked to click the ranking in each respective “Rank” column for each faculty development program and to rank each item from “1” to “4”, in the context of its essentiality for teaching and learning centers in a research extensive university, where:

- **4**” represented a program that is **“essential”** to teaching and learning centers in a research extensive university;
- **3**” represented a program that is **“important but not essential”** to teaching and learning centers in a research extensive university;
- **2**” represented a program that maybe **“helpful but not very important”** to teaching and learning centers in a research extensive university;
- **1**” represented a program that is **“unimportant and should not be included”** to teaching and learning centers in a research extensive university.

For the mailed version, the panel members ranked the items using a pen or a pencil. Each program was numbered, where a first digit designation referred to the seven Program Categories (e.g. 1.), and a second digit identification referred to a program item (e.g. 1.1.). In the space provided after the tables, the panel members were asked to add



any new essential programs that they believed should be included and that were not part of the original list. The Delphi panel experts added a total of 32 new faculty development programs during the first round questionnaire. Table 1 presents the distribution of new faculty development programs according to program categories.

**TABLE 1. Distribution of New Added Programs According to Program Categories.**

<b>Program Category</b>	<b>Number of New Programs</b>
1. Consultations	4
2. University-wide orientations	4
3. University-wide workshops	4
4. Intensive programs	2
5. Grants, awards, and exchange programs	3
6. Resources and publications	5
7. Other services	10

The space was identified as “Programs not included” and was organized according to the seven program categories. Additionally, at the end of the first questionnaire, the panel members were asked two questions (1) to list and briefly describe what goals they perceive to be the top five for centers for teaching and learning in a research extensive university, and (2) to list and briefly describe what challenges they perceive to be the top five for centers for teaching and learning in a research extensive university. Additional space for comments was also provided at the end of the questionnaire. The panel members were requested to return their filled in questionnaires within two weeks of receipt.

The *second round questionnaire* (Appendix 4) followed the organization of the first round questionnaire. For each suggested essential program (in terms of both current and future essentiality), the second round questionnaire tables provided the mean score and the standard deviation for the group, individual panel member's score and space for change of rank if deemed appropriate. The Delphi panel experts were asked, after reviewing the mean score and the standard deviation for the group and their previous rank, to provide a new rank if they desire to make a change for each suggested essential faculty development program (in terms of both current and future essentiality). If no change of rank was deemed appropriate, the panel members were asked to leave the space for "New Rank" blank. New suggested essential faculty development programs provided by the panel members in the first round questionnaire were marked in bold with "New!" and were added in the Program Category panel. Where more than one panel member suggested similar essential faculty development programs, the new essential faculty development program was included to accommodate all suggestions with the minimum possible modifications to the original wording provided by the panel members. The Delphi panel experts were asked to rank all new essential programs in the column labeled "New Rank".

The first round questionnaire returned a variety of goals and challengers for teaching and learning centers in a research extensive university. All suggested goals were grouped according to a content analysis and 23 categories were formed. The table provided checkboxes for ranking of the importance of goals for teaching and learning centers in a research extensive university. There was no prioritization in the sequence of

presentation of the goal categories. The panel members were asked to rank the importance of each goal from “1” to “4”, where:

- “4” represented a goal that is “**very important**” to teaching and learning centers in a research extensive university;
- “3” represented a goal that is “**important**” to teaching and learning centers in a research extensive university;
- “2” represented a goal that maybe “**not very important**” to teaching and learning centers in a research extensive university;
- “1” represented a goal that is “**unimportant**” to teaching and learning centers in a research extensive university.

All suggested challenges were grouped based on a content analysis and 23 categories were formed. The table provided checkboxes for ranking of panel members’ perceived impact of challenges on teaching and learning centers in a research extensive university. There was no prioritization in the sequence of presentation of the challenge categories. The panel members were asked to rank the perceived impact of challenges from “1” to “4”, where:

- “4” represented a challenge with “**major impact**” on teaching and learning centers in a research extensive university;
- “3” represented a challenge with “**moderate impact**” on teaching and learning centers in a research extensive university;
- “2” represented a challenge with “**minimal impact**” on teaching and learning centers in a research extensive university;

- “1” represented a challenge with “no impact” on teaching and learning centers in a research extensive university.

For the electronic version, the panel members were asked to click the ranking in each respective “Rank Importance” column for each goal group or “Rank Impact” column for each challenge group. For the mailed version, the panel members ranked the items using a pen or a pencil.

The *third round questionnaire* (Appendix 5) followed the organization of the two previous questionnaires. The third round questionnaire included the responses for all suggested essential faculty development programs as result of the responses to the second round questionnaire. The consensus items results (means and standard deviations) were provided for the panel members’ information only. The panel members were asked to review their responses only for those items where consensus had not been reached. The third round questionnaire also continued the exploration of the goals and challenges for teaching and learning centers in a research extensive university. The tables were modified to include the mean score and the standard deviation for the group, an individual panel member’s score and space for change of rank if deemed appropriate. The Delphi panel experts were asked, after reviewing the mean score and the standard deviation for the group and their previous rank, to provide a new rank if they desire to make a change for each goal or challenge. If no change of rank was deemed appropriate, the panel members were asked to leave the space for “New Rank” blank.

The *fourth round questionnaire* (Appendix 6) followed the organization of the previous questionnaires. It included only those suggested essential faculty development

programs where consensus was not reached in one or more ranking (current or future essentiality) during the previous rounds. Those were the programs that went through the third round of assessment. The fourth round questionnaire also continued the exploration of the goals and challenges for teaching and learning centers in a research extensive university. The questionnaire included only the responses for the goals and challenges where consensus was not reached.

One of the additional purposes of this dissertation study was to identify model faculty development programs for each program category that had essential programs. The fourth round questionnaire included the tables that listed those programs that had been determined to be essential by the expert panel. The programs were grouped within their respective group category. The panel members were asked to identify and briefly describe one or more model programs for each program category that related to the essential programs within that category. The “Model Program” column provided space for including an answer.

### *Consensus in Delphi Studies*

According to Rotondi and Gustafson (1996), creativity, synergy and consensus are desirable outcomes in a Delphi application. The Delphi procedure stops after either consensus or stability of responses has been achieved (Murry & Hammons, 1995). Scheibe, Skutsch and Schofer (1975) conclude that opinion stability may serve as a method of consensus measurement and defined *consensus* as stability of the respondents’

vote distribution curve over successive rounds of the Delphi (p. 277). Following Scheibe, Skutsch and Schofer (1975) model, in this research, using the 15% change level to represent a state of equilibrium, any two distributions that showed marginal changes of less than 15% were said to have reached stability; any successive distributions with more than 15% change were included in later rounds of the Delphi, since they did not come to the equilibrium position. To compare the distributions of opinions between rounds, the following steps were implemented:

- calculating the absolute differences in the histograms (responses) for the two successive rounds;
- calculating total units of change—the sums of the absolute differences in the histograms (responses);
- calculating net person changes—total units of change divided by 2;
- calculating percent change—net change divided by the number of participants (Scheibe, Skutsch and Schofer, 1975).

The group mean at the round in which consensus was reached was referred to as “consensus mean”. In this research, all variables have been introduced for exploration, consideration and reevaluation three times. Wilhelm (2001) states that in many Delphi studies attempting to reach consensus using rankings, the communication process has reached a point of diminishing marginal returns beyond three iterations. If consensus on a variable was not reached after three iterations, it was concluded that consensus was not reached. As Scheibe, Skutsch and Schofer (1975) point out “one of the original objectives of Delphi was the identification of areas of difference as well as areas of

agreement within the participating group...use of this stability measure to develop a stopping criterion preserves any well-defined disagreements which may exist” (pp. 280-281).

### **Study Population**

It was projected that the Delphi panel would include a national sample of 12 to 15 (and not fewer than eight in any round) faculty professional development experts, who are knowledgeable about the theory and practice of faculty professional development in a research extensive university setting.

The list of 102 public research extensive universities was identified based on The 2000 Carnegie Classification of Institutions of Higher Education. This list was then matched against Professional and Organizational Development Network in Higher Education (POD) Membership Directory and Networking Guide for 2005. From this matching 70 public research extensive universities were identified as having formal faculty development programs. For purposes of this study 22 teaching and learning centers were chosen. The following criteria qualified teaching and learning centers for inclusion in the study: (1) existence of a centrally located unit (in a research extensive university setting) that has an administrative staff managed by a director; (2) number of years in existence; (3) geographical location (geographically dispersed locations); (4) a variety of faculty development programs (website information); and (5) professional referrals of a past president of the POD on recognizable teaching and learning centers in

public research extensive universities. The directors of these centers were identified. Each of the twenty two nominated panel members were professionally competent and actively involved in faculty development initiatives at the national level. All study participants—directors for teaching and learning centers—were contacted by email letters and given a description of the study. The researcher emphasized the importance of their contribution to the study as experts in faculty development initiatives. Fifteen of the twenty two nominated directors for teaching and learning centers agreed to participate in the study (Table 2). Fifteen experts from 14 U.S. states participated in all 4 rounds of the Delphi study.

**TABLE 2. Characteristics of the Delphi Experts (N=15).**

<b>Panel Members Characteristics</b>	<b>Number of Panel Members</b>
Directors for Teaching and Learning Centers	12
Associate Director	1
Interim Director	1
Assistant Director	1
Female	12
Male	3

## **Procedures**

Three individuals, qualifying for the pilot instrument review panel were contacted via email and in person. After they agreed to review the initial questionnaire, the draft survey instrument, developed after an extensive literature review, were emailed



to the three members of the instrument review panel. After the instrument review panel assessed the first questionnaire, changes were made as recommended by the instrument reviewers, and the questionnaire was sent out to the 15 identified faculty development experts—Delphi panel members, who had confirmed their commitment to participate in the study. The Delphi panel members were given an option to choose if they wanted to work with a hard copy of the instrument (mailed), or preferred an electronic copy sent via email. Two study participants selected the mail option. Thirteen study participants preferred email option.

The names of the respondents were known to the researcher but not to other panelists. According to Turoff and Hiltz (1996), the objective of anonymity is to allow the introduction and evaluation of ideas and concepts by removing some of the common biases normally occurring in the face-to-face group process. At the end of the study, permission was sought from each Delphi expert to publish his/her name in the dissertation. Fourteen panel members agreed to have their names published.

It was estimated that the Delphi panelists would need approximately 30-45 minutes to fill in each of the four questionnaires for this study. The time between survey rounds depended on the option chosen for survey completion (mail or email), on the agreed deadlines for response, as well as on the time needed for data analysis for each round. Initially, it was anticipated that three rounds would be made, each lasting approximately 6 weeks. The first round took the longest time due to the researcher's efforts to obtain the highest possible response rate. Simpson and Smith (1993) underline that communication with panel members throughout the Delphi study is essential to the

process. Reminder emails were sent to individual participants that had not responded within the initially agreed response timeframe. The Christmas vacation time may have also contributed to the delays in participants' responses. After receiving the first round questionnaire, one of the panel members raised some questions about what was being measured: faculty development programs at a research extensive university or faculty development programs in a teaching and learning center in a research extensive university. A clarification letter that included additional explanations of the purpose of the study was sent to all panel members who had not sent their filled-in questionnaires by that time. All 13 Delphi experts that chose the email option, emailed their questionnaires back as attachments to email letters for all four rounds. Two Delphi panel experts that chose the mail option, mailed their questionnaires back for all four rounds. The Delphi expert panel reached consensus or stability within four questionnaire rounds. The first round questionnaire concluded in approximately 8 weeks, the second round questionnaire concluded in approximately 7 weeks, the third round questionnaire concluded in approximately 4 weeks, and the fourth round questionnaire concluded in approximately 6 weeks (a total of 6 months and 3 weeks for conclusion of the questionnaire series).

### **Data Analysis**

Spreadsheets were used to enter the responses for each suggested essential faculty development program (both in its current and future essentiality), and each goal

and challenge to teaching and learning centers in a research extensive university. The results of each round were compiled and analyzed by descriptive statistics and then returned to each panel member to provide them with an opportunity to examine the results and compare their responses. In consecutive rounds, survey instruments were prepared individually to include the mean score and the standard deviation for the group for each variable and the rank assigned to each variable by the respective Delphi panel member. Once the questionnaire round comparisons were made, the Delphi panel members were asked to decide if they would like to keep or change their rank for each suggested essential faculty development program. Additionally, the panel members were asked to add new essential faculty development programs.

The qualitative data from participants' responses to the questions of identifying top goals and challenges for teaching and learning centers in a research extensive university were analyzed by grouping similar items together and providing one description for newly formed groups of items while preserving the original wording of the panel members to the maximum extent possible. Data were analyzed using the constant comparative method (Glasser & Strauss, 1967), refined later by Lincoln and Guba (1985) and adapted to the content analysis method, which includes unitizing data, categorization, and identifying patterns. Next, the Delphi panel experts were asked to rank the importance of each goal and to rank the perceived impact of each challenge to teaching and learning centers in a research extensive university on a 4-point Likert scales developed for ranking of these items. The wording for new items, as suggested by the panel members, with minor editing, was used in consecutive rounds.

### *Statistical Analysis*

The raw scores from participants' questionnaires for each round were entered into spreadsheets. SPSS 14.0 software was used to obtain frequencies, measures of central tendency, and standard deviation for the raw data set for each round. The "consensus means" for each suggested essential faculty development program (in its current and future essentiality) were calculated following the guidelines provided by Scheibe, Skutsch & Schofer (1975).

The Delphi panel members were assessing a total of 182 variables in the first round, 292 variables in the second round, 121 variables in the third round, and 30 variables in the fourth round. The third round questionnaire included the responses for all items as a result of the responses to the second round questionnaire but the panel members were asked to complete only those items where consensus was not reached. The fourth round questionnaire included only the variables where consensus had not been reached in previous rounds. The first round questionnaire had seven subsets of variables, which related to different program categories (1) consultations, (2) university-wide orientations, (3) university-wide workshops, (4) intensive programs, (5) grants, awards, and exchange programs; (6) resources and publications; and (7) other services. Additionally, each suggested essential faculty development program was ranked twice—both in terms of its current and future essentiality. The subsequent questionnaires (second, third and fourth rounds) included two additional subsets of variables for goals and challenges.

## **Human Subjects in Research**

The Institutional Review Board-Human Subjects in Research, Texas A&M University, reviewed and approved this research (Protocol Number 2005-0243). The following conditions were pertinent to the study:

- there was no relationship of the investigator with any or all of the research participants, other than the investigator role;
- the study did not use deception or coercion;
- there was no compensation for the study participants;
- there were no specific risks or benefits for the participants;
- there were no exclusions from participation due to gender or racial/ethnic origin.

Recruitment method included an invitation letter sent out by email to potential panel members. An invitation letter explained the topic to be examined, provided information about the Delphi method, explained the time it would require, and asked the individual to become a member of the panel.

An Information Sheet, specifying the details regarding participation commitment, was given to each study participant prior to the start of the research. For participants who chose to work with an electronic copy of the questionnaire (sent via email), the Information Sheet appeared as a first attachment to an email letter. For participants who chose to work with questionnaires on a hard (paper) copy, the Information Sheet was placed in the envelope in a way to appear first.

Primary research data were gathered through questionnaires (paper and email) completed by the directors for teaching and learning centers in selected research extensive universities. These questionnaires did not involve sensitive subjects but focused on questions about essential and model faculty development programs for teaching and learning centers in a research extensive university. Additionally, the study identified future faculty development programs essential to centers for teaching and learning. The study also explored the key goals and most important challenges for centers for teaching and learning in a research extensive university. Once essential programs were identified by the Delphi panel, they then identified model programs within each program category (fourth round).

#### *Human Subjects Protection*

Confidentiality of subject responses was ensured. For representation in consecutive questionnaires, data from the previous round was stripped from personal identifiers and aggregated for the panel of experts as a group. No individual was quoted, and there were no links between an individual and his/her responses. The methodology provided functional anonymity to individual respondents—i.e. none of the respondents knew the name or affiliated institution of other panelists. All information and data utilized for the needs of this project were confidential, i.e. all personal identifiers were removed and all events were discussed only after data congregation.

### *Inclusion of Women and Minorities*

The inclusion of women and minorities was determined by their representation on the Delphi panel. There was no provision for gathering race/ethnicity data in the questionnaire instrument, nor was this an objective of the study. The study was designed to work with the directors for teaching and learning centers in selected research extensive universities based on their expertise and experience, regardless of their gender or ethnicity.

### **Innovation**

This dissertation establishes a framework of essential faculty development programs for a teaching and learning center in a research extensive university. This study strives to expand in theoretically meaningful and practically applicable ways the existing knowledge in the area of faculty development.

## CHAPTER IV

### ANALYSIS OF DATA

#### **Introduction**

The Delphi method is an exercise in group communication among a panel of geographically dispersed experts. The technique allows experts to deal systematically with a complex problem or task. The essence of the technique comprises a series of questionnaires sent to a pre-selected group of experts. These questionnaires are designed to elicit and develop individual responses to the problems posed and to enable the experts to refine their views as the group's work progresses in accordance with the assigned task (Ziglio, 1996). The discovery of individual responses was done through the repetitive use of a questionnaire developed on the basis of an extensive literature review in the field of faculty development. The essentiality of faculty development programs (both current and future essentiality) for a teaching and learning center in a research extensive university was determined by calculating the mean for the Delphi panelists as a group. Based on a 4-point Likert-type scale, the ranks were from 1 to 4, where "1" presented a program that is **"unimportant and should not be included"**, "2" presented a program that may be **"helpful but not very important"**, "3" presented a program that is **"important but not essential"**, and "4" presented a program that is **"essential"** to teaching and learning centers in a research extensive university.



The Delphi panel members were given the opportunity to add new faculty development programs as deemed appropriate in the first questionnaire. The second round questionnaire contained all new programs as suggested by the panel members during the first round questionnaire.

The first round questionnaire included two open questions exploring the perceptions of the panel experts regarding which are (1) the top five goals for a teaching and learning center in a research extensive university, and (2) the top five challenges for a teaching and learning center in a research extensive university. The first open question returned 75 suggested goals which were grouped in 23 categories and returned to the panel members in a second round questionnaire for further discussion. The importance of goals for teaching and learning centers in a research extensive university was determined by calculating the mean for the Delphi panelists as a group. Based on a 4-point Likert-type scale, the ranks were from 1 to 4, where “1” presented a goal that is **“unimportant”**, “2” presented a goal that is **“not very important”**, “3” presented a goal that is **“important”**, and “4” presented a goal that is **“very important”** to teaching and learning centers in a research extensive university. The second open question returned 72 suggested challenges which were grouped in 23 categories and returned to panel members in a second round questionnaire for further discussion. The perceived impact of challenges to teaching and learning centers in a research extensive university was determined by calculating the mean for the Delphi panelists as a group. Based on a 4-point Likert scale, the ranks were from 1 to 4, where “1” presented a challenge with **“no impact”**, “2” presented a challenge with **“minimal impact”**, “3” presented a

challenge with “**moderate impact**”, and “4” presented a challenge with “**major impact**” on a teaching and learning center in a research extensive university.

According to Scheele (1975 as cited in Wilhelm, 2001), synthesis of the data should provide a feedback of the overall movement, countervailing forces, areas of convergence and divergence, and, in general, what is going on between and with individual items. Wilhelm (2001) states that frequency distributions based on panelists’ responses to specific items are necessary. Descriptive statistics of central tendency and variability were presented to the Delphi panel members in the consecutive rounds in an effort to approach consensus. On some of the questionnaire variables consensus was reached during the third round. All other items that elicited diverse opinions from the panelists and others that were being ranked for the third time were included in the fourth round questionnaire.

This chapter presents analyses of the study data based on the differences between the initial panel members’ group rank means and standard deviations from the beginning to the end of the study. The higher the mean score for the group (the closer the group ranks mean to “4”), the closer a faculty development program was to a category of “essential” program. The smaller the degree of standard deviation in ranking a particular faculty development program, the greater the degree of consensus among panel members regarding that particular item. The same data analytic procedures were applied to analyzing rankings for goals and challenges for a teaching and learning center in a research extensive university.

## **Dealing with Missing Data**

The Delphi panel members were assessing a total of 182 variables in the first round, 292 variables in the second round, 121 variables in the third round, and 30 variables in the fourth round. The first round questionnaire had 14 missing responses. The missing responses were random. Some of the panel members who were working with the electronic copies of the questionnaire clicked some choices several times, some panel members overlooked some items. In the consecutive rounds the researcher underlined the importance of clicking each item only once. The second round had 9 missing responses. These 9 panel members were additionally approached via email and their responses were added to the second round rankings. By the end of the second round one response was missing. The third and the fourth rounds had no missing responses. For the data analysis process the missing cell response received the mean score of the group.

## **Research Question One**

The first research question for this study was: “What are essential faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities?” To answer this question, The Delphi panel members were asked to (1) review suggested essential programs (in all seven program categories) for teaching and learning centers in a research extensive university (programs

that were derived from the literature); and (2) to add new essential programs that were not part of the original questionnaire. All essential programs ranked 3.50 or higher were considered to be “essential” to a teaching and learning center in a research extensive university.

#### *Criteria for Inclusion of Faculty Development Programs into Final Framework*

One of the purposes of this dissertation study was to identify essential and model faculty development programs that could serve as a framework for teaching and learning centers. This study created an essential faculty development programs framework for teaching and learning centers in research extensive universities to introduce, enhance and improve faculty development programs. The criteria for inclusion of faculty development programs in the essential faculty development programs framework were based on the 4-point Likert scale for ranking of the essentiality of the items in the Delphi questionnaires:

- Faculty development programs with a consensus group mean between **1.49** and **1.00** were considered “**unimportant and should not be included**” for teaching and learning centers in research extensive universities and were not included in the final essential faculty development framework.
- Faculty development programs with a consensus group mean between **1.50** and **2.49** were considered “**helpful but not very important**” for teaching and

learning centers in research extensive universities and were not included in the final essential faculty development framework.

- Faculty development programs with a consensus group mean between **2.50** and **3.49** were considered “**important but not essential**” for teaching and learning centers in research extensive universities and were not included in the final essential faculty development framework.
- Faculty development programs with a consensus group mean between **3.50** and **4.00** were considered “**essential**” for teaching and learning centers in research extensive universities and were included in the final essential faculty development framework.

#### *Program Category 1, Consultations*

The original questionnaire included 13 faculty development programs under Category 1, Consultations. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 3 presents the distribution of initial mean scores and standard deviations for the group as well as final consensus mean scores and standard deviations for the group.

**TABLE 3. Faculty Development Programs, Program Category 1, Consultations.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Consultations	<b>1.1.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.53	3.53	0.52	0.52
	<b>1.2.</b> consultation on enhancing teaching practices for individual faculty	4.00	4.00	0.00	0.00
	<b>1.3.</b> consultation on career goals and other personal questions for individual faculty	2.60	2.40	0.83	0.74
	<b>1.4.</b> consultations on ethical conduct and teacher-student relationships for individual faculty	3.20	3.13	0.68	0.52
	<b>1.5.</b> individual consultations for TAs	3.80	3.80	0.41	0.41
	<b>1.6.</b> mentoring services for TAs	2.87	2.87	0.74	0.64
	<b>1.7.</b> mentoring services for new faculty members	2.87	2.80	0.74	0.56
	<b>1.8.</b> pre-tenure review support for individual faculty	3.29	3.27	0.83	0.60
	<b>1.9.</b> post-tenure review support for individual faculty	3.13	3.13	0.74	0.64
	<b>1.10.</b> consultation on preparing teaching and course portfolios for individual faculty	3.36	3.27	0.50	0.60
	<b>1.11.</b> consultation with campus groups or departmental units on teaching related issues	3.93	3.93	0.26	0.26
	<b>1.12.</b> consulting with departments on TA programs	3.60	3.60	0.63	0.63

TABLE 3. Continued.

Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
	<b>1.13.</b> consultations for individual faculty and TAs involved in peer review of teaching programs	3.13	3.20	0.74	0.68
	<b>1.14.</b> consultations with individuals and university groups on educational grant proposals and teaching grants	2.80	2.87	0.56	0.35
	<b>1.15.</b> consultations with individuals and university groups on writing for scholarship of teaching and learning	3.00	2.93	0.65	0.59
	<b>1.16.</b> consultations for post-docs who have teaching responsibilities	3.13	3.13	0.83	0.64
	<b>1.17.</b> consultations for individual faculty on e-learning and integration of technology	3.13	3.00	0.74	0.53

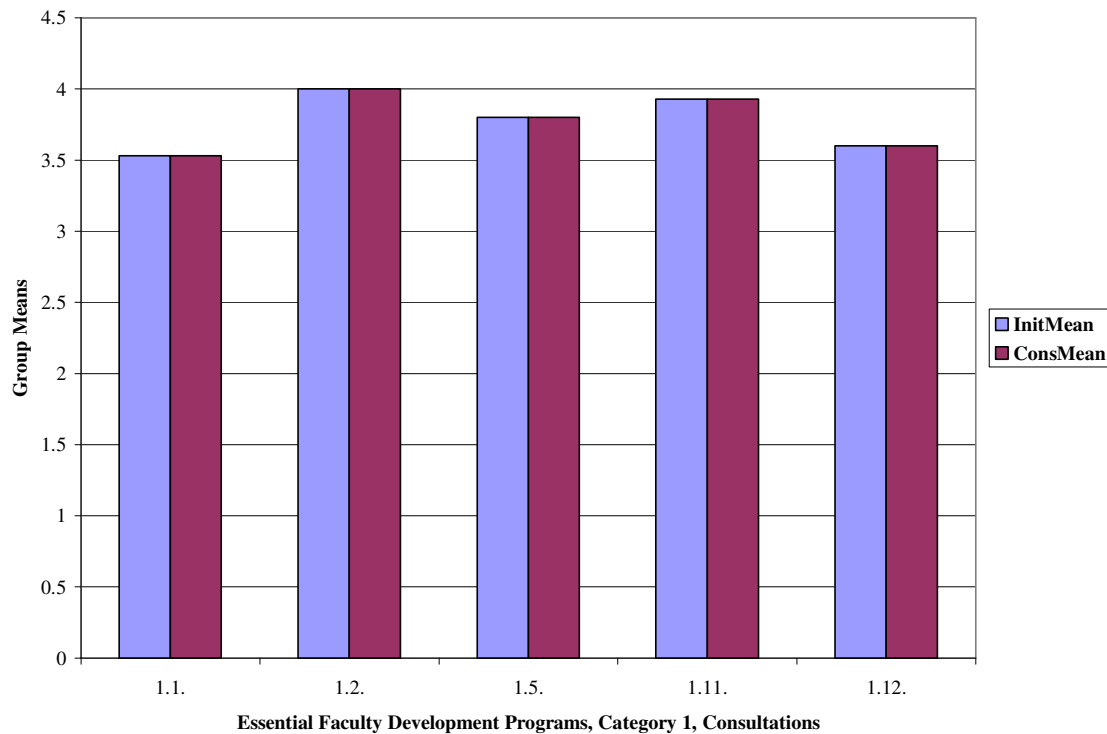
Five faculty development programs in Category 1, Consultations, were considered essential by the panel members. Table 4 presents five faculty development programs in Category 1, Consultations, that had consensus group rank 3.50 or higher (in descending order).

**TABLE 4. Essential Faculty Development Programs, Program Category 1, Consultations.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Consultations	<b>1.2.</b> consultation on enhancing teaching practices for individual faculty	4.00	0.00
	<b>1.11.</b> consultation with campus groups or departmental units on teaching related issues	3.93	0.26
	<b>1.5.</b> individual consultations for TAs	3.80	0.41
	<b>1.12.</b> consulting with departments on TA programs	3.60	0.63
	<b>1.1.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.53	0.52

For these five faculty development programs the group means did not change from round one to round three/or round four (Figure 1). Essential faculty development programs ranked high from the beginning of the study and kept high ranks till consensus was reached. The stability of the group mean across study rounds defines the panel perception that these programs are essential for teaching and learning centers in research extensive universities. The stability in the standard deviation for these items also indicates the stability of the panel agreement on the essentiality of these consultations. These findings follow the trends identified in the research literature on teaching and learning centers to the effect that individual consultations are one of the most effective modes of development and that creating a collaborative system of support is one of the principles of best practice for a center (Wright 2000; 2002).





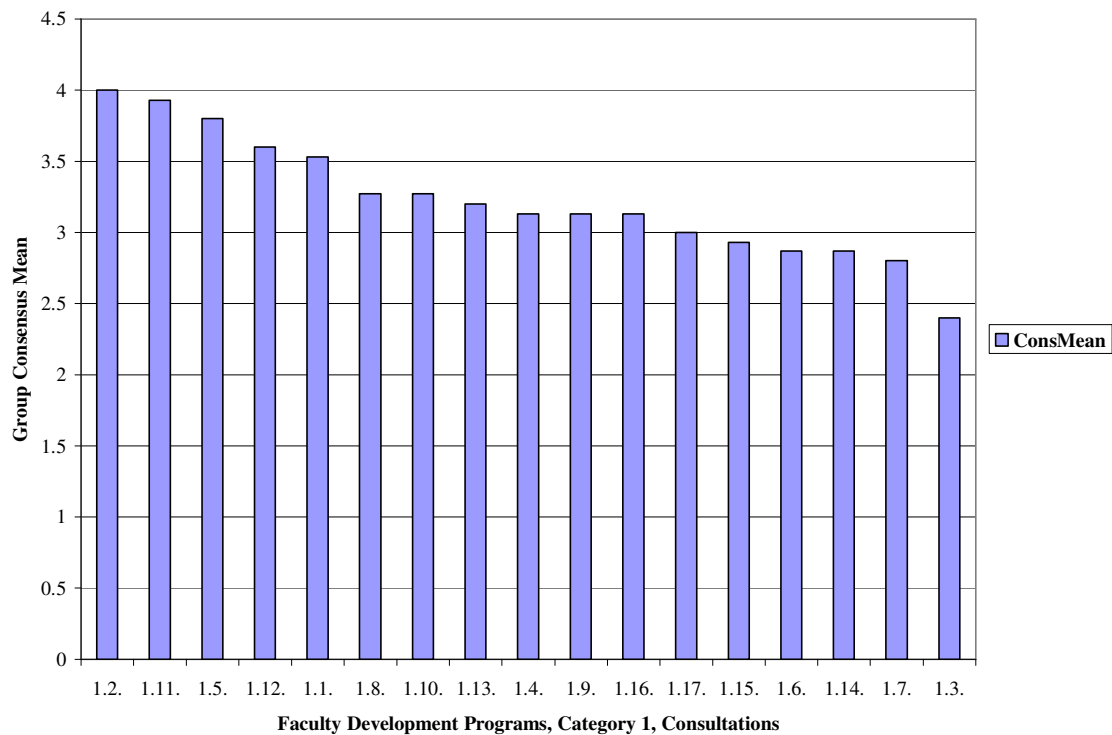
**FIGURE 1. Change in Group Means for Essential Faculty Development Programs, Program Category 1, Consultations: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered eleven faculty development programs in Category 1, Consultations, as “important but not essential” for a teaching and learning center. Table 5 presents eleven faculty development programs in Category 1, Consultations, that had consensus group mean between 2.50 and 3.49 (in descending order).

**TABLE 5. “Important but not Essential” Faculty Development Programs, Program Category 1, Consultations.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Consultations	<b>1.8.</b> pre-tenure review support for individual faculty	3.27	0.60
	<b>1.10.</b> consultation on preparing teaching and course portfolios for individual faculty	3.27	0.60
	<b>1.13.</b> consultations for individual faculty and TAs involved in peer review of teaching programs	3.20	0.68
	<b>1.4.</b> consultations on ethical conduct and teacher-student relationships for individual faculty	3.13	0.52
	<b>1.9.</b> post-tenure review support for individual faculty	3.13	0.64
	<b>1.16.</b> consultations for post-docs who have teaching responsibilities	3.13	0.64
	<b>1.17.</b> consultations for individual faculty on e-learning and integration of technology	3.00	0.53
	<b>1.15.</b> consultations with individuals and university groups on writing for scholarship of teaching and learning	2.93	0.59
	<b>1.6.</b> mentoring services for TAs	2.87	0.64
	<b>1.14.</b> consultations with individuals and university groups on educational grant proposals and teaching grants	2.87	0.35
	<b>1.7.</b> mentoring services for new faculty members	2.80	0.56

The Delphi panel members considered one faculty development program in Category 1, Consultations, as “helpful but not very important”. This program--1.3. consultations on career goals and other personal questions for individual faculty--yielded a consensus group mean of 2.40 and had a consensus standard deviation for the group 0.74. Figure 2 visually presents the distribution of group consensus means for faculty development programs in Category 1, Consultations.



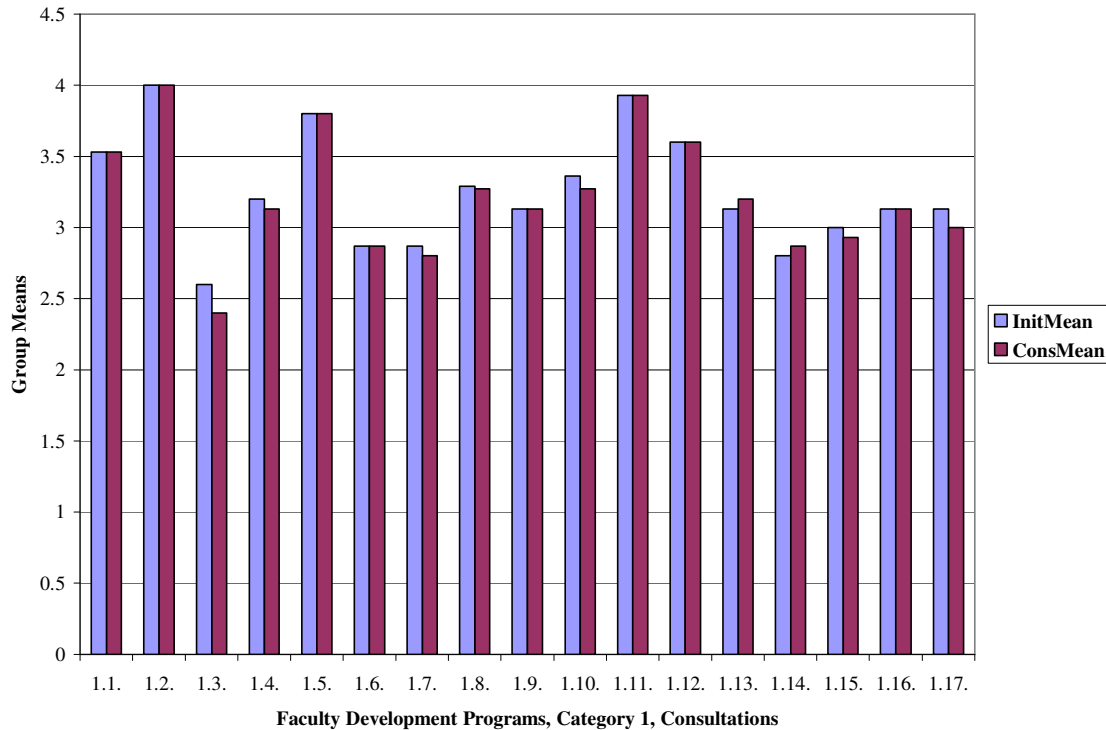
**FIGURE 2. The Distribution of Group Consensus Means for Faculty Development Programs, Program Category 1, Consultations.**

For the seven faculty development programs in Category 1, Consultations, the group means decreased from round one to round three (or round four depending on when consensus was reached). The Delphi panel members perceived the current essentiality of consultations on career goals and other personal questions for individual faculty, consultations on ethical conduct and teacher-student relationships for individual faculty, mentoring services for new faculty members, pre-tenure review support for individual faculty, consultation on preparing teaching and course portfolios for individual faculty, consultations with individuals and university groups on writing for scholarship of teaching and learning, and consultations for individual faculty on e-learning and integration of technology as less important at the end of the study than in the first round. Item 1.3., consultations on career goals and other personal questions for individual faculty, had a significant decrease in its group mean from 2.60 to 2.40. Thus by the end of the study, this type of consultation was classified as “helpful but not very important” for a teaching and learning center. The decrease of group means in the other six faculty development programs was slight. All of these faculty development programs except for one (consultation on preparing teaching and course portfolios for individual faculty) had a decrease in their standard deviations between the rounds. This confirms stabilization of the group opinion, i.e. the variability in the ranks distribution decreased.

For two faculty development programs in Category 1, Consultations, the group means increased from round one to round three/or round four. These programs are:

consultations for individual faculty and TAs involved in peer review of teaching programs; and consultations with individuals and university groups on educational grant proposals and teaching grants. Both of these programs had a decrease in their standard deviations.

For eight faculty development programs in Category 1, Consultations, the group means did not change from round one to consensus round. These programs include: classroom videotaping, observations, and critique of classroom instruction for individual faculty; consultation on enhancing teaching practices for individual faculty; individual consultations for TAs; mentoring services for TAs; post-tenure support for individual faculty; consultation with campus groups or departmental units on teaching related issues; consulting with departments on TA programs; and consultations for post-docs who have teaching responsibilities. Figure 3 visually presents the change in group means for faculty development programs in Category 1, Consultations, from initial mean to consensus mean.



**FIGURE 3. Change in Group Means for Faculty Development Programs in Program Category 1, Consultations: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

### *Program Category 2, University-wide Orientations*

The original questionnaire included four faculty development programs under Category 2, University-wide Orientations. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 6 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 6. Faculty Development Programs, Program Category 2, University-wide Orientations.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Orientations	<b>2.1.</b> organized, campus-wide programs for new TAs	3.60	3.67	0.51	0.49
	<b>2.2.</b> organized, campus-wide programs for international TAs	3.33	3.47	0.72	0.52
	<b>2.3.</b> organized, campus-wide programs for new faculty	3.60	3.60	0.63	0.63
	<b>2.4.</b> organized, campus-wide programs for new international faculty	3.07	Consensus not Reached	0.73	Consensus not Reached
	<b>2.5.</b> organized, campus-wide programs for part-time faculty	2.87	2.60	0.74	0.63
	<b>2.6.</b> organized, campus-wide programs for academic leaders (e.g., department chairs)	3.00	2.87	0.76	0.52
	<b>2.7.</b> organized, campus-wide programs for post-docs with teaching responsibilities	2.53	2.53	0.83	0.64
	<b>2.8.</b> organized, campus-wide programs for undergraduate students who serve as peer instructors	2.20	1.93	0.68	0.46

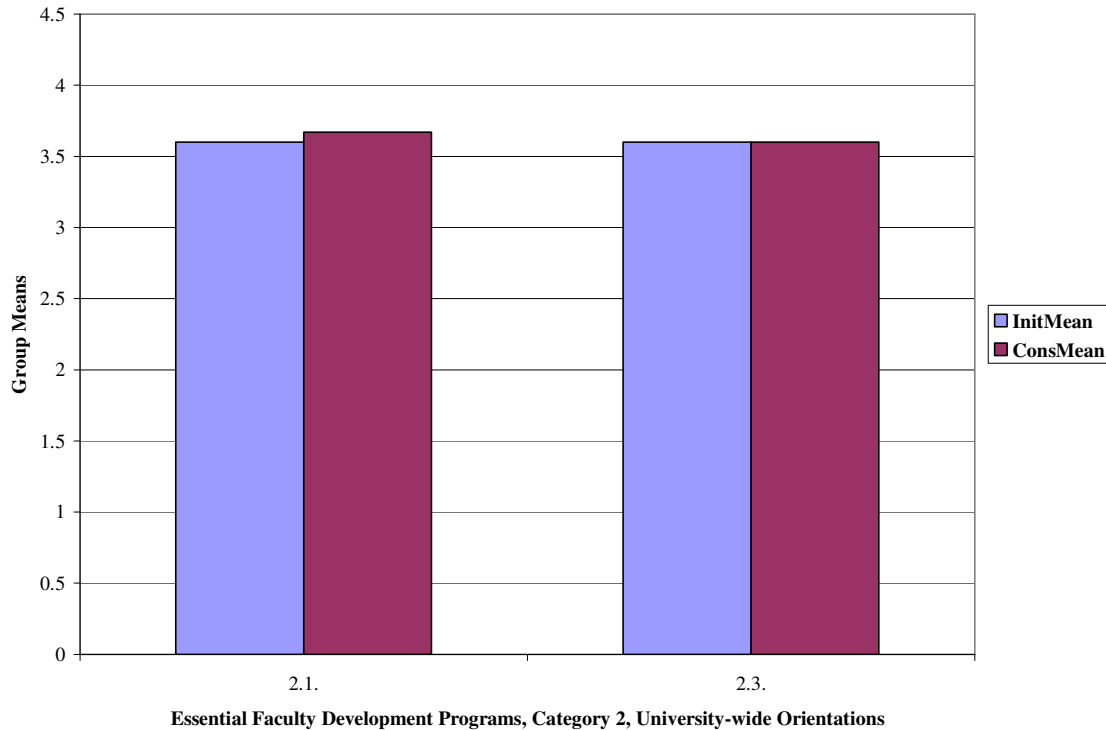
Two faculty development programs in Category 2, University-wide Orientations, were considered essential by the panel members. Table 7 presents two faculty development programs in Category 2, University-wide Orientations, that had consensus group rank 3.50 or higher (in descending order).

**TABLE 7. Essential Faculty Development Programs, Program Category 2, University-wide Orientations.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Orientations	<b>2.1.</b> organized, campus-wide programs for new TAs	3.67	0.49
	<b>2.3.</b> organized, campus-wide programs for new faculty	3.60	0.63

The group mean for item 2.1., organized, campus-wide programs for new TAs, slightly increased from round one to consensus round from 3.60 to 3.67 (Figure 4). The standard deviation decreased between the beginning and the end of the study from 0.51 to 0.49. The other essential program, 2.3., organized, campus-wide programs for new faculty, did not change its group mean and standard deviation across the study rounds. It was identified as essential early in the study and kept its group mean high as 3.60.





**FIGURE 4. Change in Group Means for Essential Faculty Development Programs, Program Category 2, University-wide Orientations: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered four faculty development programs in Category 2, University-wide Orientations, as “important but not essential” for a teaching and learning center. Table 8 presents four faculty development programs in Category 2, University-wide Orientations, that had consensus group mean between 2.50 and 3.49 (in descending order).

**TABLE 8. “Important but not Essential” Faculty Development Programs, Program Category 2, University-wide Orientations.**

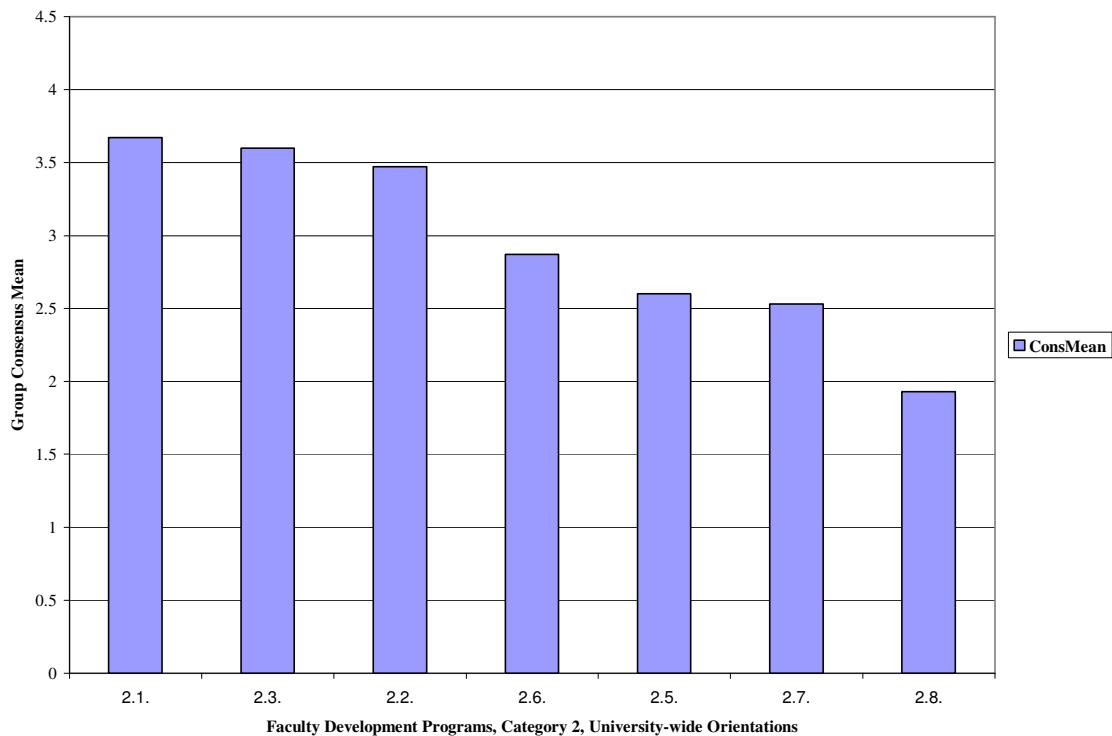
Program category	Program	Consensus Mean	Consensus SD
University-wide Orientations	2.2. organized, campus-wide programs for international TAs	3.47	0.52
	2.6. organized, campus-wide programs for academic leaders (e.g., department chairs)	2.87	0.52
	2.5. organized, campus-wide programs for part-time faculty	2.60	0.63
	2.7. organized, campus-wide programs for post-docs with teaching responsibilities	2.53	0.64

The Delphi panel members considered one faculty development program in Category 2, University-wide Orientations, as “helpful but not very important”. This program--2.8. organized, campus-wide programs for undergraduate students who serve as peer instructors--yielded a consensus group mean of 1.93 and a consensus group standard deviation of 0.46.

The Delphi panel members did not reach consensus for item 2.4., organized, campus-wide programs for new international faculty. Consensus on this item was not reached after three iterations, and it was concluded that consensus was not reached. Across the study rounds the group mean for this item had a significant decrease, from 3.07 at the beginning of the study to 2.80 at the end of the study. This item had a

significant decrease in its standard deviation as well, from 0.73 to 0.41. As Scheibe, Skutsch and Schofer (1975) point out “one of the original objectives of Delphi was the identification of areas of difference as well as areas of agreement within the participating group” (pp. 280). Not reaching the consensus, the Delphi panel members showed a well-defined disagreement over this item.

Figure 5 visually presents the distribution of group consensus means for faculty development programs in Category 2, University-wide Orientations:

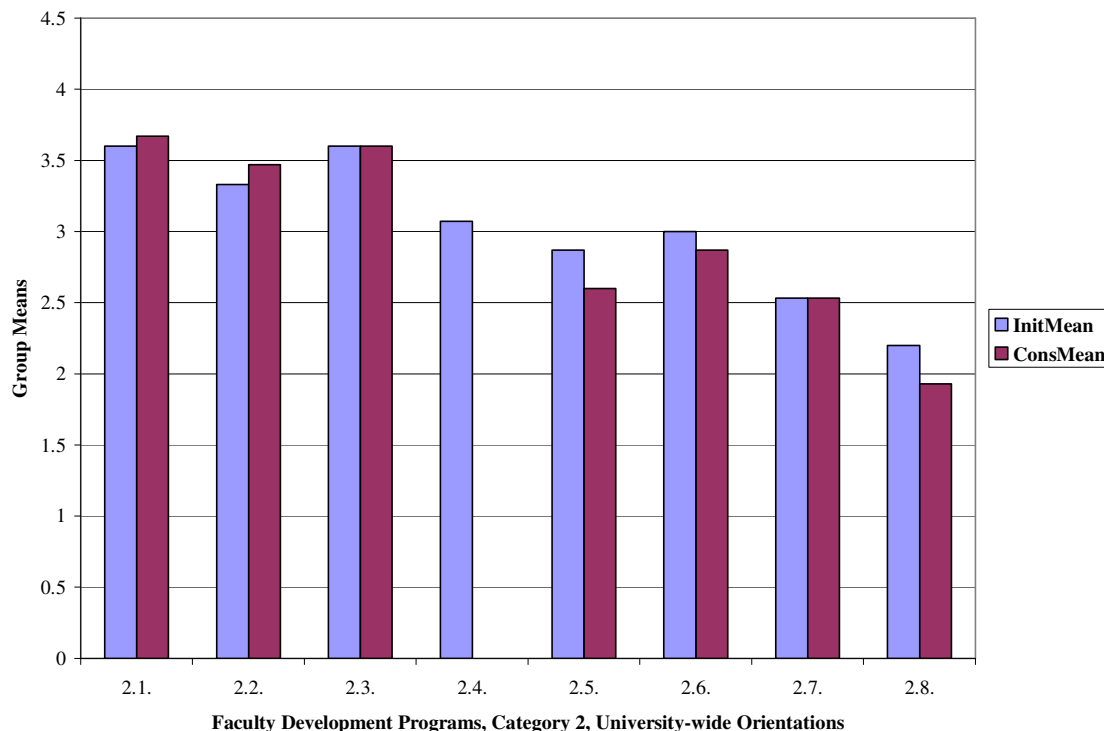


**FIGURE 5. The Distribution of Group Consensus Means for Faculty Development Programs, Program Category 2, University-wide Orientations.**

For the three faculty development programs in Category 2, University-wide Orientations, the group means decreased from initial round to consensus round. These programs are: organized, campus-wide programs for part-time faculty; organized, campus-wide programs for academic leaders (e.g., department chairs); and organized, campus-wide programs for undergraduate students who serve as peer instructors. All three programs had substantial decreases in their standard deviations, from 0.74 to 0.63, from 0.76 to 0.52, and from 0.68 to 0.46 respectively.

The faculty development program 2.2., organized, campus-wide programs for international TAs, slightly increased its group mean from the beginning to the end of the study (from 3.33 to 3.47), and decreased its standard deviation from 0.72 to 0.52 which measures the tightened variability in the assigned ranks.

One faculty development program, 2.7., organized campus-wide programs for post-docs with teaching responsibilities, did not change its group mean across the study rounds. Figure 6 visually presents the change in group means for faculty development programs in Category 2, University-wide Workshops, from initial mean to consensus mean.



**FIGURE 6. Change in Group Means for Faculty Development Programs, Program Category 2, University-wide Orientations: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

### *Program Category 3, University-wide Workshops*

The original questionnaire included thirty eight faculty development programs under Category 3, University-wide Workshops. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 9 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 9. Faculty Development Programs, Program Category 3, University-wide Workshops.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.1.</b> enhancing teaching strategies	3.80	3.87	0.41	0.35
	<b>3.2.</b> course and syllabus design	3.80	3.80	0.41	0.41
	<b>3.3.</b> testing, test construction and evaluating student performance	3.47	3.67	0.83	0.49
	<b>3.4.</b> developing effective writing assignments	3.40	3.47	0.74	0.64
	<b>3.5.</b> assessing student learning outcomes	3.73	3.80	0.59	0.41
	<b>3.6.</b> academic advising and counseling skills	2.20	2.13	0.56	0.52
	<b>3.7.</b> understanding college students (learning styles, developmental patterns, diversity)	3.40	3.40	0.63	0.51
	<b>3.8.</b> strengthening research skills/scholarly writing for publication; developing skills in graphics and publications	2.67	Consensus Not Reached	1.11	Consensus Not Reached
	<b>3.9.</b> chairing a department; improving the management of departmental operations	2.47	2.33	0.74	0.62
	<b>3.10.</b> personal development (improving interpersonal skills, career planning, etc.)	2.07	2.00	0.80	0.76
	<b>3.11.</b> multicultural teaching and learning; infusing multiculturalism into a course	3.40	3.33	0.74	0.72
	<b>3.12.</b> application of instructional technology; teaching with technology; using various multimedia software	3.33	3.33	0.62	0.62

TABLE 9. Continued.

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.13.</b> teaching in online and distance environments	2.80	2.80	0.68	0.68
	<b>3.14.</b> developing course and teaching portfolios	3.21	3.13	0.70	0.52
	<b>3.15.</b> ESL programs for international TAs	2.40	Consensus Not Reached	1.06	Consensus Not Reached
	<b>3.16.</b> college teaching for TAs	3.53	3.53	0.64	0.64
	<b>3.17.</b> developing teaching strategies and methods of active and cooperative learning	3.87	3.87	0.35	0.35
	<b>3.18.</b> balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles	2.93	3.00	0.46	0.38
	<b>3.19.</b> writing grant proposals and reports	2.20	2.07	0.86	0.80
	<b>3.20.</b> teaching for student-centered learning	3.80	3.87	0.41	0.35
	<b>3.21.</b> acclimating new faculty to the culture of the institution	3.00	3.00	1.04	0.76
	<b>3.22.</b> writing across the curriculum	2.67	2.67	1.05	0.82
	<b>3.23.</b> teaching underprepared students	2.93	2.87	0.96	0.74
	<b>3.24.</b> teaching adult learners	2.60	2.47	0.83	0.52
	<b>3.25.</b> community-service learning	2.93	2.93	0.80	0.70
	<b>3.26.</b> pre-tenure review process	2.60	2.47	0.99	0.83
<b>3.27.</b> post-tenure review process	2.47	2.47	0.99	0.83	

TABLE 9. Continued.

Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
University-wide Workshops	<b>3.28.</b> course and curricular reform	3.27	3.27	0.70	0.60
	<b>3.29.</b> general education reform	2.53	2.73	0.83	0.60
	<b>3.30.</b> part-time/adjunct faculty development	3.07	3.13	0.96	0.83
	<b>3.31.</b> midcareer faculty renewal strategies	2.87	2.67	0.64	0.62
	<b>3.32.</b> enhancing senior faculty careers	2.80	2.60	0.56	0.51
	<b>3.33.</b> developing leadership and management skills	2.20	2.07	0.56	0.46
	<b>3.34.</b> faculty roles in learning communities	2.73	2.73	0.70	0.70
	<b>3.35.</b> engaging in small group processes	3.29	3.27	0.73	0.60
	<b>3.36.</b> developing faculty in the scholarship of teaching	3.33	3.40	0.82	0.63
	<b>3.37.</b> teaching large classes	3.73	3.80	0.46	0.41
	<b>3.38.</b> peer review as a form of assessment; training faculty and TAs in the peer review process	3.07	3.20	0.88	0.68
	<b>3.39.</b> learning and teaching styles	3.13	3.07	0.64	0.46
	<b>3.40.</b> critical thinking and inquiry	3.47	3.40	0.64	0.51
	<b>3.41.</b> library connections to teaching and learning	2.67	2.67	0.82	0.62
<b>3.42.</b> student e-portfolio development	2.33	2.13	0.62	0.52	



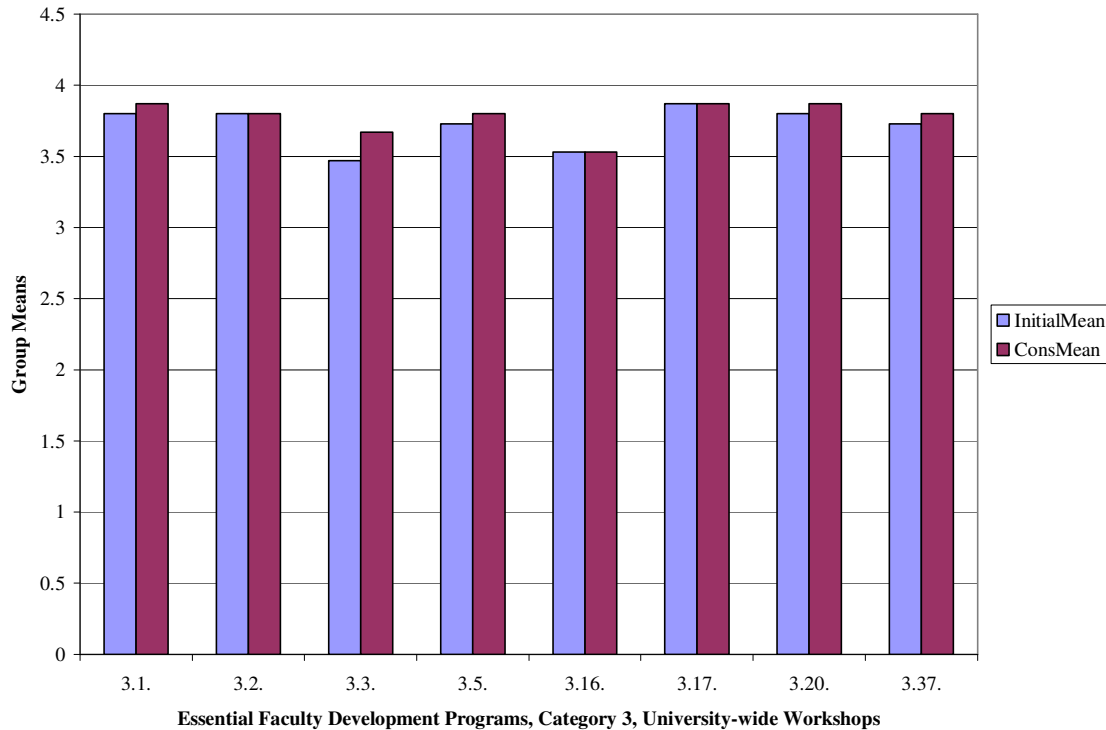
Eight faculty development programs in Category 3, University-wide Workshops, were considered essential by the panel members. Table 10 presents eight faculty development programs in Category 3, University-wide Workshops, that had consensus group rank 3.50 or higher (in descending order).

**TABLE 10. Essential Faculty Development Programs, Program Category 3, University-wide Workshops.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.1.</b> enhancing teaching strategies	3.87	0.35
	<b>3.17.</b> developing teaching strategies and methods of active and cooperative learning	3.87	0.35
	<b>3.20.</b> teaching for student-centered learning	3.87	0.35
	<b>3.2.</b> course and syllabus design	3.80	0.41
	<b>3.5.</b> assessing student learning outcomes	3.80	0.41
	<b>3.37.</b> teaching large classes	3.80	0.41
	<b>3.3.</b> testing, test construction and evaluating student performance	3.67	0.49
	<b>3.16.</b> college teaching for TAs	3.53	0.64

The identified essential faculty development programs in Category 3, University-wide Workshops, reflect some of the most important topics discussed in the current literature on faculty development. The research literature underscores the shifts on campus from faculty teaching to student learning with emphasis on active learning and assessment of learning outcomes (Barr & Tagg, 1995; Levine, 2001).

Three essential faculty development programs in Category 3, University-wide Workshops--course and syllabus design; college teaching for TAs; and developing teaching strategies and methods of active and cooperative learning--did not change their group means throughout the Delphi process (Figure 7). There was no change in standard deviations for these programs as well. The group means for five essential faculty development programs-- enhancing teaching strategies; testing, test construction and evaluating student performance; assessing student learning outcomes; teaching for student-centered learning; teaching large classes--increased their group means throughout the Delphi study. For all five of these programs there was a decrease in standard deviations, and for one program--testing, test construction and evaluating student performance--this decrease was dramatic, from 0.83 to 0.49.



**FIGURE 7. Change in Group Means for Essential Faculty Development Programs, Program Category 3, University-wide Workshops: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered twenty three faculty development programs in Category 3, University-wide Workshops, as “important but not essential” for teaching and learning centers in research extensive universities. Table 11 presents twenty three faculty development programs in Category 3, University-wide Workshops, that had consensus group mean between 2.50 and 3.49 (in descending order).

**TABLE 11. “Important but not Essential” Faculty Development Programs, Program Category 3, University-wide Workshops.**

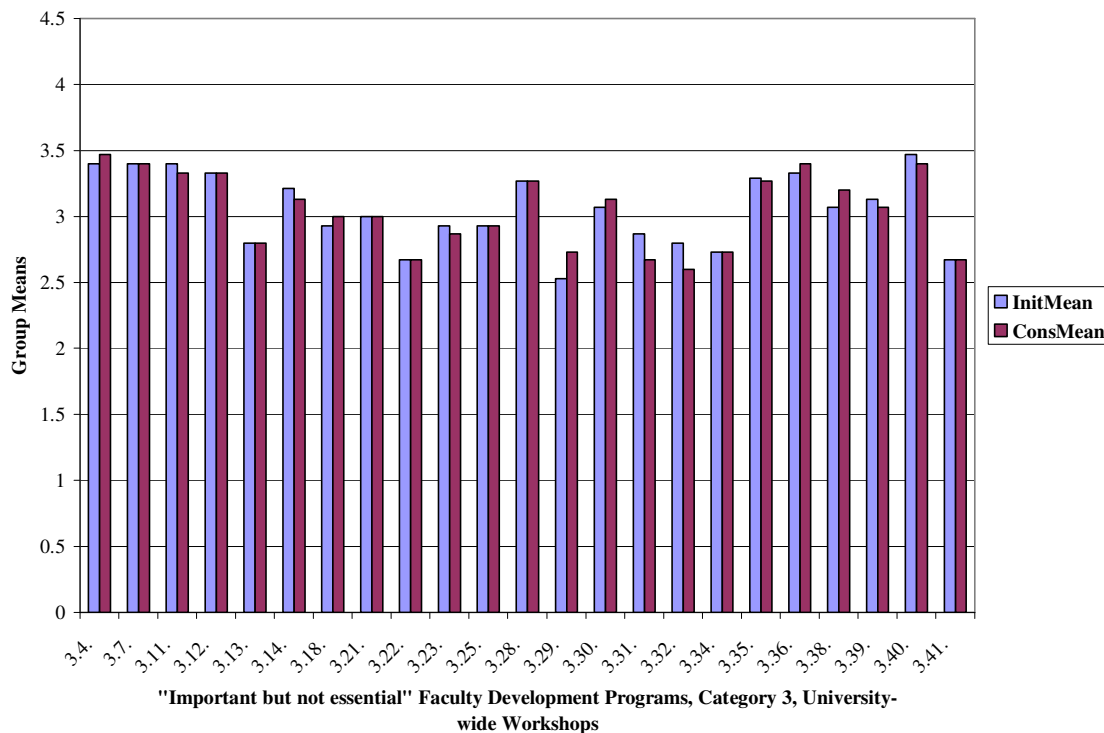
<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.4.</b> developing effective writing assignments	3.47	0.64
	<b>3.7.</b> understanding college students (learning styles, developmental patterns, diversity)	3.40	0.51
	<b>3.36.</b> developing faculty in the scholarship of teaching	3.40	0.63
	<b>3.40.</b> critical thinking and inquiry	3.40	0.51
	<b>3.11.</b> multicultural teaching and learning; infusing multiculturalism into a course	3.33	0.72
	<b>3.12.</b> application of instructional technology; teaching with technology; using various multimedia software	3.33	0.62
	<b>3.28.</b> course and curricular reform	3.27	0.60
	<b>3.35.</b> engaging in small group processes	3.27	0.60
	<b>3.38.</b> peer review as a form of assessment; training faculty and TAs in the peer review process	3.20	0.68
	<b>3.30.</b> part-time/adjunct faculty development	3.13	0.83
	<b>3.14.</b> developing course and teaching portfolios	3.13	0.52
	<b>3.39.</b> learning and teaching styles	3.07	0.46
<b>3.18.</b> balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles	3.00	0.38	

TABLE 11. Continued.

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.21.</b> acclimating new faculty to the culture of the institution	3.00	0.76
	<b>3.25.</b> community-service learning	2.93	0.70
	<b>3.23.</b> teaching underprepared students	2.87	0.74
	<b>3.13.</b> teaching in online and distance environments	2.80	0.68
	<b>3.29.</b> general education reform	2.73	0.60
	<b>3.34.</b> faculty roles in learning communities	2.73	0.70
	<b>3.22.</b> writing across the curriculum	2.67	0.82
	<b>3.31.</b> midcareer faculty renewal strategies	2.67	0.62
	<b>3.41.</b> library connections to teaching and learning	2.67	0.62
	<b>3.32.</b> enhancing senior faculty careers	2.60	0.51

Nine faculty development programs out of 23 that were considered “important but not essential” did not change their group mean throughout the Delphi process. Six faculty development programs increased their group means and eight faculty development programs decreased their group means throughout the Delphi study. Most of the standard deviations (for twenty faculty development programs out of 23) decreased from the beginning to the end of the study. Three faculty development

programs did not change their standard deviations throughout the Delphi study (Figure 8).



**FIGURE 8. Change in Group Means for “Important but not Essential” Faculty Development Programs, Program Category 3, University-wide Workshops: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered nine faculty development programs in Category 3, University-wide Workshops, as “helpful but not very important” for teaching and learning centers in research extensive universities. Table 12 presents nine

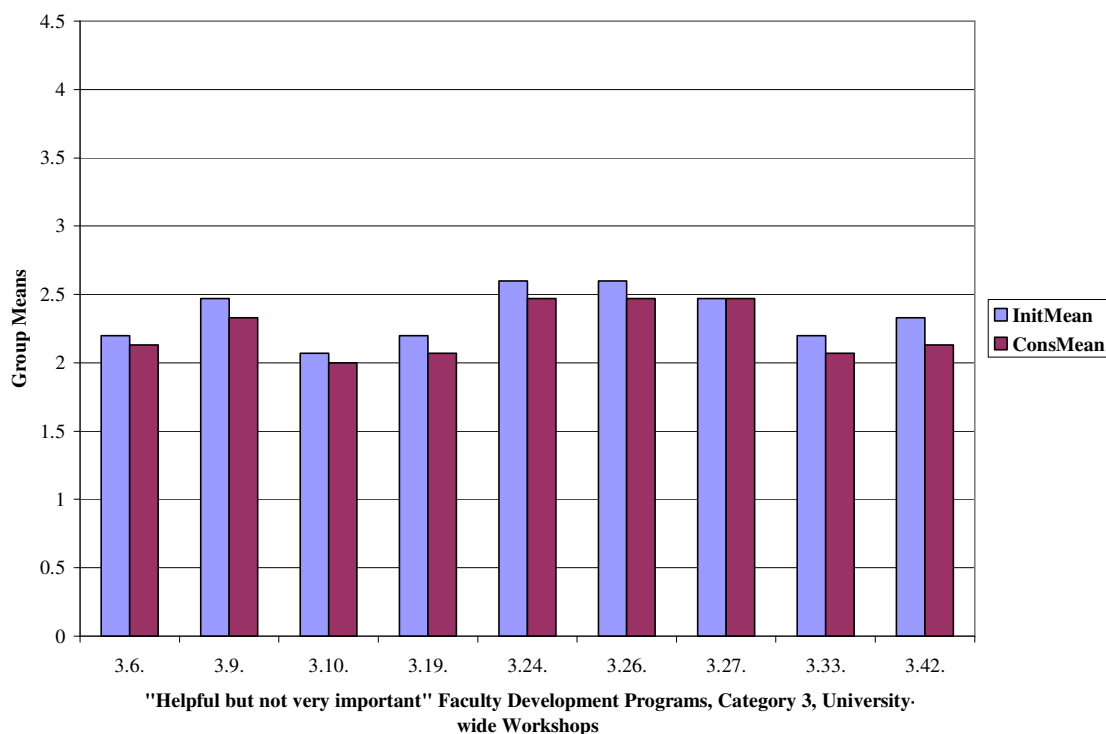
faculty development programs in Category 3, University-wide Workshops, that had consensus group mean between 1.50 and 2.49 (in descending order).

**TABLE 12. “Helpful but not Very Important” Faculty Development Programs, Program Category 3, University-wide Workshops.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.24.</b> teaching adult learners	2.47	0.52
	<b>3.26.</b> pre-tenure review process	2.47	0.83
	<b>3.27.</b> post-tenure review process	2.47	0.83
	<b>3.9.</b> chairing a department; improving the management of departmental operations	2.33	0.62
	<b>3.6.</b> academic advising and counseling skills	2.13	0.52
	<b>3.42.</b> student e-portfolio development	2.13	0.52
	<b>3.19.</b> writing grant proposals and reports	2.07	0.80
	<b>3.33.</b> developing leadership and management skills	2.07	0.46
	<b>3.10.</b> personal development (improving interpersonal skills, career planning, etc.)	2.00	0.76

Eight faculty development programs out of 9 that were considered “helpful but not very important” decreased their group means with consecutive study rounds (Figure 9). One faculty development program--post-tenure review process--retained its group

mean rank throughout the study. For all nine of these programs there was a decrease in standard deviations, and for one program--teaching adult learners--this decrease was dramatic from 0.83 to 0.52.



**FIGURE 9. Change in Group Means for “Helpful but not Very Important” Faculty Development Programs, Program Category 3, University-wide Workshops: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members did not reach consensus for two items in Program Category 3, University-wide Workshops:



- strengthening research skills/scholarly writing for publication; developing skills in graphics and publication; and
- ESL programs for international TAs.

Consensus on these items was not reached after three iterations, and it was concluded that consensus was not reached. The group means for both of these programs decreased dramatically from 2.67 to 2.07 and from 2.40 to 2.13 respectively with consecutive study rounds. There was also a dramatic decrease in the standard deviations for these items: from 1.11 to 0.59 and from 1.06 to 0.52 respectively from the beginning to the end of the study.

#### *Program Category 4, Intensive Programs*

The original questionnaire included eleven faculty development programs under Category 4, Intensive Programs. Two new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 13 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 13. Faculty Development Programs, Program Category 4, Intensive Programs.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Intensive Programs	<b>4.1.</b> preparing future faculty programs	2.93	3.00	0.80	0.76
	<b>4.2.</b> college teaching courses (weekly, or several times a year)	3.00	3.07	0.66	0.46
	<b>4.3.</b> 2-3 days conference on learning and teaching	3.00	3.13	0.85	0.52
	<b>4.4.</b> teaching and learning institutes	2.93	2.80	0.80	0.56
	<b>4.5.</b> faculty learning communities	3.13	3.07	0.74	0.60
	<b>4.6.</b> general interest discussion groups on teaching	2.60	2.67	0.74	0.62
	<b>4.7.</b> special-interest group discussion	2.73	2.80	0.60	0.56
	<b>4.8.</b> breakfast/luncheon groups (social gatherings)	2.00	1.93	0.66	0.46
	<b>4.9.</b> book/reading groups	2.60	2.53	0.51	0.52
	<b>4.10.</b> teaching fellow programs	2.80	2.87	0.68	0.64
	<b>4.11.</b> peer review on teaching programs	2.93	2.87	0.59	0.52
	<b>4.12.</b> Symposium on Teaching with Technology	2.73	2.73	0.80	0.80
	<b>4.13.</b> faculty learning communities on scholarship of teaching and learning	2.87	2.80	0.74	0.56

None of the faculty development programs in Category 4, Intensive Programs, were considered “essential” by the Delphi panel members.

The Delphi panel members considered twelve faculty development programs in Category 4, Intensive Programs, as “important but not essential” for teaching and learning centers in research extensive universities. Table 14 presents twelve faculty development programs in Category 4, Intensive programs, that had consensus group mean between 2.50 and 3.49 (in descending order).

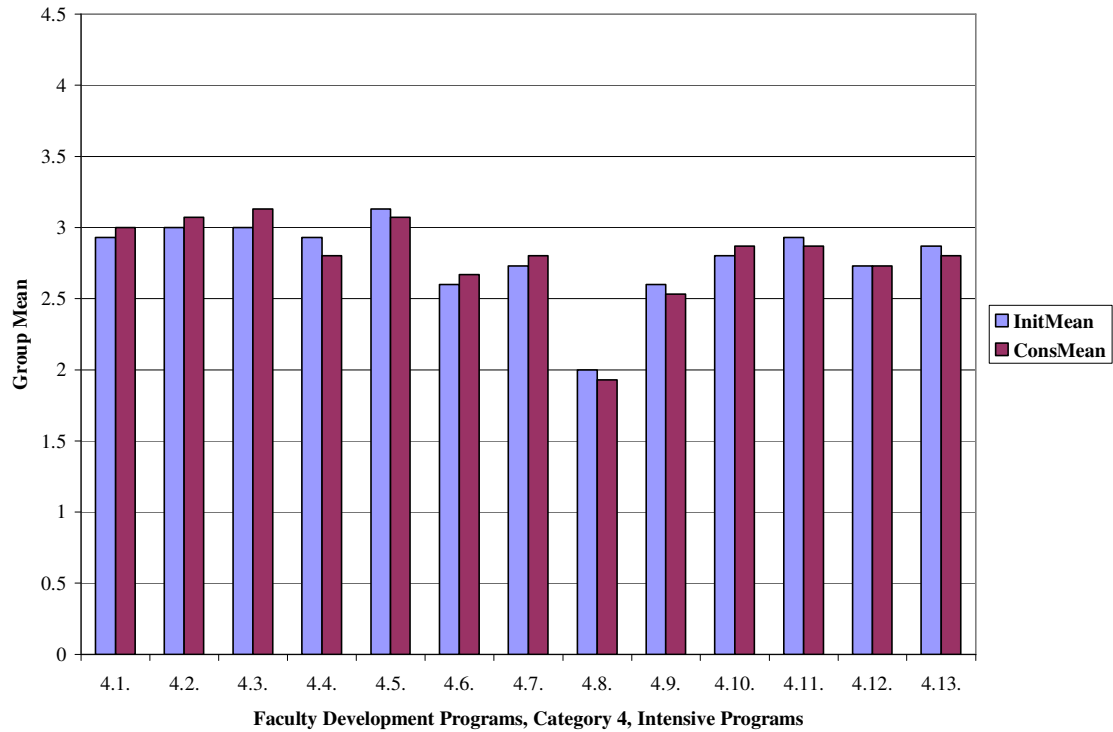
**TABLE 14. “Important but not Essential” Faculty Development Programs, Program Category 4, Intensive Programs.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Intensive Programs	<b>4.3.</b> 2-3 days conference on learning and teaching	3.13	0.52
	<b>4.2.</b> college teaching courses (weekly, or several times a year)	3.07	0.46
	<b>4.5.</b> faculty learning communities	3.07	0.60
	<b>4.1.</b> preparing future faculty programs	3.00	0.76
	<b>4.10.</b> teaching fellow programs	2.87	0.64
	<b>4.11.</b> peer review on teaching programs	2.87	0.52
	<b>4.4.</b> teaching and learning institutes	2.80	0.56
	<b>4.7.</b> special-interest group discussion	2.80	0.56
	<b>4.13.</b> faculty learning communities on scholarship of teaching and learning	2.80	0.56

TABLE 14. Continued.

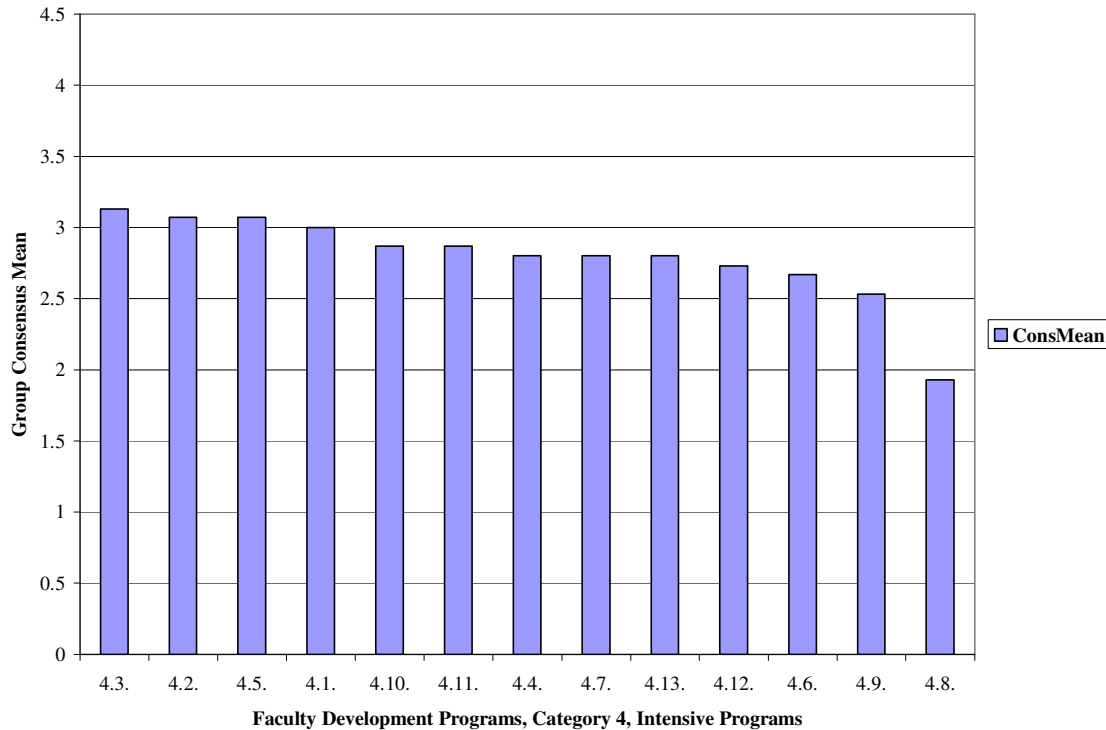
<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Intensive Programs	<b>4.12.</b> Symposium on Teaching with Technology	2.73	0.80
	<b>4.6.</b> general interest discussion groups on teaching	2.67	0.62
	<b>4.9.</b> book/reading groups	2.53	0.52

The Delphi panel members considered one faculty development program--breakfast/luncheon groups (social gatherings)--in Category 4, Intensive Programs, as “helpful but not very important” for teaching and learning centers in research extensive universities. This faculty development program had the consensus group mean of 1.93 which falls between 1.50 and 2.49. Six of the 13 faculty development programs in Category 4, Intensive Programs, slightly increased their group means from the beginning to the end of the study (Figure 10). Six other faculty development programs in this category slightly decreased their group means throughout the Delphi process. There was no change in group rank means as well as the standard deviation for one program--Symposium on Teaching with Technology--from the beginning to the end of the study. Most of the standard deviations for the faculty development programs in Category 4, Intensive Programs, decreased throughout the Delphi process (for eleven out of 13 programs). There was a slight increase in the standard deviation from 0.51 to 0.52 for one faculty development program on book/reading groups.



**FIGURE 10. Change in Group Means for Faculty Development Programs, Program Category 4, Intensive Programs: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

Figure 11 visually presents the distribution of group consensus means for faculty development programs in Category 4, Intensive Programs:



**FIGURE 11. The Distribution of Group Consensus Means for Faculty Development Programs, Program Category 4, Intensive Programs.**

*Program Category 5, Grants, Awards, and Exchange Programs*

The original questionnaire included twelve faculty development programs under Category 5, Grants, Awards, and Exchange Programs. Three new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 15 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 15. Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Grants, Awards, and Exchange Programs	<b>5.1.</b> grants for faculty members developing new or improved instructional approaches/course redesign grants	3.07	3.13	0.96	0.52
	<b>5.2.</b> grants for <i>new</i> faculty members developing new or improved instructional approaches	2.87	2.80	0.83	0.77
	<b>5.3.</b> grants for enhancing teaching with technology	3.07	3.13	0.96	0.83
	<b>5.4.</b> grants for multicultural projects	2.93	3.00	0.88	0.85
	<b>5.5.</b> research funds/grants to pursue scholarly interests	2.27	2.07	1.03	0.88
	<b>5.6.</b> institutional awards/honors for teaching excellence	3.33	3.33	0.49	0.49
	<b>5.7.</b> grants for academic opportunities in international settings/foreign exchange programs	1.93	1.87	0.80	0.64
	<b>5.8.</b> faculty exchange programs with other institutions	2.00	1.87	0.54	0.52
	<b>5.9.</b> travel funds/grants to attend professional conferences in the discipline/field	2.07	1.93	0.80	0.70
	<b>5.10.</b> travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings	2.80	2.60	0.68	0.51
	<b>5.11.</b> travel funds to attend conferences/programs to enhance teaching skills	3.00	2.87	0.93	0.64
	<b>5.12.</b> summer grants for projects to improve instruction of courses	3.13	3.00	0.92	0.85

TABLE 15. Continued.

Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Grants, Awards, and Exchange Programs	<b>5.13.</b> distinguished TAs awards	3.00	3.13	0.93	0.74
	<b>5.14.</b> grants awarded to departments to support development of departmental teaching programs for TAs	2.87	2.73	0.74	0.59
	<b>5.15.</b> grants awarded to individual faculty members participating in faculty learning communities	2.60	2.47	0.91	0.64

None of the faculty development programs in Category 5, Grants, Awards, and Exchange Programs, were considered “essential” by the Delphi panel members.

The Delphi panel members considered ten faculty development programs in Category 5, Grants, Awards, and Exchange Programs, as “important but not essential” for teaching and learning centers in research extensive universities. Table 16 presents ten faculty development programs in Category 5, Grants, Awards, and Exchange Programs, that had consensus group mean between 2.50 and 3.49 (in descending order).

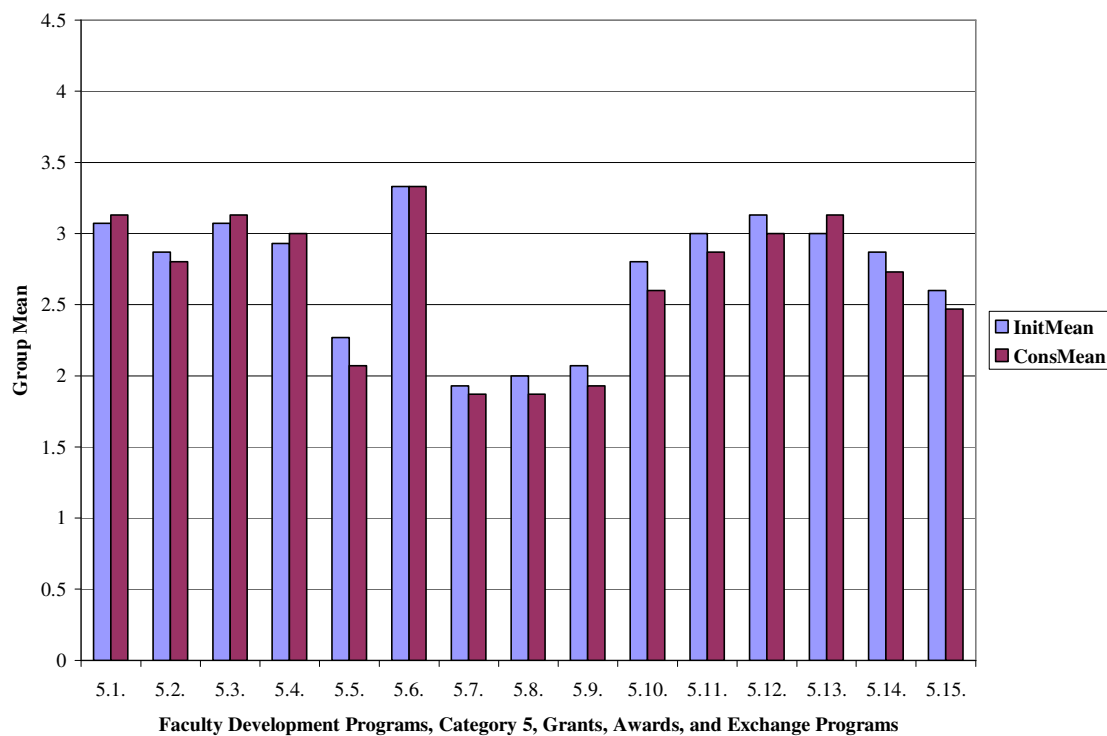


**TABLE 16. “Important but not Essential” Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Grants, Awards, and Exchange Programs	<b>5.6.</b> institutional awards/honors for teaching excellence	3.33	0.49
	<b>5.1.</b> grants for faculty members developing new or improved instructional approaches/course redesign grants	3.13	0.52
	<b>5.3.</b> grants for enhancing teaching with technology	3.13	0.83
	<b>5.13.</b> distinguished TAs awards	3.13	0.74
	<b>5.4.</b> grants for multicultural projects	3.00	0.85
	<b>5.12.</b> summer grants for projects to improve instruction of courses	3.00	0.85
	<b>5.11.</b> travel funds to attend conferences/programs to enhance teaching skills	2.87	0.64
	<b>5.2.</b> grants for <i>new</i> faculty members developing new or improved instructional approaches	2.80	0.77
	<b>5.14.</b> grants awarded to departments to support development of departmental teaching programs for TAs	2.73	0.59
<b>5.10.</b> travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings	2.60	0.51	

For four of the 10 programs that were considered “important but not essential” there was an increase in group means throughout the Delphi study (Figure 12). Five faculty development programs of these 10 decreased their group means; and one program retained its group mean from the beginning to the end of the study. For all of these programs there was a decrease in the standard deviations; and for two programs-- grants for faculty members developing new or improved instructional approaches/course redesign grants; and travel funds to attend conferences/programs to enhance teaching skills--there were dramatic decreases from 0.96 to 0.52 and from 0.93 to 0.64 respectively.

The Delphi panel members considered five faculty development programs in Category 5, Grants, Awards, and Exchange Programs, as “helpful but not very important” for teaching and learning centers in research extensive universities. Table 17 presents five faculty development programs in Category 5, Grants, Awards, and Exchange Programs, that had consensus group mean between 1.50 and 2.49 (in descending order).



**FIGURE 12. Change in Group Means for Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

**TABLE 17. “Helpful but not Very Important” Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

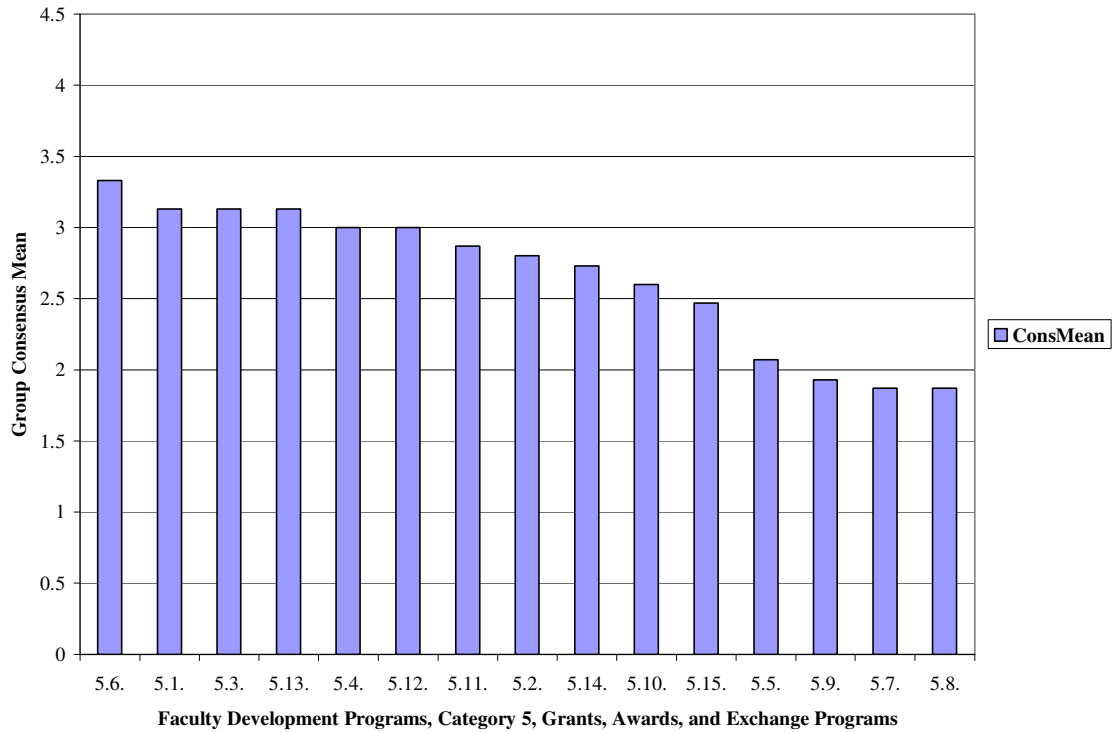
Program category	Program	Consensus Mean	Consensus SD
Grants, Awards, and Exchange Programs	<b>5.15.</b> grants awarded to individual faculty members participating in faculty learning communities	2.47	0.64
	<b>5.5.</b> research funds/grants to pursue scholarly interests	2.07	0.88
	<b>5.9.</b> travel funds/grants to attend professional conferences in the discipline/field	1.93	0.70

**TABLE 17. Continued.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Grants, Awards, and Exchange Programs	<b>5.7.</b> grants for academic opportunities in international settings/foreign exchange programs	1.87	0.64
	<b>5.8.</b> faculty exchange programs with other institutions	1.87	0.52

All five of the faculty development programs that were considered “helpful but not important” decreased their group means with consecutive study rounds (Figure 12). For all of these programs there was a decrease in the standard deviations as well.

Figure 13 visually presents the distribution of group consensus means for faculty development programs in Category 5, Grants, Awards, and Exchange Programs:



**FIGURE 13. The Distribution of Group Consensus Means for Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

*Program Category 6, Resources and Publications*

The original questionnaire included five faculty development programs under Category 6, Resources and Publications. Five new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 18 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 18. Faculty Development Programs, Program Category 6, Resources and Publications.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Resources and Publications	<b>6.1.</b> newsletter on teaching or faculty development	2.67	2.60	0.62	0.51
	<b>6.2.</b> resource rooms (books, videotapes, CD-ROMs, etc.)	3.07	3.13	0.80	0.64
	<b>6.3.</b> updated website (with resources to download and links to other web-based resources)	3.80	3.87	0.41	0.35
	<b>6.4.</b> classroom audio/visual equipment and distance-learning services	2.40	2.27	1.12	0.88
	<b>6.5.</b> faculty listserv (to share ideas on teaching and learning issues)	2.33	2.33	0.82	0.62
	<b>6.6.</b> faculty and TAs handbooks and handbooks for international faculty and TAs	3.00	3.00	0.65	0.53
	<b>6.7.</b> syllabus construction handbook	2.60	2.27	0.91	0.59
	<b>6.8.</b> a periodic collection of essays on teaching by award winning faculty	2.40	2.00	0.74	0.38
	<b>6.9.</b> online, self-guided tutorials on areas of teaching and student learning	2.67	2.53	0.82	0.64
	<b>6.10.</b> online, self-guided workshop sessions on pertinent instructional topics and issues	2.60	2.60	0.83	0.74

One faculty development program in Category 6, Resources and Publications, was considered essential by the panel members. This faculty development program--an updated website, with resources to download and links to other web-based resources--had consensus group rank of 3.87. The group mean for this program slightly increased from 3.80 to 3.87 for the beginning to the end of the study, while the standard deviation decreased from 0.41 to 0.35.

The Delphi panel members considered five faculty development programs in Category 6, Resources and Publications, as “important but not essential” for teaching and learning centers in research extensive universities. Table 19 presents five faculty development programs in Category 6, Resources and Publications, that had consensus group mean between 2.50 and 3.49 (in descending order).

**TABLE 19. “Important but not Essential” Faculty Development Programs, Program Category 6, Resources and Publications.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Resources and Publications	<b>6.2.</b> resource rooms (books, videotapes, CD-ROMs, etc.)	3.13	0.64
	<b>6.6.</b> faculty and TAs handbooks and handbooks for international faculty and TAs	3.00	0.53
	<b>6.1.</b> newsletter on teaching or faculty development	2.60	0.51
	<b>6.10.</b> online, self-guided workshop sessions on pertinent instructional topics and issues	2.60	0.74

**TABLE 19. Continued.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Resources and Publications	<b>6.9.</b> online, self-guided tutorials on areas of teaching and student learning	2.53	0.64

Two of the programs that were considered “important but not essential” decreased their group means throughout the study; the other two programs did not change their group means; and one program increased its group mean (Figure 14). All faculty development programs had a decrease in their standard deviations.

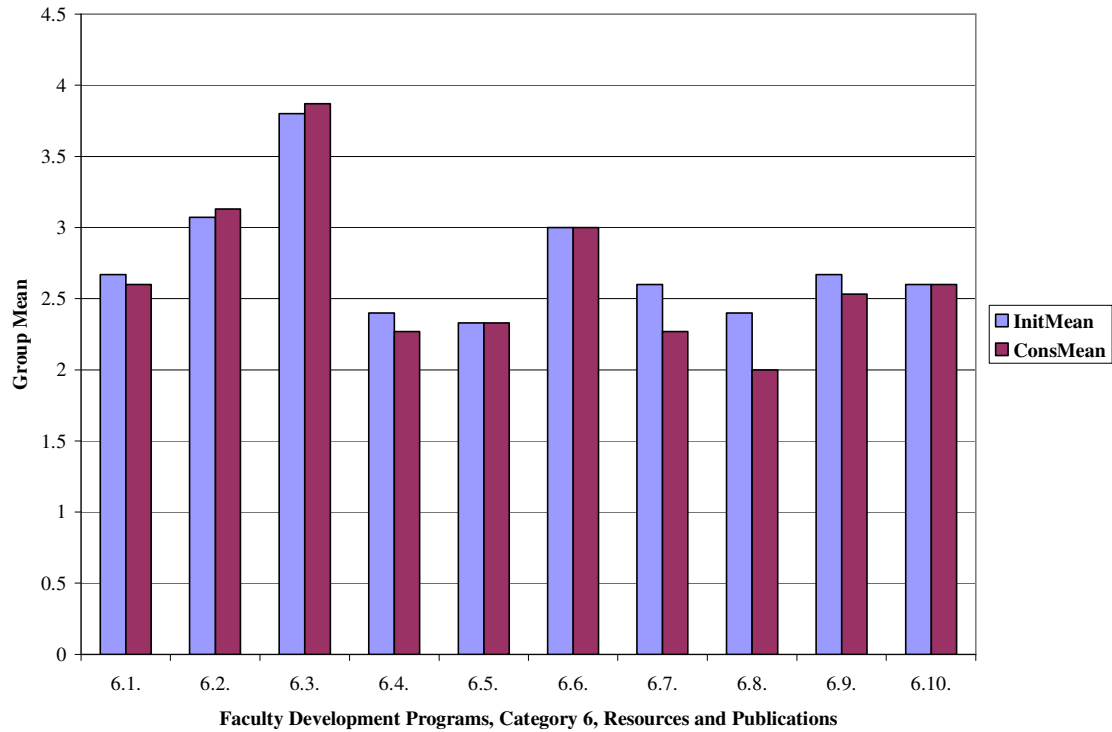
The Delphi panel members considered four faculty development programs in Category 6, Resources and Publications, as “helpful but not very important” for teaching and learning centers in research extensive universities. Table 20 presents four faculty development programs in Category 6, Resources and Publications, that had consensus group mean between 1.50 and 2.49 (in descending order).



**TABLE 20. “Helpful but not very Important” Faculty Development Programs, Program Category 6, Resources and Publications.**

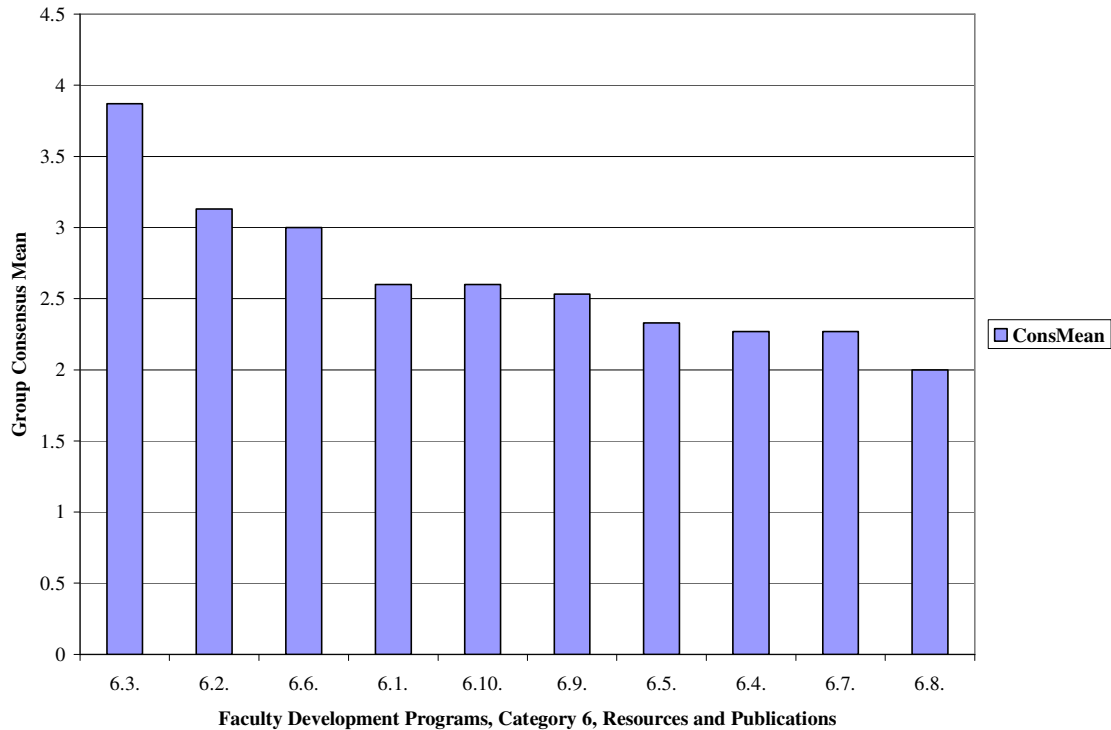
<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Resources and Publications	<b>6.5.</b> faculty listserv (to share ideas on teaching and learning issues)	2.33	0.62
	<b>6.4.</b> classroom audio/visual equipment and distance-learning services	2.27	0.88
	<b>6.7.</b> syllabus construction handbook	2.27	0.59
	<b>6.8.</b> a periodic collection of essays on teaching by award winning faculty	2.00	0.38

Three of the programs that were considered “helpful but not very important” decreased their group means from the beginning to the end of the study; and one program did not change its group mean (Figure 14). All faculty development programs had a decrease in their standard deviations; and for three programs that were considered “helpful but not essential programs”--classroom audio/visual equipment and distance-learning services; syllabus construction handbook; and a periodic collection of essays on teaching by award winning faculty--a dramatic decrease from 1.12 to 0.88, from 0.91 to 0.59 and from 0.74 to 0.38 respectively.



**FIGURE 14. Change in Group Means for Faculty Development Programs, Program Category 6, Resources and Publications: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

Figure 15 visually presents the distribution of group consensus means for faculty development programs in Category 6, Resources and Publications:



**FIGURE 15. The Distribution of Group Consensus Means for Faculty Development Programs, Category 6, Resources and Publications.**

### *Program Category 7, Other Services*

The original questionnaire included eight faculty development programs under Category 7, Other Services. Ten new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 21 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 21. Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Other Services	<b>7.1.</b> training of departmental TA supervisors	2.87	2.93	0.83	0.60
	<b>7.2.</b> technical instruction on software and technical equipment assistance	2.07	2.00	1.10	0.93
	<b>7.3.</b> customized programs on instructional issues for individual academic departments	3.43	3.47	0.65	0.52
	<b>7.4.</b> systematic self-assessment techniques	3.00	3.00	0.85	0.76
	<b>7.5.</b> computerized examination services (examination scoring, test analysis statistics)	1.87	1.67	0.99	0.90
	<b>7.6.</b> faculty socializing programs (faculty movie nights, faculty travel groups, faculty sport events)	1.87	1.80	0.52	0.41
	<b>7.7.</b> inviting visiting scholars/experts to do presentations or lectures	3.07	2.87	0.70	0.52
	<b>7.8.</b> organizing health/wellness related programs	1.80	1.73	0.56	0.46
	<b>7.9.</b> organizing diverse student panels on their perceptions of teaching and learning	2.73	2.67	0.80	0.49
	<b>7.10.</b> recognition for teachers and TAs, such as "Thank-a-Prof" programs	2.93	2.80	0.70	0.56
	<b>7.11.</b> Weekly Teaching Tips	2.27	2.07	0.70	0.26
	<b>7.12.</b> continual research of new instructional technology and integration of technology	2.60	2.53	0.83	0.83

TABLE 21. Continued.

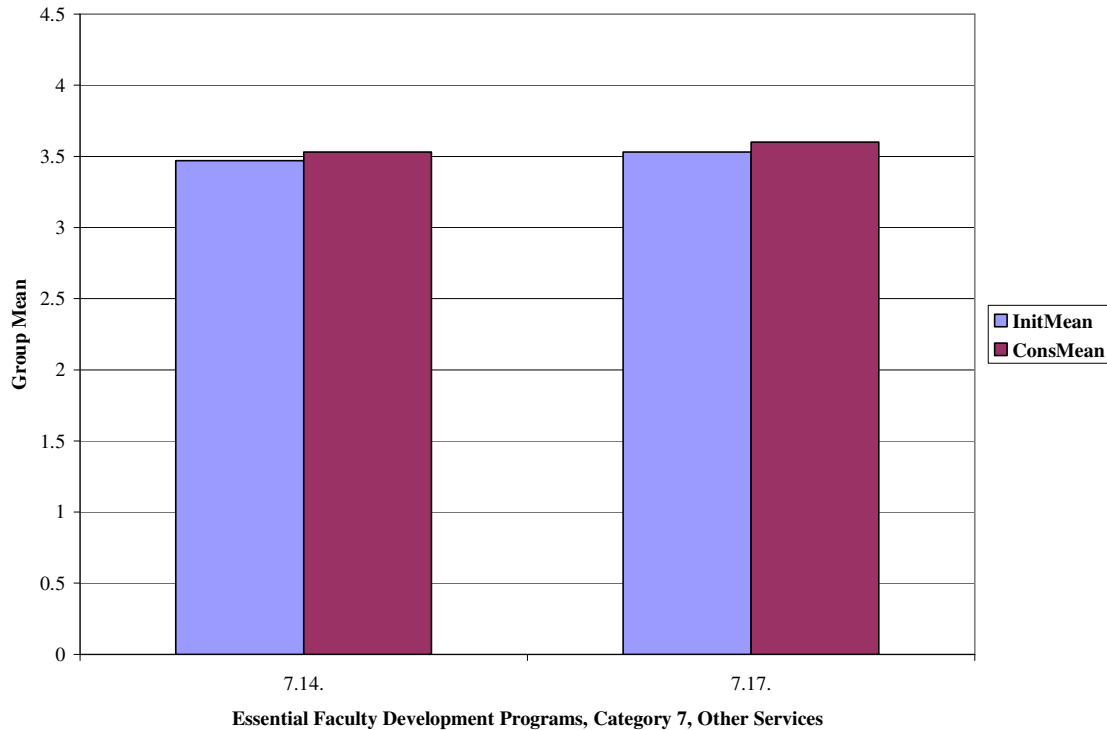
Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Other Services	<b>7.13.</b> broader support of teaching large classes	3.20	3.20	0.77	0.68
	<b>7.14.</b> service on university, college and departmental committees in support of teaching and learning	3.47	3.53	0.74	0.64
	<b>7.15.</b> scholarship on individual teaching and learning center's staff practice	2.87	2.53	0.83	0.52
	<b>7.16.</b> assistance with scholarship of teaching and learning, including consulting on human subjects approval process, research methods, data analysis, networking among faculty for research mentoring	2.53	2.47	0.74	0.52
	<b>7.17.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.53	3.60	0.64	0.63
	<b>7.18.</b> faculty showcases of best practice	3.47	3.33	0.64	0.62

Two faculty development programs in Category 7, Other Services, were considered essential by the panel members. Table 22 presents two faculty development programs in Category 7, Other Services, that had consensus group rank 3.50 or higher (in descending order).

**TABLE 22. Essential Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Other Services	<b>7.17.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.60	0.63
	<b>7.14.</b> service on university, college and departmental committees in support of teaching and learning	3.53	0.64

Both the programs increased their group means across study rounds, while the standard deviation slightly decreased (Figure 16).



**FIGURE 16. Change in Group Means for Essential Faculty Development Programs, Program Category 7, Other Services: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered ten faculty development programs in Category 7, Other Services, as “important but not essential” for teaching and learning centers in research extensive universities. Table 23 presents ten faculty development programs in Category 7, Other Services, that had consensus group means between 2.50 and 3.49 (in descending order).

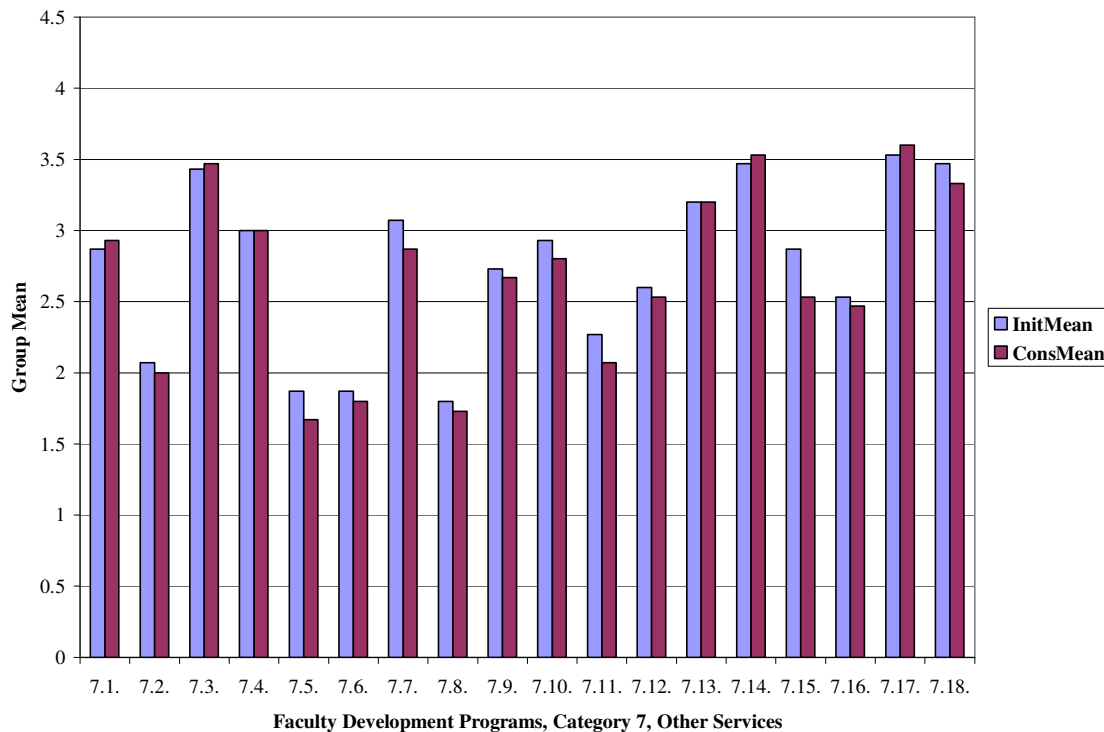
**TABLE 23. “Important but not Essential” Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Other Services	<b>7.3.</b> customized programs on instructional issues for individual academic departments	3.47	0.52
	<b>7.18.</b> faculty showcases of best practice	3.33	0.62
	<b>7.13.</b> broader support of teaching large classes	3.20	0.68
	<b>7.4.</b> systematic self-assessment techniques	3.00	0.76
	<b>7.1.</b> training of departmental TA supervisors	2.93	0.60
	<b>7.7.</b> inviting visiting scholars/experts to do presentations or lectures	2.87	0.52
	<b>7.10.</b> recognition for teachers and TAs, such as “Thank-a-Prof” programs	2.80	0.56
	<b>7.9.</b> organizing diverse student panels on their perceptions of teaching and learning	2.67	0.49
	<b>7.12.</b> continual research of new instructional technology and integration of technology	2.53	0.83
	<b>7.15.</b> scholarship on individual teaching and learning center’s staff practice	2.53	0.52

Six programs that were considered “important but not essential” decreased their group means from the beginning to the end of the study. Two faculty development programs increased their group means and two programs did not change their group means across the study rounds (Figure 17). All of these programs except for one--



continual research of new instructional technology and integration of technology-- decreased their group means. This one program did not change its standard deviation throughout the Delphi study.



**FIGURE 17. Change in Group Means for Faculty Development Programs, Program Category 7, Other Services: Initial Mean—Consensus Mean (Blue-Initial Mean, Maroon-Consensus Mean).**

The Delphi panel members considered six faculty development programs in Category 7, Other Services, as “helpful but not very important” for teaching and learning centers in research extensive universities. Table 24 presents six faculty development

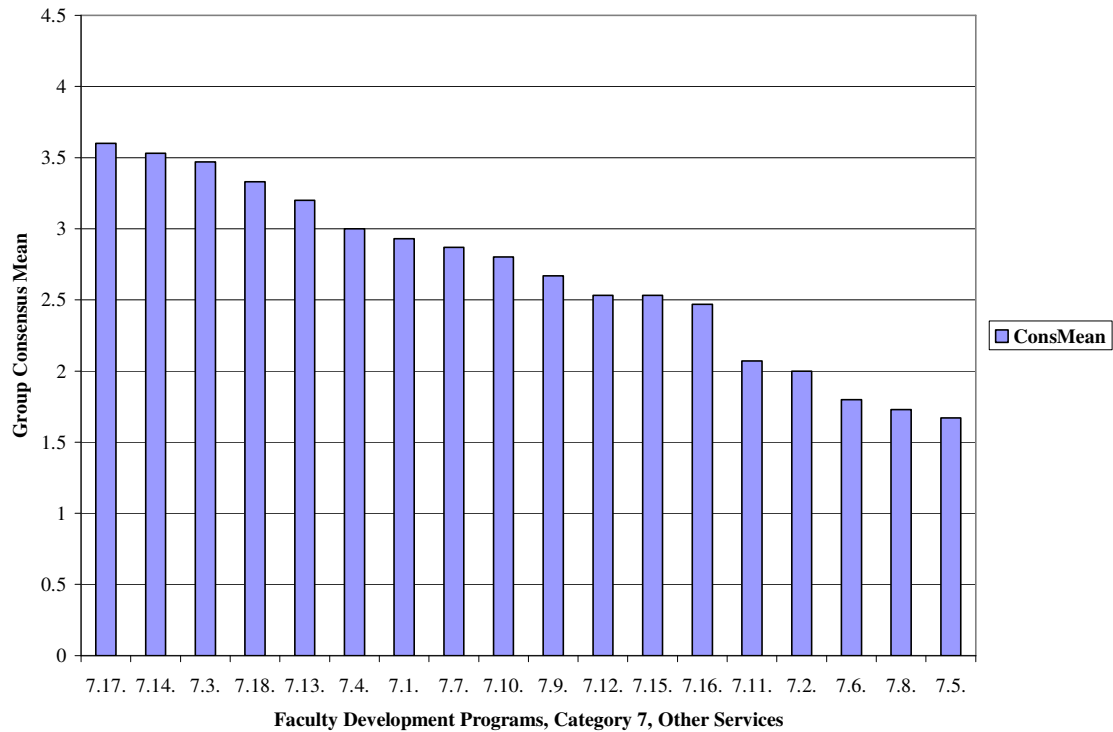
programs in Category 7, Other Services, that had consensus group mean between 1.50 and 2.49 (in descending order).

**TABLE 24. “Helpful but not Very Important” Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Other Services	<b>7.16.</b> assistance with scholarship of teaching and learning, including consulting on human subjects approval process, research methods, data analysis, networking among faculty for research mentoring	2.47	0.52
	<b>7.11.</b> Weekly Teaching Tips	2.07	0.26
	<b>7.2.</b> technical instruction on software and technical equipment assistance	2.00	0.93
	<b>7.6.</b> faculty socializing programs (faculty movie nights, faculty travel groups, faculty sport events)	1.80	0.41
	<b>7.8.</b> organizing health/wellness related programs	1.73	0.46
	<b>7.5.</b> computerized examination services (examination scoring, test analysis statistics)	1.67	0.90

All the programs in this category that were considered “helpful but not very important” decreased their group means across the study rounds (Figure 17). The standard deviations also decreased for all programs; and for one program--Weekly Teaching Tips--it decreased dramatically from 0.70 to 0.26 from the beginning to the

end of the study. Figure 18 visually presents the distribution of group consensus means for faculty development programs in Category 7, Other Services:



**FIGURE 18. The Distribution of Group Consensus Means for Faculty Development Programs, Program Category 7, Other Services.**

### *Faculty Development Programs, Final Framework*

One of the purposes of this dissertation study was to identify essential faculty development programs that could serve as a framework for teaching and learning centers

in research extensive universities. This study created an essential faculty development programs framework for teaching and learning centers in research extensive universities to introduce, enhance and improve faculty development programs. The criteria for inclusion of faculty development programs in the essential faculty development programs framework were based on the 4-point Likert scale for ranking of the essentiality of the items in the Delphi questionnaires.

The Delphi panel members considered eighteen faculty development programs in five program categories as “essential” for teaching and learning centers in research extensive universities. This final framework is presented in Table 25.

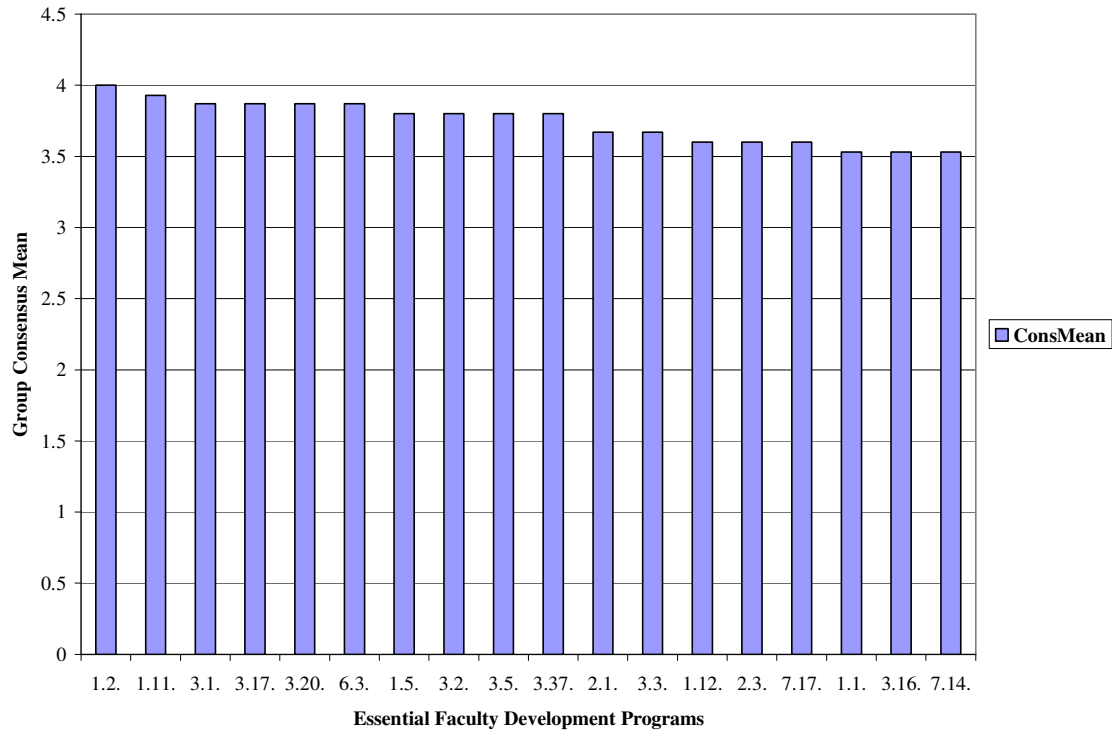
**TABLE 25. Essential Faculty Development Programs, Final Framework.**

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

**TABLE 25. Continued.**

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

Figure 19 visually presents the distribution of group consensus means for essential faculty development programs in five program categories:



**FIGURE 19. The Distribution of Group Consensus Means for Essential Faculty Development Programs.**

## Research Question Two

The second researched question for this study was: “What are model faculty development programs for teaching and learning centers as reported by directors in selected research extensive universities?” To answer this question, The Delphi panel members were asked to identify model faculty development programs for each program category that had essential programs. The fourth round questionnaire included the tables that listed those programs that had been determined to be essential (consensus group

means of 3.50 and higher) by the expert panel. The programs were grouped within their respective group category. The panel members were asked to identify and briefly describe one or more model programs for each program category that related to the essential programs within that category. The “Model Program” column provided space for including an answer. In providing the description, the Delphi panel members were asked to refer to the sources of description--brochures, website information, or other communications--if there were any. In identification of these model programs, the Delphi panel members were asked to consider both programs at their particular institution and programs that they may know about at other institutions (research extensive universities).

*Model Programs, Program Category 1, Consultations*

The Delphi panel members identified five faculty development programs in Category 1, Consultations, as “essential” for teaching and learning centers in research extensive universities. The five faculty development programs in Category 1, Consultations, that had consensus group rank 3.50 or higher included:

- classroom videotaping, observations, and critique of classroom instruction for individual faculty;
- consultation on enhancing teaching practices for individual faculty;
- individual consultations for TAs;

- consultation with campus groups or departmental units on teaching related issues;
- consulting with departments on TA programs.

The Delphi experts provided descriptions of these programs at their institutions as well as named some programs at other institutions.

At Arizona State University Main, they offer consultations for individual faculty as well as for departments on request. The consultation services are listed under resources on the center's home page (<http://clte.asu.edu/>). Each contact from a faculty member can require 15-40 hours of staff time.

At the University of Nevada, Reno, there is a required workshop on classroom observations for all TAs in a graduate required course. For those completing required graduate assistant observations and optional faculty observations, the center provides a template. The center also follows a model microteaching format described by Hertel, Millis, and Noyd (2002). This microteaching model to train new faculty uses videotaping, peer coaching, and such unique features as a cross-disciplinary approach to supplement feedback from department members and focused small group feedback with built-in preparation time.

At the University of Massachusetts, Amherst, there is a program called the Midterm Assessment Program (MAP). The (MAP) is an opportunity for instructors to get student feedback on a selected course while the course is in progress. A MAP is a confidential and voluntary service. Unlike the mandatory evaluations all departments ask students to fill out at the end of the semester, MAPs are done earlier (around midterm) to



allow the instructor to make meaningful changes during the course. Many instructors use the assessment as a way to begin a dialogue with students about course content and successful learning strategies and as a tool for examining their own assumptions about teaching and learning. The MAP allows the instructor to gauge how and what students are learning and to assess his or her teaching. It offers the time and attention of a center consultant who collects, synthesizes, and helps interpret student feedback, and identifies appropriate teaching suggestions and print or web-based resources. Unlike end-of-term evaluations, MAP feedback goes directly to, and only to, the instructor.

At Harvard University, The Bok Center offers and encourages use of a broad variety of feedback techniques, so that teachers can reflect on their own teaching as a first step toward improvement. One of the Center's principal tools for feedback is videotaping. A class is usually videotaped in the Center's specially-equipped classrooms or at another campus location. Each videotaped class is subsequently viewed in a confidential session with a Bok Center staff member. The staff member and teacher together analyze specific teaching issues and focus on the taped individual's teaching, recognizing that there are many effective ways to teach. Videotape allows teachers to experience their own teaching directly in a safe, supportive atmosphere. At the teacher's request, the Center can provide copies of the tape to be reviewed by others or included in a teaching portfolio as part of a job application.

At the University of South Florida, faculty development professionals try to combine the classroom videotaping and critique with the consultation on enhancing teaching practices for any faculty member who is interested in looking at active learning

and classroom interaction. The director of the center mentioned that any visit to the classroom always begins with an observation of the students before the instructor arrives, in order to be the eyes of the instructor in terms of gauging the environment before the instructor enters. Much can be learned about the rapport of the instructor with students and the relationship they have built together from observing the students before the class.

Dr. Karron Lewis at the University of Texas, Austin, was mentioned two times by other Delphi panel members as an exemplary faculty development professional experienced in providing consultations to faculty members. The center offers confidential individual consultations to faculty members and TAs who wish to discuss specific teaching concerns and effectiveness as they relate to a specific class or classes. An individual classroom observation includes three stages: (1) pre-observation meeting; (2) classroom observation; (3) post-observation meeting. Prior to the observation, a faculty member or a TA schedules a meeting with the consultant who will be observing the class. The purpose of this meeting is to create a context for the consultant regarding a faculty's instruction style, goals and experience, students, typical class activities, departmental requirements, etc. During classroom observation, a consultant takes descriptive notes on what is said and done in the class. Teacher-student interaction, student-to-student interaction, and student behavior will be noted so that the consultation can focus on the specifics of the class. In addition to the narrative account of what happened, the consultant may also use a checklist of teaching skills. After the observation, a faculty member or a TA will meet one-to-one with the consultant to

discuss the consultant's observations. Then a faculty member and a consultant create an informal "action plan" and options for follow-up observations. Consultations typically continue until a faculty member or a TA feels that his/her needs have been met.

At the Ohio State University, the center offers a wide range of consultation services to departments on their graduate teaching assistants programming. In addition to direct organizational development work, the center offers consultations embedded in learning communities for graduate teaching fellows and for TA coordinators, seed grants for program development, professional development mini-grants for TA coordinators, and Departmental Awards for exemplary graduate teaching assistants programs.

The Center for Instructional Development and Research at the University of Washington provides individual consultation services grounded in the needs of the individual instructor. The consultations use a research-based approach that helps instructors make decisions in light of the literature on teaching and learning and of data provided on their own teaching and students' learning. The director of this center specifically identified the use of consultations in the International Teaching Assistant (ITA) Program. The ITA Program provides individual consultation services free of charge to international TAs interested in improving their teaching or their language proficiency. ITA Program staff work primarily with newly appointed international TAs currently in teaching positions, especially if they are experiencing difficulties communicating with their students. The center assists other international TAs who are referred by their departments or who request ITA Program services on their own.

At Indiana University, Bloomington, the consultation process includes: (1) arranging a consultation to discuss a faculty member's goals for a class to be observed and the specific elements of the class that are important for a faculty member; (2) the consultant coming to the designated class and taking notes on a class (often these notes are extensive--10-12 pages long); (3) a few days after the observation, meeting again with the consultant to talk about how the class went. The consultant not only serves as a sounding board for a faculty member's own thoughts, relating those thoughts to the appropriate research on teaching and learning, but also serves to model a beginning learner in a specific discipline. Often the jargon and tools of the discipline become invisible to the experienced instructor, and the consultant can serve to identify issues of possible concern to beginning learners in the class. The director of the center points out that many instructors find these observations useful to their growth as teachers, in part because they are completely confidential and can be conducted without any fear of affecting one's relationship within one's home department. Also, it is always a good idea to have faculty members in a faculty's department observe a class, not only because they are uniquely qualified to judge the content, but also because they can write a letter on a faculty's behalf.

At Texas A&M University, the Center for Teaching Excellence offers an Early Feedback Program. The Early Feedback Program involves early semester survey feedback from students, a classroom observation by a center instructional consultant, and a meeting of a consultant and a faculty participant to discuss data from the survey and observation.

*Model Programs, Program Category 2, University-wide Orientations*

The Delphi panel members identified two faculty development programs in Category 2, University-wide Orientations, as “essential” for teaching and learning centers in research extensive universities. The two faculty development programs in Category 2, University-wide Orientations, that had a consensus group rank 3.50 or higher included:

- organized, campus-wide programs for new TAs; and
- organized, campus-wide programs for new faculty.

The Delphi experts provided descriptions of these orientation programs at their institutions as well as named some programs at other institutions.

At Arizona State University Main, the New Faculty Orientation is delivered under the Office of the Provost. The center staff takes an active part in the work of the planning group. Additionally, the center staff offers workshops during the Teaching Days that are part of the New Faculty Orientation. The website for the program is <http://www.asu.edu/provost/orientation>

New faculty programs at Columbia College-Chicago were named as exemplary by one of the Delphi panel members. New Faculty Orientation (NFO) is held during two days. NFO is designed to help faculty members establish connections to other faculty; understand the characteristics and aspirations of the students; and better appreciate institutional mission and vision. The website for the program is <http://cte.colum.edu/nfo.php>

At the University of South Florida, the new faculty orientation is developed in collaboration with the Office of the Provost. The center staff meets with the Vice Provost for Faculty Development to plan the week of events; and the center oversees all events related to teaching and students. These events include open-lab sessions where faculty can learn to upload their syllabi into Blackboard Courseware Management; as well as a variety of sessions on teaching tips conducted by experienced faculty; sessions introducing cutting edge technology into teaching; sessions on university policies; and other relevant sessions for new faculty. The center staff is able to meet all new faculty every summer thus beginning a relationship with those who seek the center's support.

At New Mexico State University Main Campus, the Teaching Academy initiated a mandatory course for new faculty titled "Teaching Scholars". At the time of this writing, the course was approved by the provost and was awaiting funding. The goals of this course are to engage new faculty members in a shared learning class in which they can learn from each other. Every participant is assigned to a four-person team. The team reads and responds to a faculty member's tests, syllabi, and teaching philosophies; exchange classroom observations; and, practice in WebCT discussions.

At The Ohio State University, the center offers an annual University-Wide Orientation on Teaching and Learning: A Conference for New TAs. This is a free orientation designed for Teaching Associates (TAs) at The Ohio State University. Most sessions are facilitated by senior TAs; others are larger panel discussions. This orientation is designed to reduce anxieties new TAs might have, provide techniques and strategies for effective teaching, and suggest resources for further assistance. In some

cases, departments have made session recommendations for their TAs. This program was described by the Delphi panel member representing this university as well as mentioned by the other members of the Delphi panel. The website for the program is: <http://ftad.osu.edu/ta/conference.html>

At the University of Washington, the center offers a two-and-a-half-day TA Conference on Teaching and Learning. The orientation includes a variety of concurrent sessions that cover different topics that might be interesting to new TAs. Some of these topics include: activities to engage your students in learning; balancing graduate school demands; using technology tools for teaching and learning; teaching diverse classrooms; motivating students to learn; presenting information effectively; teaching in lab settings; creating a course website; etc. Most workshops are offered two or more times during the three days of the Conference, so if a TA would like to attend two workshops that meet at the same time, he/she should be able to find the same workshop offered at another time. The website for the program is:

<http://depts.washington.edu/cidrweb/TAConference/2006/index.html>

The University of Washington provides a week-long pre-autumn quarter orientation for new faculty called the Faculty Fellows Program. It is hosted by the Office of Undergraduate Education and the Teaching Academy. The orientation involves collaboration among different units on campus, including the Center for Instructional Development and Research. The Faculty Fellows Program orients new faculty to the University and assists them in improving their teaching skills. The Program relies almost entirely on senior faculty members with distinguished records as educators, employing

them to instruct new faculty members about University of Washington students, effective teaching methods and techniques for balancing the demands of successful teaching and research. The website for the program is:

<http://www.washington.edu/oue/academy/facfellows.html>

At the University of Michigan, the center offers a New Graduate Student Instructor Teaching Orientation. It provides an intensive Teaching Orientation program for new and returning Graduate Student Instructors (GSIs) and for graduate students who anticipate teaching in the future. This University-wide program is led by Center for Research on Learning and Teaching (CRLT) staff, faculty, and experienced GSIs. This orientation is a perfect opportunity to gain teaching skills, to make connections with other GSIs, to allay some of the fears that an impending teaching assignment can create, and to learn about the resources that CRLT offers to GSIs. The center also offers a variety of services for faculty new to the University of Michigan. These programs are designed to help faculty learn about UM students, find the resources they need to be successful, and begin to develop a community of colleagues. Programs include: New Faculty Orientation; Program for New Faculty in Engineering; and Midterm Student Feedback. The Office of the Provost and Executive Vice President for Academic Affairs and the Center for Research on Learning and Teaching (CRLT) conduct a New Faculty Orientation to introduce all new faculty to the University of Michigan. The program includes remarks by UM officials and faculty members, as well as interactive sessions in which faculty can share experiences and strategize about good teaching. The program usually includes a luncheon during which the President and Provost address the new



faculty. An Information Fair, with representatives from key University offices provides materials and answer questions about life at the University of Michigan. The website for both GSI and new faculty orientation programs could be found at <http://www.crlt.umich.edu/>

At Georgia Institute of Technology, the center has created an on-line resource—TAWeb—for new teaching assistants. TA Web modules are designed to assist TAs in learning about important policies, procedures, and practices related to their work at Georgia Tech. Each module is a narrated PowerPoint presentation that lasts between 5 and 8 minutes. Any TA can also download or print the handouts for these presentations. TA web modules include such topics as: your role as a teaching assistant; academic integrity; grading policies; sexual harassment information and resources; learning styles; tutoring students; teaching towards inclusion; teaching in the laboratory; and teaching recitations. The TAWeb also includes assessment procedures. There is a 25-question multiple choice exam that asks TAs to apply what they have learned while studying the modules. If a department requires that a TA completes this assessment, the scores are automatically sent to a department. The website for this program is:

<http://www.cetl.gatech.edu/taweb/> The center also offers two and a half day New Faculty Orientation for all new faculty on campus. Participants usually meet colleagues who are new to Georgia Tech; connect with current students, faculty and administrative leaders on campus; and learn about resources that will support their teaching and research efforts. All faculty members are also given a CD of all the presentations and it

also includes a picture directory of all the new faculty. The website for this program is:  
<http://www.cetl.gatech.edu/services/faculty/nfoinfo.htm>

At Indiana University at Bloomington, the center offers an Associate Instructor Workshop on Campus Climate for all new associate instructors. This campus-wide workshop on diversity and campus climate helps to address the challenges of effectively teaching undergraduate students with diverse backgrounds and learning styles. The center also follows a model of central support that results in department-based efforts to orient graduate students to teaching. The website for the center is:  
<http://www.indiana.edu/~teaching/>

At the University of Texas at Austin, the center offers an annual Graduate Student Instructor Colloquium. This one-day, free event helps graduate students build instructional skills, and introduces GSIs to expectations for teaching at UT Austin. The special emphasis for 2006 program is “Reflecting: Using Discussion, Writing, and Technology to Encourage Student-Centered Learning.” The exemplars are chosen from the call for proposals for the session and poster presentations are included in the colloquium program. This approach is in keeping with the GSI program goal to move toward professionalism in peer presentations. These sessions feature world-class research, best practices, and hands-on workshops using the latest appropriate teaching techniques in their fields of study, presented by new GSIs’ peers at UT Austin. The website for the program is: <http://www.utexas.edu/academic/diia/gsi/seminars/index.php>  
The center also offers a three day New Faculty Teaching, Learning, and Orientation Seminar. During an orientation, participants and presenters share advice on successful

teaching and research. Additionally, over twenty University centers and offices come together to help orient new faculty to the campus. The website for the program is:

<http://www.utexas.edu/academic/diia/nfs/>

At University of Delaware, the center offers three days annual Conference For Graduate Teaching Assistants. The conference is designed primarily for those graduate students who have been newly appointed as TAs. The conference helps orient TAs to their instructional roles and responsibilities at Delaware and introduces them to best practices and central aspects of learning and teaching. Since the conference accommodates TAs across disciplines and with varied teaching responsibilities, the center staff usually recommend that department faculty highlight those sessions for the TAs that are most relevant to their instructional roles in the department. Senior TAs are also invited to the conference. They have the opportunity to refine their teaching skills by participating in sessions focused on specific pedagogies (one offered each day). The conference is followed by discipline-specific training sessions in individual departments. The website for this program is: <http://cte.udel.edu/tacon.html>

At Texas A&M University, the center offers a university-wide TA orientation program: Teaching Assistants Training and Evaluation Program (TATEP). The program uses experienced graduate student TAs as small group leaders. The new TAs meet in small groups for three sessions to be introduced to basic topics and concepts such as: the first day”, “ethics of teaching”, and “diverse learners”. Prior to the orientation, the TA leaders have a day-long preparation session with a center program consultant. The website for the program is: <http://cte.tamu.edu/tatep/>

*Model Programs, Program Category 3, University-wide Workshops*

The Delphi panel members identified eight faculty development programs in Category 3, University-wide Workshops, as “essential” for teaching and learning centers in research extensive universities. The eight faculty development programs in Category 3, University-wide Workshops, that had consensus group rank 3.50 or higher included:

- 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.

Most of the Delphi panel experts stated that these topics are reflected in the set of workshops that they offer at their institutions. All the centers hold many workshops each semester, and the numbers vary from 10-15 workshops a semester to more than 40. The centers with some help from other campus groups facilitate workshops to enhance the preparation and delivery of classes at their universities to enhance student learning. All centers’ websites have workshop calendars to display workshops and registration links.

At the University of South Florida, every semester the center organizes a different student panel to talk about their individual perceptions of teaching and learning at the university.

At the University of Washington, the center presents workshops grounded in the specific needs and goals of a department or program. All workshops are customized for the specific individuals and disciplines, and the center's staff strives to incorporate the skills and experience of the individuals requesting assistance with workshops.

At the University of Texas at Austin, the center does not offer any workshops. Instead, the center offers a two-day program each January before classes begin. This year's title was "Teaching and Learning Colloquium: Ideas That Work". All Teaching and Learning Colloquium sessions are stand-alone, and the participants are welcome to attend one session or join for the entire colloquium. The website for this program is: <http://www.utexas.edu/academic/diia/seminars/fc/2006/schedule.php>

At Texas A&M University, the center offers a Course and Syllabus Design workshop that is a three hour workshop that includes time for participants to examine sample syllabi to identify characteristics that are required as well as qualities that create a welcoming, learning-centered tone. Participants also spend time working on their own syllabi and receive feedback from each other and from the workshop leaders.

*Model Programs, Program Category 6, Resources and Publications*

One faculty development program in Category 6, Resources and Publications, was considered essential by the Delphi panel members. This faculty development program--updated website (with resources to download and links to other web-based resources)--had a consensus group rank of 3.87.

The Delphi experts provided the links to their centers' websites as well as named some exemplary centers' websites at other institutions. Some of these websites are:

- Arizona State University Main, Center for Learning and Teaching Excellence  
<http://clte.asu.edu/index.htm>
- University of Delaware, Center for Teaching Effectiveness <http://cte.udel.edu/>
- University of South Florida, Center for 21<sup>st</sup> Century Teaching Excellence  
<http://www.cte.usf.edu/>
- University of Illinois, Urbana-Champaign, Center for Teaching Excellence  
<http://www.cte.uiuc.edu/>
- Indiana University at Bloomington, Instructional Support Services  
<http://www.indiana.edu/~iss/>
- University of Louisville, Delphi Center for Teaching and Learning  
<http://delphi.louisville.edu/>
- University of Massachusetts-Amherst, Center for Teaching  
<http://www.umass.edu/cft/>
- University of Michigan-Ann Arbor, Center for Research on Learning and Teaching <http://www.crlt.umich.edu/>
- Texas A&M University, Center for Teaching Excellence <http://cte.tamu.edu/>
- University of Texas at Austin, Center for Teaching Effectiveness  
<http://www.utexas.edu/academic/cte/>

- University of Washington, Center for Instructional Development and Research  
<http://depts.washington.edu/cidrweb/>
- New Mexico State University Main Campus, Teaching Academy  
<http://www.teaching.nmsu.edu/#>
- University of Nevada, Reno, Excellence in Teaching Program  
<http://teaching.unr.edu/etp/>
- Georgia Institute of Technology, Center for the Enhancement of Teaching and Learning <http://www.cetl.gatech.edu/>
- The Ohio State University, Faculty and TA Development, <http://ftad.osu.edu/>
- Harvard University, Derek Bok Center for Teaching and Learning,  
<http://bokcenter.harvard.edu/icb/icb.do>

Most of the websites provide information for *faculty* (information on consultations, grants, seminars, orientations, workshops, teaching awards, etc.); for *TAs* (information on consultations, workshops, employment, teaching awards, etc); for *departments* (information on customized programs, evaluation services, departmental TA training, etc.); and have some information about *the center* itself (mission, staff directory, annual reports, directions, etc.). Most of the websites provide a lot of additional information on teaching and learning resources, for example links to publications on teaching and learning topics, and links to other teaching and learning centers' resources.

*Model Programs, Program Category 7, Other Services*

The Delphi panel members identified two faculty development programs in Category 7, Other Services, as “essential” for teaching and learning centers in research extensive universities. The two faculty development programs in Category 7, Other Services, that had consensus group rank 3.50 or higher included:

- service on university, college and departmental committees in support of teaching and learning; and
- faculty facilitated sessions for colleagues on issues of teaching and teaching methods.

Most of the Delphi panel members commented that centers’ staff support teaching and learning through the courses they teach, participation on university committees, contribution to professional organizations, and service to other institutions.

One of the Delphi panel members commented on these two programs saying that although these two seem like different topics, those staff who are members of the faculty participate in governance activities including those dealing with teaching and learning.

The director of the center at University of South Florida commented that their most extensive model program involves the center’s staff participation in the university general education revision. The university has approximately 400 general education courses, and all of them must go through a process of being certified with a new set of requirements. The center has designed a website for this process

<http://www.ugs.usf.edu/gened/>, where courses are proposed for certification as General



Education courses. Questions include, for example, what are your course objectives; how do they connect to the General Education objectives; which of your course objectives relate to critical thinking; and how will you teach and assess critical thinking; which of your course objectives relate to inquiry-based learning; how will you teach and assess students' inquiry skills; and how will you maintain the professional development of the instructors in this course and the like. The website contains a growing repository of teaching and learning ideas for meeting the general education objectives, including multimedia, resources links, and handout examples from other university's instructors. The center also offers working sessions on how to incorporate the University of South Florida 16 general education dimensions into teaching and learning. The center's staff attended general education committee meetings for the past three years to support this major revision process.

The director of the center at the Ohio State University commented that he served for three years on a variety of committees looking at the evaluation of teaching and drafted the current version of the Academic Affairs guidelines on this topic, as well as putting together the website that offers guidance to departments on their policies and procedures. The website for the program is: [http://oaa.osu.edu/eval\\_teaching/index.html](http://oaa.osu.edu/eval_teaching/index.html)

The director of the center at The University of Texas at Austin commented that the center's staff members serve on university committees that support or discuss teaching and learning, for example, the Classroom Renovation Committee, the Tech Deans Committee, the Curriculum Reform Committee, etc. The director also pointed out that most of the seminars are faculty facilitated. Having faculty facilitate the sessions lets

those faculty share best practices and gives credibility to the strategies the center is trying to promote.

At Texas A&M University, there is TAMU's Faculty Forum series. This program identifies faculty who are doing interesting, innovative things with their teaching and provides a forum for them to share these ideas with other faculty.

### **Research Question Three**

The third research question for this study explored what programs will be essential for teaching and learning centers in the future as forecasted by the faculty development experts on the Delphi panel. To answer this question, The Delphi panel members were asked to review suggested future faculty development programs (in all seven program categories) for teaching and learning centers in a research extensive university. The essentiality of each faculty development program was ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality. All future programs ranked 3.50 or higher were considered to be "essential" to a teaching and learning center in a research extensive university. For identification of the future essentiality of the same faculty development programs a suffix of "f" was added to the program number, e.g. 1.1.f. (as shown in the tables and figures). For each of the program categories the comparisons are made between the current essentiality (discussed in section "Research Question One) and future essentiality of the faculty development programs.

*Future Programs, Program Category 1, Consultations*

The original questionnaire included 13 future faculty development programs under Category 1, Consultations. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 26 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 26. Future Faculty Development Programs, Program Category 1, Consultations.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Consultations	<b>1.1.f.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.60	3.60	0.51	0.51
	<b>1.2.f.</b> consultation on enhancing teaching practices for individual faculty	4.00	4.00	0.00	0.00
	<b>1.3.f.</b> consultation on career goals and other personal questions for individual faculty	2.73	2.47	0.88	0.74
	<b>1.4.f.</b> consultations on ethical conduct and teacher-student relationships for individual faculty	3.33	3.27	0.72	0.60
	<b>1.5.f.</b> individual consultations for TAs	3.87	3.87	0.35	0.35
	<b>1.6.f.</b> mentoring services for TAs	3.14	2.93	0.54	0.46

TABLE 26. Continued.

Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Consultations	<b>1.7.f.</b> mentoring services for new faculty members	3.20	3.10	0.68	0.60
	<b>1.8.f.</b> pre-tenure review support for individual faculty	3.33	3.27	0.72	0.60
	<b>1.9.f.</b> post-tenure review support for individual faculty	3.13	3.13	0.74	0.64
	<b>1.10.f.</b> consultation on preparing teaching and course portfolios for individual faculty	3.43	3.47	0.51	0.52
	<b>1.11.f.</b> consultation with campus groups or departmental units on teaching related issues	3.93	3.93	0.26	0.26
	<b>1.12.f.</b> consulting with departments on TA programs	3.47	3.53	0.74	0.64
	<b>1.13.f.</b> consultations for individual faculty and TAs involved in peer review of teaching programs	3.33	3.40	0.82	0.63
	<b>1.14.f.</b> consultations with individuals and university groups on educational grant proposals and teaching grants	3.07	3.07	0.70	0.59
	<b>1.15.f.</b> consultations with individuals and university groups on writing for scholarship of teaching and learning	3.47	3.47	0.64	0.64
	<b>1.16.f.</b> consultations for post-docs who have teaching responsibilities	3.20	3.27	0.77	0.59
<b>1.17.f.</b> consultations for individual faculty on e-learning and integration of technology	3.40	3.13	0.83	0.64	

Five future faculty development programs in Category 1, Consultations, were considered essential in the future by the panel members. Table 27 presents five faculty development programs in Category 1, Consultations, that had a consensus group rank of 3.50 or higher (in descending order).

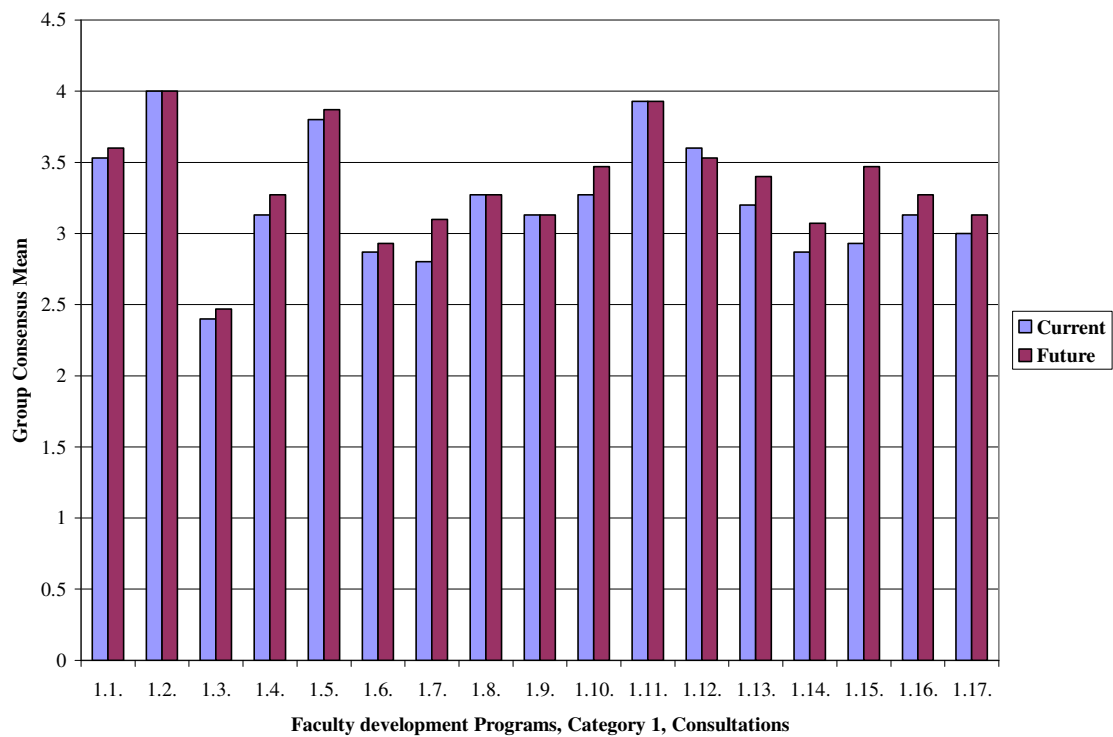
**TABLE 27. Future Essential Faculty Development Programs, Program Category 1, Consultations.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Consultations	<b>1.2.f.</b> consultation on enhancing teaching practices for individual faculty	4.00	0.00
	<b>1.11.f.</b> consultation with campus groups or departmental units on teaching related issues	3.93	0.26
	<b>1.5.f.</b> individual consultations for TAs	3.87	0.35
	<b>1.1.f.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.60	0.51
	<b>1.12.f.</b> consulting with departments on TA programs	3.53	0.64

The opinions of the Delphi panel members changed little over the course of the study. Four programs that were considered “essential” did not change their group means; and one program--consulting with departments on TA programs--slightly increased its group mean from the beginning to the end of the study.

The comparison between the currently essential programs and essential programs in the future for Category 1, Consultations, showed that twelve programs will have higher importance in the future, four programs were rated the same, and one program had slightly less importance (Figure 20). For one program--consultations with individuals and university groups on writing for scholarship of teaching and learning--there was a dramatic difference between current essentiality group consensus mean of 2.93 and future essentiality group consensus mean of 3.47.

The same five currently “essential” programs in Category 1, Consultations, were considered as “essential” for the future by the Delphi panel members.



**FIGURE 20. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 1, Consultations.**

*Future Programs, Program Category 2, University-wide Orientations*

The original questionnaire included four future faculty development programs under Category 2, University-wide Orientations. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 28 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 28. Future Faculty Development Programs, Program Category 2, University-wide Orientations.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Orientations	<b>2.1.f.</b> organized, campus-wide programs for new TAs	3.53	3.60	0.74	0.51
	<b>2.2.f.</b> organized, campus-wide programs for international TAs	3.40	3.53	0.83	0.52
	<b>2.3.f.</b> organized, campus-wide programs for new faculty	3.73	3.73	0.46	0.46
	<b>2.4.f.</b> organized, campus-wide programs for new international faculty	3.47	3.00	0.74	0.53
	<b>2.5.f.</b> organized, campus-wide programs for part-time faculty	3.07	3.00	0.80	0.53
	<b>2.6.f.</b> organized, campus-wide programs for academic leaders (e.g., department chairs)	3.27	3.00	0.70	0.38
	<b>2.7.f.</b> organized, campus-wide programs for post-docs with teaching responsibilities	2.67	2.67	0.90	0.62

**TABLE 28. Continued.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Orientations	<b>2.8.f.</b> organized, campus-wide programs for undergraduate students who serve as peer instructors	2.40	2.13	0.63	0.52

Three future faculty development programs in Category 2, University-wide Orientations, were considered essential by the panel members. Table 29 presents three faculty development programs in Category 2, University-wide Orientations, that had consensus group ranks of 3.50 or higher (in descending order).

**TABLE 29. Future Essential Faculty Development Programs, Program Category 2, University-wide Orientations.**

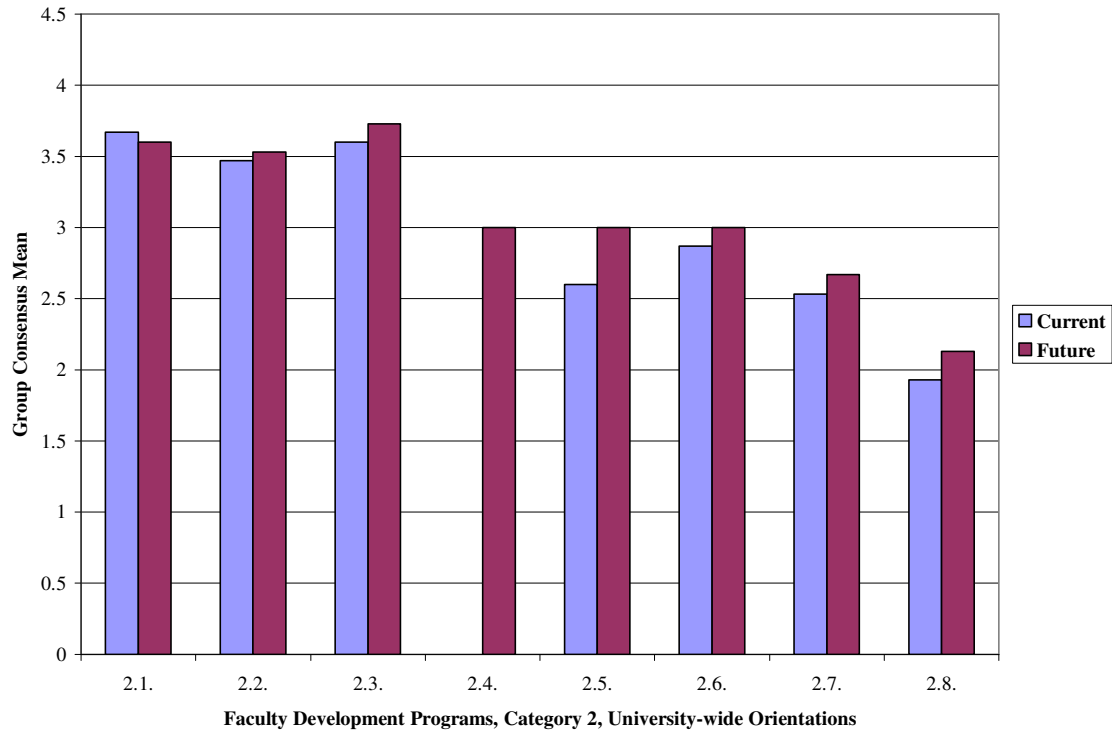
<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Orientations.	<b>2.3.f.</b> organized, campus-wide programs for new faculty	3.73	0.46
	<b>2.1.f.</b> organized, campus-wide programs for new TAs	3.60	0.51
	<b>2.2.f.</b> organized, campus-wide programs for international TAs	3.53	0.52



Two of these identified “essential” programs for the future increased their group means throughout the study and one program did not change its group mean.

The comparison between the currently essential programs and essential programs in the future for Category 2, University-wide Orientations, showed that six programs will have higher importance in the future, and one program had a slightly less importance (Figure 21). For one program--organized, campus-wide programs for new international faculty--no consensus was reached in terms of its current essentiality; but in terms of its future essentiality the consensus was reached with the group consensus mean of 3.00.

The comparison between the currently essential programs and essential programs in the future showed that one additional program--organized, campus-wide programs for international TAs--was identified as “essential” in the future by the Delphi panel members. In terms of its current essentiality the group consensus mean for this program was 3.47 and it was classified as “important but not essential”, and in terms of its future essentiality the group consensus mean was 3.53 and it was classified as “essential”.



**FIGURE 21. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 2, University-wide Orientations.**

*Future Programs, Program Category 3, University-wide Workshops*

The original questionnaire included thirty-eight future faculty development programs under Category 3, University-wide Workshops. Four new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 30 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 30. Future Faculty Development Programs, Program Category 3, University-wide Workshops.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.1.f.</b> enhancing teaching strategies	3.73	3.80	0.59	0.56
	<b>3.2.f.</b> course and syllabus design	3.87	3.87	0.35	0.35
	<b>3.3.f.</b> testing, test construction and evaluating student performance	3.60	3.67	0.83	0.82
	<b>3.4.f.</b> developing effective writing assignments	3.53	3.53	0.64	0.64
	<b>3.5.f.</b> assessing student learning outcomes	3.87	3.87	0.52	0.52
	<b>3.6.f.</b> academic advising and counseling skills	2.33	2.27	0.62	0.70
	<b>3.7.f.</b> understanding college students (learning styles, developmental patterns, diversity)	3.67	3.67	0.49	0.49
	<b>3.8.f.</b> strengthening research skills/scholarly writing for publication; developing skills in graphics and publications	2.80	Consensus Not Reached	1.15	Consensus Not Reached
	<b>3.9.f.</b> chairing a department; improving the management of departmental operations	2.64	2.53	0.93	0.83
	<b>3.10.f.</b> personal development (improving interpersonal skills, career planning, etc.)	2.20	2.20	0.94	0.94
	<b>3.11.f.</b> multicultural teaching and learning; infusing multiculturalism into a course	3.67	3.67	0.49	0.49

TABLE 30. Continued.

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.12.f.</b> application of instructional technology; teaching with technology; using various multimedia software	3.67	3.73	0.49	0.46
	<b>3.13.f.</b> teaching in online and distance environments	3.53	3.40	0.64	0.74
	<b>3.14.f.</b> developing course and teaching portfolios	3.40	3.33	0.51	0.49
	<b>3.15.f.</b> ESL programs for international TAs	2.47	Consensus Not Reached	1.13	Consensus Not Reached
	<b>3.16.f.</b> college teaching for TAs	3.53	3.53	0.74	0.74
	<b>3.17.f.</b> developing teaching strategies and methods of active and cooperative learning	3.87	3.87	0.35	0.35
	<b>3.18.f.</b> balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles	3.33	3.33	0.49	0.49
	<b>3.19.f.</b> writing grant proposals and reports	2.53	2.40	1.13	0.99
	<b>3.20.f.</b> teaching for student-centered learning	3.87	3.87	0.35	0.35
	<b>3.21.f.</b> acclimating new faculty to the culture of the institution	3.13	3.07	0.99	0.80
	<b>3.22.f.</b> writing across the curriculum	2.73	2.73	1.03	0.88
	<b>3.23.f.</b> teaching underprepared students	3.27	3.20	0.88	0.77
	<b>3.24.f.</b> teaching adult learners	2.87	2.60	0.92	0.74
<b>3.25.f.</b> community-service learning	3.27	3.27	0.80	0.70	

TABLE 30. Continued.

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.26.f.</b> pre-tenure review process	2.60	2.47	0.99	0.83
	<b>3.27.f.</b> post-tenure review process	2.47	2.47	0.99	0.83
	<b>3.28.f.</b> course and curricular reform	3.40	3.33	0.63	0.62
	<b>3.29.f.</b> general education reform	2.87	3.00	0.83	0.65
	<b>3.30.f.</b> part-time/adjunct faculty development	3.64	3.60	0.75	0.74
	<b>3.31.f.</b> midcareer faculty renewal strategies	3.13	2.93	0.74	0.80
	<b>3.32.f.</b> enhancing senior faculty careers	2.93	2.73	0.59	0.60
	<b>3.33.f.</b> developing leadership and management skills	2.40	2.27	0.83	0.70
	<b>3.34.f.</b> faculty roles in learning communities	3.00	2.87	0.88	0.74
	<b>3.35.f.</b> engaging in small group processes	3.36	3.33	0.75	0.62
	<b>3.36.f.</b> developing faculty in the scholarship of teaching	3.67	3.73	0.62	0.46
	<b>3.37.f.</b> teaching large classes	3.73	3.87	0.46	0.35
	<b>3.38.f.</b> peer review as a form of assessment; training faculty and TAs in the peer review process	3.47	3.53	0.74	0.74
	<b>3.39.f.</b> learning and teaching styles	3.20	3.07	0.56	0.46
	<b>3.40.f.</b> critical thinking and inquiry	3.67	3.60	0.49	0.51

**TABLE 30. Continued.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
University-wide Workshops	<b>3.41.f.</b> library connections to teaching and learning	2.73	2.73	0.80	0.59
	<b>3.42.f.</b> student e-portfolio development	2.73	2.67	0.46	0.50

Sixteen future faculty development programs in Category 3, University-wide Workshops, were considered essential in the future by the panel members. Table 31 presents sixteen future faculty development programs in Category 3, University-wide Workshops, that had consensus group ranks of 3.50 or higher (in descending order).

**TABLE 31. Future Essential Faculty Development Programs, Program Category 3, University-wide Workshops.**

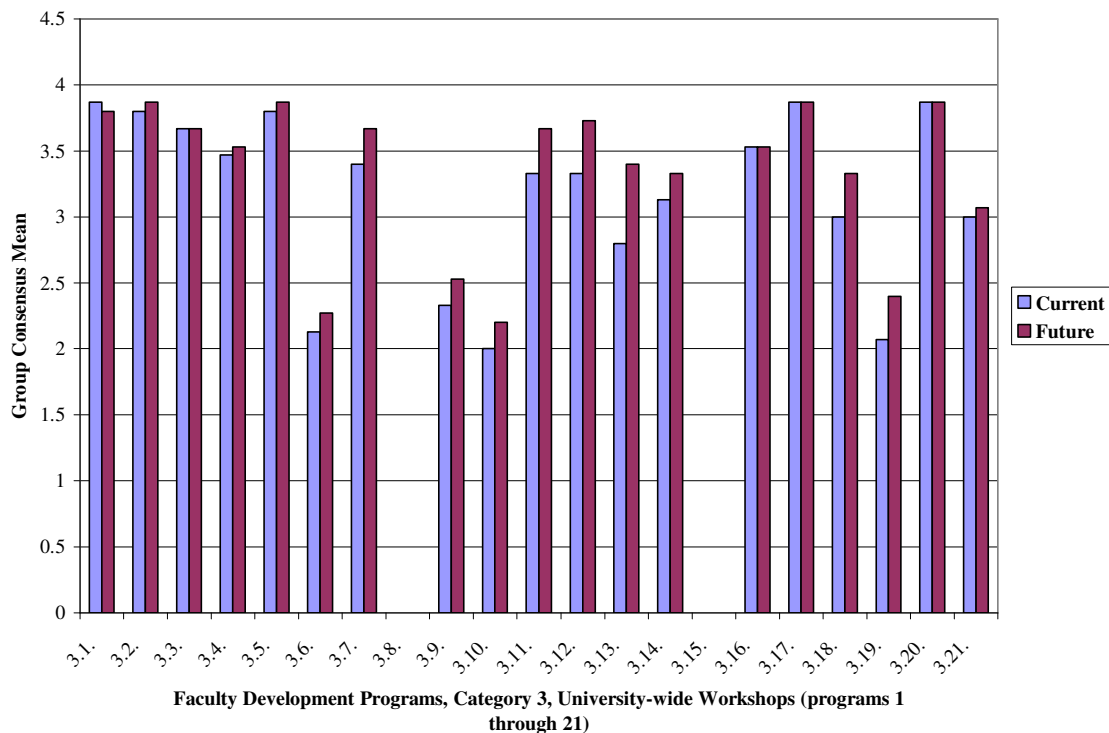
<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
University-wide Workshops.	<b>3.2.f.</b> course and syllabus design	3.87	0.35
	<b>3.5.f.</b> assessing student learning outcomes	3.87	0.52
	<b>3.17.f.</b> developing teaching strategies and methods of active and cooperative learning	3.87	0.35
	<b>3.20.f.</b> teaching for student-centered learning	3.87	0.35

TABLE 31. Continued.

Program category	Program	Consensus Mean	Consensus SD
University-wide Workshops.	3.37.f. teaching large classes	3.87	0.35
	3.1.f. enhancing teaching strategies	3.80	0.56
	3.12.f. application of instructional technology; teaching with technology; using various multimedia software	3.73	0.46
	3.36.f. developing faculty in the scholarship of teaching	3.73	0.46
	3.3.f. testing, test construction and evaluating student performance	3.67	0.82
	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
	3.30.f. part-time/adjunct faculty development	3.60	0.74
	3.40.f. critical thinking and inquiry	3.60	0.51
	3.4.f. developing effective writing assignments	3.53	0.64
	3.16.f. college teaching for TAs	3.53	0.74
	3.38.f. peer review as a form of assessment; training faculty and TAs in the peer review process	3.53	0.74

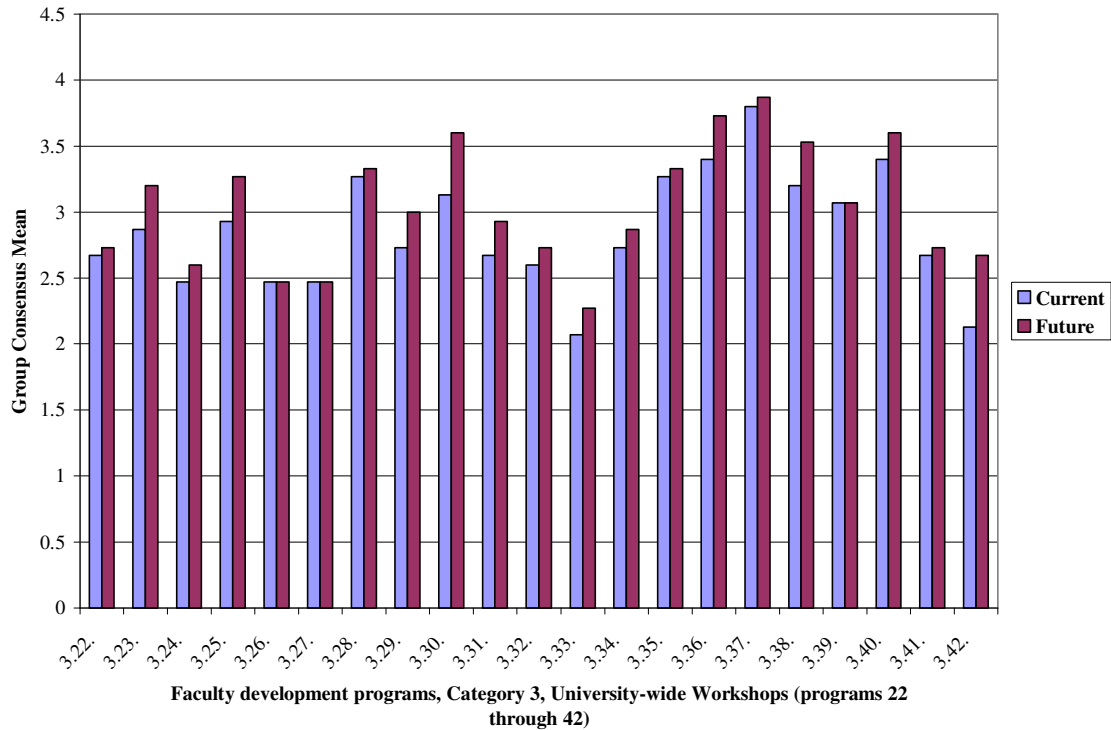
The comparison between the currently essential programs and essential programs in the future for Category 3, University-wide Workshops, showed that thirty two

programs will have higher importance in the future, seven programs were rated the same, and one program had slightly lower importance (Figure 22a and 22b). For two programs--strengthening research skills/scholarly writing for publication; developing skills in graphics and publications; and ESL programs for international TAs--no consensus was reached in terms of both current and future essentiality.



**FIGURE 22a. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 3, University-wide Workshops (programs 1 through 21).**





**FIGURE 22b. Comparison between Current and Future Essentiality of Faculty Development Programs, Category 3, University-wide Workshops (programs 22 through 42).**

There were dramatic differences between current and future essentiality group consensus means for several programs:

- multicultural teaching and learning; infusing multiculturalism into a course (3.33 and 3.67 respectively);
- application of instructional technology; teaching with technology; using various multimedia software (3.33 and 3.73 respectively);
- teaching in online and distance environments (2.80 and 3.40 respectively);

- balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles (3.00 and 3.33 respectively);
- writing grant proposals and reports (2.07 and 2.40 respectively);
- teaching underprepared students (2.87 and 3.20 respectively);
- part-time/adjunct faculty development (3.13 and 3.60 respectively);
- developing faculty in the scholarship of teaching (3.40 and 3.73 respectively);
- peer review as a form of assessment; training faculty and TAs in the peer review process (3.20 and 3.53 respectively);
- student e-portfolio development (2.13 and 2.67 respectively).

The Delphi panel members identified eight faculty development programs to be currently “essential” and sixteen faculty development programs to be “essential” in the future in Program Category 3, University-wide Workshops.

*Future Programs, Program Category 4, Intensive Programs*

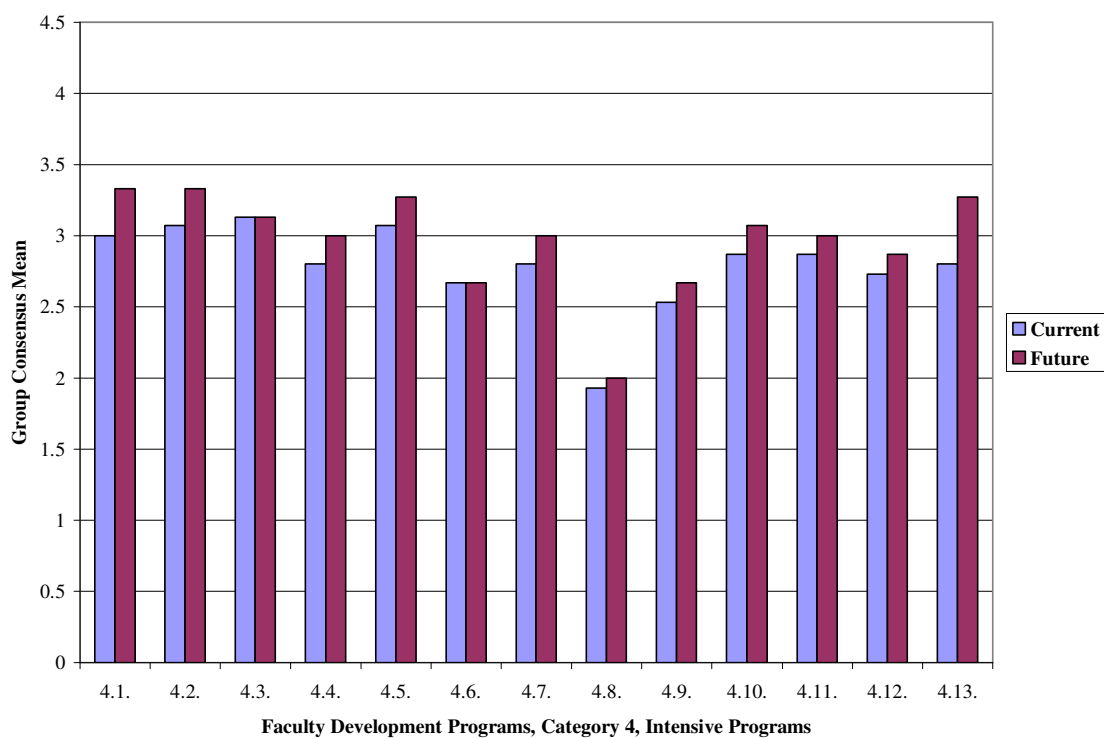
The original questionnaire included eleven future faculty development programs under Category 4, Intensive Programs. Two new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 32 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 32. Future Faculty Development Programs, Program Category 4, Intensive Programs.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Intensive Programs	<b>4.1.f.</b> preparing future faculty programs	3.33	3.33	0.90	0.82
	<b>4.2.f.</b> college teaching courses (weekly, or several times a year)	3.33	3.33	0.62	0.62
	<b>4.3.f.</b> 2-3 days conference on learning and teaching	3.20	3.13	0.56	0.52
	<b>4.4.f.</b> teaching and learning institutes	3.13	3.00	0.64	0.38
	<b>4.5.f.</b> faculty learning communities	3.27	3.27	0.70	0.60
	<b>4.6.f.</b> general interest discussion groups on teaching	2.73	2.67	0.96	0.72
	<b>4.7.f.</b> special-interest group discussion	2.87	3.00	0.52	0.38
	<b>4.8.f.</b> breakfast/luncheon groups (social gatherings)	2.07	2.00	0.80	0.65
	<b>4.9.f.</b> book/reading groups	2.67	2.67	0.49	0.49
	<b>4.10.f.</b> teaching fellow programs	3.07	3.07	0.59	0.46
	<b>4.11.f.</b> peer review on teaching programs	3.07	3.00	0.70	0.65
	<b>4.12.f.</b> Symposium on Teaching with Technology	2.87	2.87	0.83	0.74
	<b>4.13.f.</b> faculty learning communities on scholarship of teaching and learning	3.33	3.27	0.90	0.80

None of the future faculty development programs in Category 4, Intensive Programs, were considered “essential” by the Delphi panel members.

The comparison between the currently essential programs and essential programs in the future for Category 4, Intensive Programs, showed that eleven programs will have higher importance in the future, and two programs were rated the same (Figure 23).



**FIGURE 23. Comparison between Current and Future Essentiality of Faculty Development Programs, Category 4, Intensive Programs.**

There were dramatic differences between current and future essentiality group consensus means for two programs:

- preparing future faculty programs (3.00 and 3.33 respectively); and
- faculty learning communities on scholarship of teaching and learning (2.80 and 3.27 respectively).

*Future Programs, Program Category 5, Grants, Awards, and Exchange Programs*

The original questionnaire included twelve future faculty development programs under Category 5, Grants, Awards, and Exchange Programs. Three new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 33 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 33. Future Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Grants, Awards, and Exchange Programs	<b>5.1.f.</b> grants for faculty members developing new or improved instructional approaches/course redesign grants	3.47	3.47	0.83	0.83

TABLE 33. Continued.

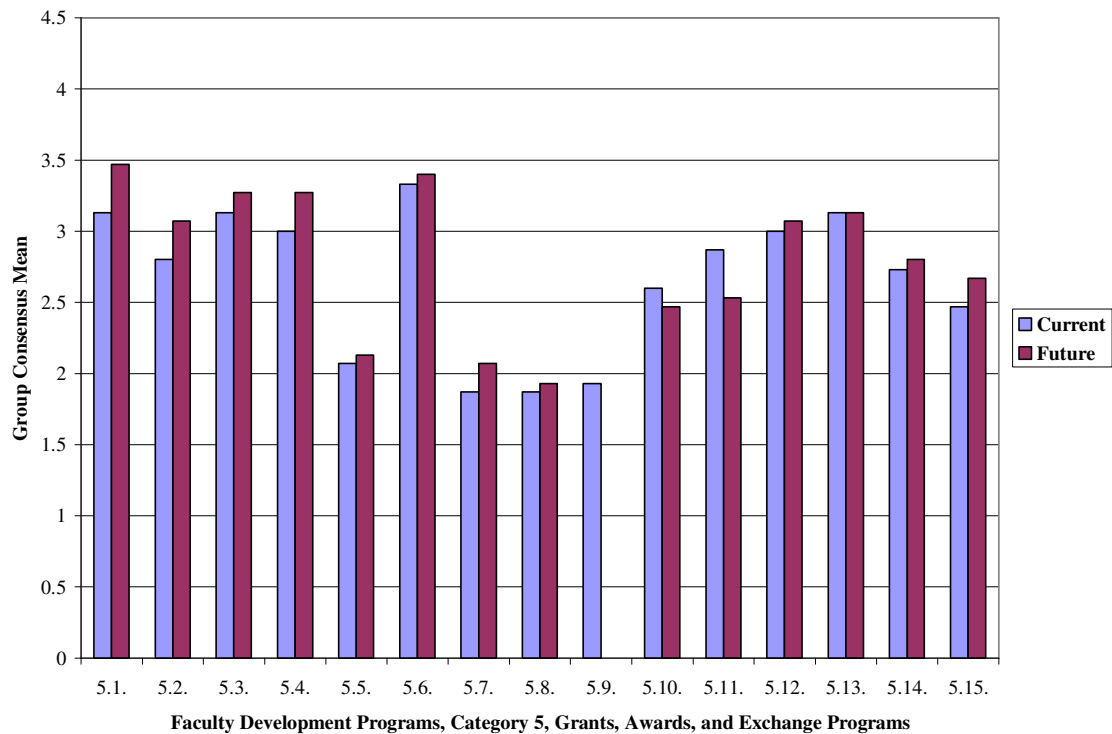
Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Grants, Awards, and Exchange Programs	<b>5.2.f.</b> grants for <i>new</i> faculty members developing new or improved instructional approaches	3.07	3.07	0.80	0.80
	<b>5.3.f.</b> grants for enhancing teaching with technology	3.27	3.27	0.70	0.70
	<b>5.4.f.</b> grants for multicultural projects	3.33	3.27	0.72	0.70
	<b>5.5.f.</b> research funds/grants to pursue scholarly interests	2.33	2.13	1.11	0.99
	<b>5.6.f.</b> institutional awards/honors for teaching excellence	3.47	3.40	0.52	0.51
	<b>5.7. f.</b> grants for academic opportunities in international settings/foreign exchange programs	2.13	2.07	0.92	0.80
	<b>5.8. f.</b> faculty exchange programs with other institutions	2.21	1.93	0.70	0.60
	<b>5.9.f.</b> travel funds/grants to attend professional conferences in the discipline/field	2.13	Consensus Not Reached	0.83	Consensus Not Reached
	<b>5.10.f.</b> travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings	2.80	2.47	0.94	0.52
	<b>5.11. f.</b> travel funds to attend conferences/programs to enhance teaching skills	3.07	2.53	0.96	0.52
	<b>5.12.f.</b> summer grants for projects to improve instruction of courses	3.20	3.07	0.86	0.80
	<b>5.13.f.</b> distinguished TAs awards	3.00	3.13	0.93	0.74

TABLE 33. Continued.

Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Grants, Awards, and Exchange Programs	<b>5.14.f.</b> grants awarded to departments to support development of departmental teaching programs for TAs	3.00	2.80	0.76	0.68
	<b>5.15. f.</b> grants awarded to individual faculty members participating in faculty learning communities	2.80	2.67	0.94	0.72

None of the future faculty development programs in Category 5, Grants, Awards, and Exchange Programs, were considered “essential” by the Delphi panel members.

The comparison between the currently essential programs and essential programs in the future for Category 5, Grants, Awards, and Exchange Programs, showed that eleven programs will have higher importance in the future, two programs were rated the same, and two programs had less importance (Figure 24). The Delphi panel members reached consensus for item 5.9., travel funds/grants to attend professional conferences in the discipline/field, while assessing its current essentiality. The Delphi panel members did not reach consensus for this item while assessing its future essentiality.



**FIGURE 24. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 5, Grants, Awards, and Exchange Programs.**

There were dramatic differences between current and future essentiality group consensus means for some programs:

- grants for faculty members developing new or improved instructional approaches/course redesign grants (increase from 3.13 to 3.47);
- grants for multicultural projects (increase from 3.00 to 3.27);
- travel funds to attend conferences/programs to enhance teaching skills (decrease from 2.87 to 2.53).



*Future Programs, Program Category 6, Resources and Publications*

The original questionnaire included five future faculty development programs under Category 6, Resources and Publications. Five new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 34 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 34. Future Faculty Development Programs, Program Category 6, Resources and Publications.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Resources and Publications	<b>6.1.f.</b> newsletter on teaching or faculty development	2.73	2.73	0.88	0.70
	<b>6.2.f.</b> resource rooms (books, videotapes, CD-ROMs, etc.)	3.13	3.27	0.83	0.70
	<b>6.3.f.</b> updated website (with resources to download and links to other web-based resources)	3.93	4.00	0.26	0.00
	<b>6.4.f.</b> classroom audio/visual equipment and distance-learning services	2.67	2.53	1.18	0.99
	<b>6.5.f.</b> faculty listserv (to share ideas on teaching and learning issues)	2.47	2.47	0.92	0.74

TABLE 34. Continued.

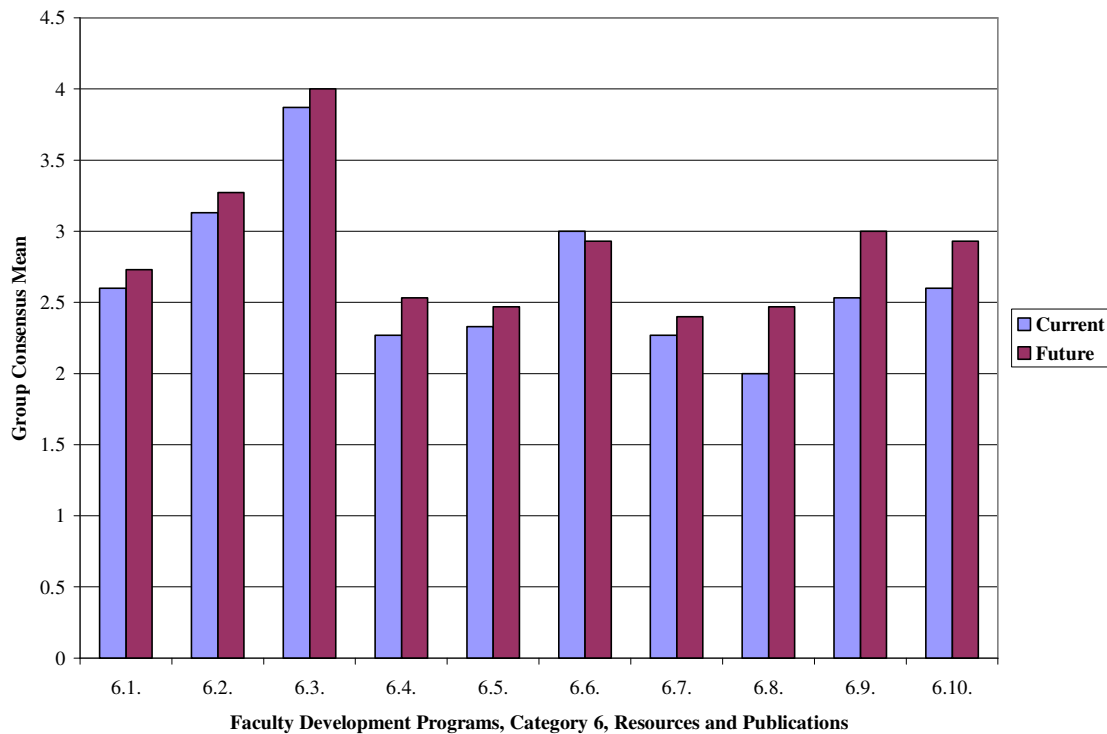
Program category	Program	Initial Mean	Consensus Mean	Initial SD	Consensus SD
Resources and Publications	<b>6.6.f.</b> faculty and TAs handbooks and handbooks for international faculty and TAs	3.00	2.93	0.65	0.46
	<b>6.7.f.</b> syllabus construction handbook	2.67	2.40	0.90	0.63
	<b>6.8.f.</b> a periodic collection of essays on teaching by award winning faculty	2.53	2.47	0.83	0.64
	<b>6.9.f.</b> online, self-guided tutorials on areas of teaching and student learning	3.00	3.00	0.76	0.76
	<b>6.10.f.</b> online, self-guided workshop sessions on pertinent instructional topics and issues	3.00	2.93	0.76	0.70

One future faculty development program in Category 6, Resources and Publications, was considered essential in the future by the panel members. This faculty development program--updated website (with resources to download and links to other web-based resources)--had consensus group rank of 4.00. The group mean for this program slightly increased from 3.93 to 4.00 for the beginning to the end of the study, while the standard deviation decreased from 0.26 to 0.00.

The comparison between the currently essential programs and essential programs in the future for Category 6, Resources and Publications, showed that nine programs will have higher importance in the future, and one program had less importance (Figure 25).

There were dramatic differences between current and future essentiality group consensus means for some programs:

- a periodic collection of essays on teaching by award winning faculty (from 2.00 to 2.47 respectively);
- online, self-guided tutorials on areas of teaching and student learning (from 2.53 to 3.00 respectively); and
- online, self-guided workshop sessions on pertinent instructional topics and issues (from 2.60 to 2.93 respectively).



**FIGURE 25. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 6, Resources and Publications.**

*Future Programs, Program Category 7, Other Services*

The original questionnaire included eight future faculty development programs under Category 7, Other Services. Ten new faculty development programs were suggested by panel members in the first round questionnaire and included in the second round. Table 35 presents the distribution of initial mean scores and standard deviations for the group as well as consensus mean scores and standard deviations for the group.

**TABLE 35. Future Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Other Services	<b>7.1.f.</b> training of departmental TA supervisors	3.00	3.00	0.93	0.76
	<b>7.2.f.</b> technical instruction on software and technical equipment assistance	2.07	2.00	1.10	0.93
	<b>7.3.f.</b> customized programs on instructional issues for individual academic departments	3.53	3.60	0.64	0.63
	<b>7.4.f.</b> systematic self-assessment techniques	3.20	3.20	0.94	0.77
	<b>7.5.f.</b> computerized examination services (examination scoring, test analysis statistics)	1.93	1.67	1.10	0.90
	<b>7.6.f.</b> faculty socializing programs (faculty movie nights, faculty travel groups, faculty sport events)	1.73	1.73	0.70	0.60

TABLE 35. Continued.

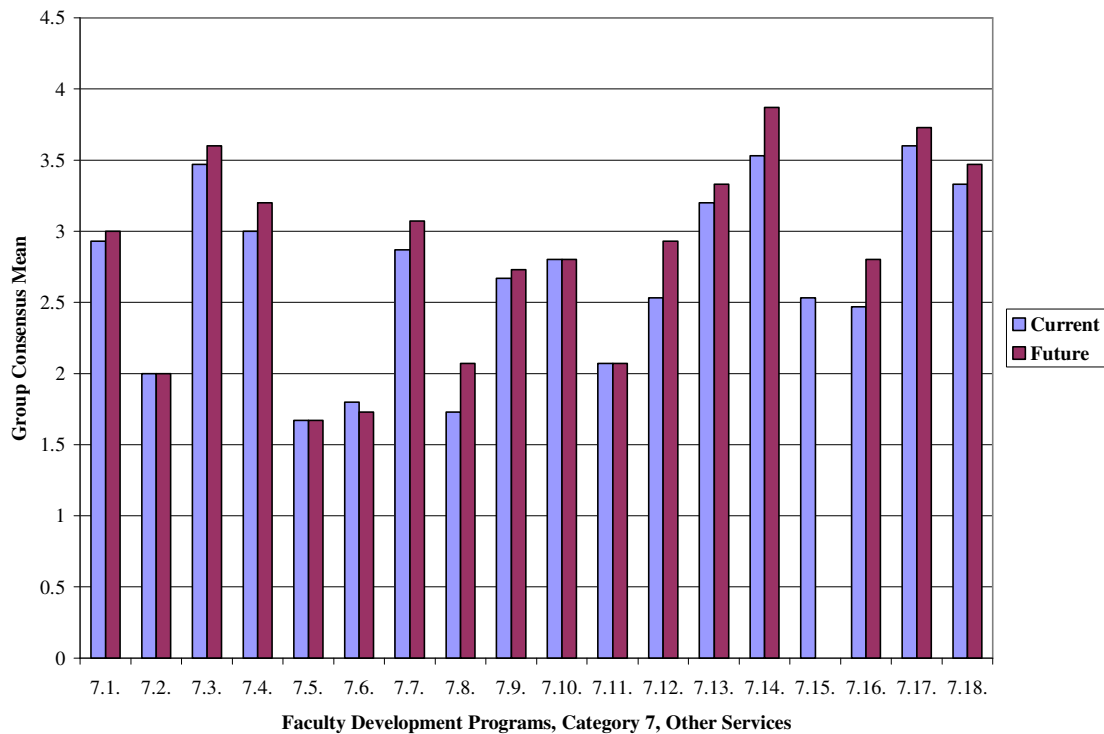
<b>Program category</b>	<b>Program</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
Other Services	<b>7.7.f.</b> inviting visiting scholars/experts to do presentations or lectures	3.20	3.07	0.78	0.60
	<b>7.8.f.</b> organizing health/wellness related programs	2.07	2.07	0.80	0.70
	<b>7.9.f.</b> organizing diverse student panels on their perceptions of teaching and learning	2.87	2.73	0.83	0.46
	<b>7.10.f.</b> recognition for teachers and TAs, such as “Thank-a-Prof” programs	2.93	2.80	0.70	0.41
	<b>7.11.f.</b> Weekly Teaching Tips	2.33	2.07	0.82	0.26
	<b>7.12.f.</b> continual research of new instructional technology and integration of technology	2.93	2.93	0.80	0.88
	<b>7.13.f.</b> broader support of teaching large classes	3.33	3.33	0.72	0.62
	<b>7.14.f.</b> service on university, college and departmental committees in support of teaching and learning	3.67	3.87	0.72	0.35
	<b>7.15.f.</b> scholarship on individual teaching and learning center’s staff practice	3.07	Consensus Not Reached	0.88	Consensus Not Reached
	<b>7.16.f.</b> assistance with scholarship of teaching and learning, including consulting on human subjects approval process, research methods, data analysis, networking among faculty for research mentoring	2.80	2.80	0.86	0.77
<b>7.17.f.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.60	3.73	0.63	0.46	
<b>7.18.f.</b> faculty showcases of best practice	3.47	3.47	0.64	0.52	

Three future faculty development programs in Category 7, Other Services, were considered essential by the panel members. Table 36 presents three future faculty development programs in Category 7, Other Services, that had consensus group rank 3.50 or higher (in descending order).

**TABLE 36. Future Essential Faculty Development Programs, Program Category 7, Other Services.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
Other Services.	<b>7.14.f.</b> service on university, college and departmental committees in support of teaching and learning	3.87	0.35
	<b>7.17.f.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.73	0.46
	<b>7.3.f.</b> customized programs on instructional issues for individual academic departments	3.60	0.63

The comparison between the currently essential programs and essential programs in the future for Category 7, Other Services, showed that twelve programs will have higher importance in the future, four programs were rated the same, and one program had slightly lower importance (Figure 26). For one program--scholarship on individual teaching and learning center's staff practice--no consensus was reached in terms of future essentiality.



**FIGURE 26. Comparison between Current and Future Essentiality of Faculty Development Programs, Program Category 7, Other Services.**

There were dramatic differences between current and future essentiality group consensus means for some programs:

- organizing health/wellness related programs (from 1.73 to 2.07 respectively);
- continual research of new instructional technology and integration of technology (from 2.53 to 2.93 respectively);
- service on university, college and departmental committees in support of teaching and learning (from 3.53 to 3.87 respectively); and

- assistance with scholarship of teaching and learning, including consulting on human subjects approval process, research methods, data analysis, networking among faculty for research mentoring (from 2.47 to 2.80 respectively).

The Delphi panel members identified two faculty development programs to be currently “essential” and three faculty development programs to be “essential” in the future in Program Category 7, Other Services.

#### *Future Faculty Development Programs, Final Framework*

One of the purposes of this dissertation study was to identify faculty development programs that will be essential for teaching and learning centers in the future as forecasted by the faculty development experts on the Delphi panel. This study created an essential future faculty development programs framework for teaching and learning centers in research extensive universities to introduce, enhance and improve faculty development programs. The criteria for inclusion of future faculty development programs in the essential faculty development programs framework were based on the 4-point Likert scale for ranking of the essentiality of the items in the Delphi questionnaires.

The Delphi panel members identified twenty eight future faculty development programs in five program categories as “essential” for teaching and learning centers in research extensive universities. This final framework is presented in Table 37.



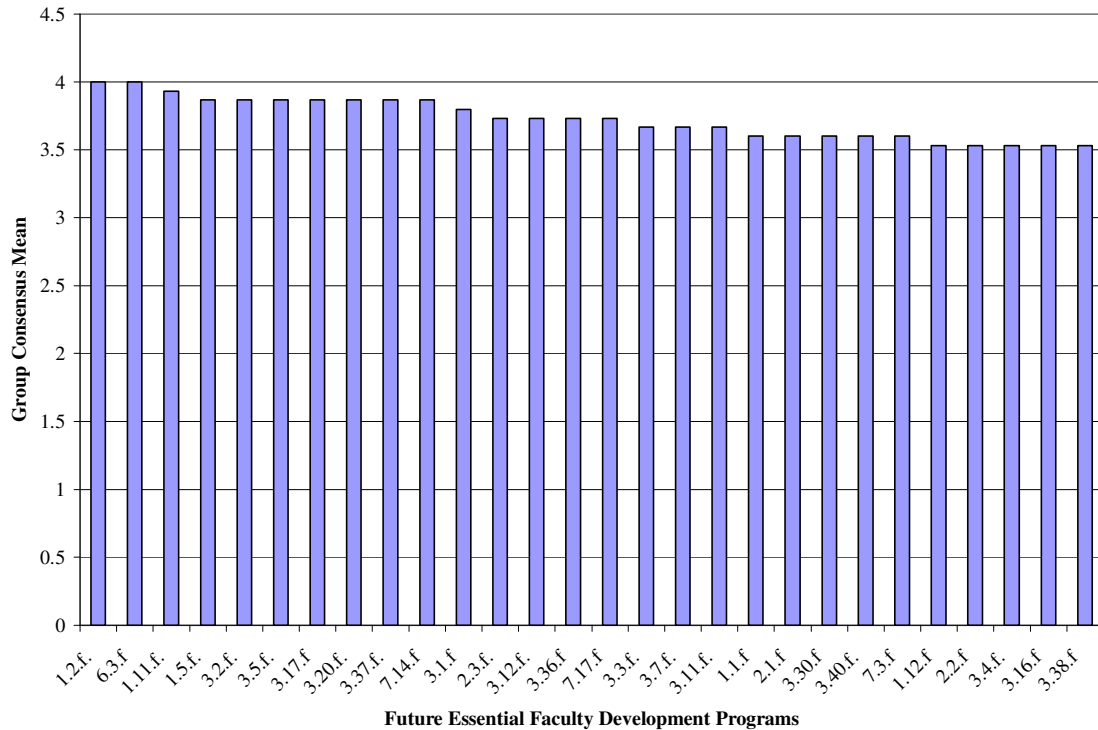
**TABLE 37. Future Essential Faculty Development Programs, Final Framework.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean</b>	<b>Consensus SD</b>
1. Consultations	<b>1.1.f.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.60	0.51
	<b>1.2.f.</b> consultation on enhancing teaching practices for individual faculty	4.00	0.00
	<b>1.5.f.</b> individual consultations for TAs	3.87	0.35
	<b>1.11.f.</b> consultation with campus groups or departmental units on teaching related issues	3.93	0.26
	<b>1.12.f.</b> consulting with departments on TA programs	3.53	0.64
2. University-wide Orientations	<b>2.1.f.</b> organized, campus-wide programs for new TAs	3.60	0.51
	<b>2.2.f.</b> organized, campus-wide programs for international TAs	3.53	0.52
	<b>2.3.f.</b> organized, campus-wide programs for new faculty	3.73	0.46
3. University-wide Workshops	<b>3.1.f.</b> enhancing teaching strategies	3.80	0.56
	<b>3.2.f.</b> course and syllabus design	3.87	0.35
	<b>3.3.f.</b> testing, test construction and evaluating student performance	3.67	0.82
	<b>3.4.f.</b> developing effective writing assignments	3.53	0.64
	<b>3.5.f.</b> assessing student learning outcomes	3.87	0.52
	<b>3.7.f.</b> understanding college students (learning styles, developmental patterns, diversity)	3.67	0.49
	<b>3.11.f.</b> multicultural teaching and learning; infusing multiculturalism into a course	3.67	0.49
	<b>3.12.f.</b> application of instructional technology; teaching with technology; using various multimedia software	3.73	0.46

TABLE 37. Continued.

Program category	Program	Consensus Mean	Consensus SD
3. University-wide Workshops	<b>3.16.f.</b> college teaching for TAs	3.53	0.74
	<b>3.17.f.</b> developing teaching strategies and methods of active and cooperative learning	3.87	0.35
	<b>3.20.f.</b> teaching for student-centered learning	3.87	0.35
	<b>3.30.f.</b> part-time/adjunct faculty development	3.60	0.74
	<b>3.36.f.</b> developing faculty in the scholarship of teaching	3.73	0.46
	<b>3.37.f.</b> teaching large classes	3.87	0.35
	<b>3.38.f.</b> peer review as a form of assessment; training faculty and TAs in the peer review process	3.53	0.74
	<b>3.40.f.</b> critical thinking and inquiry	3.60	0.51
6. Resources and Publications	<b>6.3.f.</b> updated website (with resources to download and links to other web-based resources)	4.00	0.00
7. Other Services	<b>7.3.f.</b> customized programs on instructional issues for individual academic departments	3.60	0.63
	<b>7.14.f.</b> service on university, college and departmental committees in support of teaching and learning	3.87	0.35
	<b>7.17.f.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.73	0.46

Figure 27 visually presents the distribution of group consensus means for future essential faculty development programs in five program categories:



**FIGURE 27. The Distribution of Group Consensus Means for Future Essential Faculty Development Programs.**

The Delphi panel members identified eighteen faculty development programs to be currently “essential” and twenty eight faculty development programs to be “essential” in the future for teaching and learning centers in research extensive universities.

Table 38 presents the comparison between the consensus group means for current and future essential programs for teaching and learning centers. Ten faculty development programs identified as “essential” in the future but were not identified as currently essential are marked in *italics*.

**TABLE 38. Comparison between Consensus Group Means for Current and Future Essential Faculty Development Programs.**

<b>Program category</b>	<b>Program</b>	<b>Consensus Mean Current</b>	<b>Consensus SD Current</b>	<b>Consensus Mean Future</b>	<b>Consensus SD Future</b>
1. Consultations	<b>1.1.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty	3.53	0.52	3.60	0.51
	<b>1.2.</b> consultation on enhancing teaching practices for individual faculty	4.00	0.00	4.00	0.00
	<b>1.5.</b> individual consultations for TAs	3.80	0.41	3.87	0.35
	<b>1.11.</b> consultation with campus groups or departmental units on teaching related issues	3.93	0.26	3.93	0.26
	<b>1.12.</b> consulting with departments on TA programs	3.60	0.63	3.53	0.64
2. University-wide Orientations	<b>2.1.</b> organized, campus-wide programs for new TAs	3.67	0.49	3.60	0.51
	<b>2.2.</b> <i>organized, campus-wide programs for international TAs</i>	3.47	0.52	3.53	0.52
	<b>2.3.</b> organized, campus-wide programs for new faculty	3.60	0.63	3.73	0.46
3. University-wide Workshops	<b>3.1.</b> enhancing teaching strategies	3.87	0.35	3.80	0.56
	<b>3.2.</b> course and syllabus design	3.80	0.41	3.87	0.35
	<b>3.3.</b> testing, test construction and evaluating student performance	3.67	0.49	3.67	0.82

TABLE 38. Continued.

Program category	Program	Consensus Mean Current	Consensus SD Current	Consensus Mean Future	Consensus SD Future
3. University-wide Workshops	<i>3.4. developing effective writing assignments</i>	3.47	0.64	3.53	0.64
	<b>3.5.</b> assessing student learning outcomes	3.80	0.41	3.87	0.52
	<i>3.7. understanding college students (learning styles, developmental patterns, diversity)</i>	3.40	0.51	3.67	0.49
	<i>3.11. multicultural teaching and learning; infusing multiculturalism into a course</i>	3.33	0.72	3.67	0.49
	<i>3.12. application of instructional technology; teaching with technology; using various multimedia software</i>	3.33	0.62	3.73	0.46
	<b>3.16.</b> college teaching for TAs	3.53	0.64	3.53	0.74
	<b>3.17.</b> developing teaching strategies and methods of active and cooperative learning	3.87	0.35	3.87	0.35
	<b>3.20.</b> teaching for student-centered learning	3.87	0.35	3.87	0.35
	<i>3.30. part-time/adjunct faculty development</i>	3.13	0.83	3.60	0.74
	<i>3.36. developing faculty in the scholarship of teaching</i>	3.40	0.63	3.73	0.46
<b>3.37.</b> teaching large classes	3.80	0.41	3.87	0.35	

TABLE 38. Continued.

Program category	Program	Consensus Mean Current	Consensus SD Current	Consensus Mean Future	Consensus SD Future
3. University-wide Workshops	<b>3.38.</b> <i>peer review as a form of assessment; training faculty and TAs in the peer review process</i>	3.20	0.68	3.53	0.74
	<b>3.40.</b> <i>critical thinking and inquiry</i>	3.40	0.51	3.60	0.51
6. Resources and Publications	<b>6.3.</b> updated website (with resources to download and links to other web-based resources)	3.87	0.35	4.00	0.00
7. Other Services	<b>7.3.</b> <i>customized programs on instructional issues for individual academic departments</i>	3.47	0.52	3.60	0.63
	<b>7.14.</b> service on university, college and departmental committees in support of teaching and learning	3.53	0.64	3.87	0.35
	<b>7.17.</b> faculty facilitated sessions for colleagues on issues of teaching and teaching methods	3.60	0.63	3.73	0.46

## Research Question Four

The fourth researched question for this study was: “What should be the key goals for teaching and learning centers as reported by directors in selected research extensive universities?” To answer this question, at the end of the first questionnaire, the Delphi panel members were asked to list and briefly describe what goals they perceive to be the top five for centers for teaching and learning in a research extensive university.

The first round questionnaire returned a variety of goals for teaching and learning centers in a research extensive university. The Delphi experts suggested a list containing 75 different goals. All suggested goals were grouped based on a content analysis and 23 categories were formed. There was no prioritization in the sequence of presentation of the goal categories. The panel members were asked to rank the importance of each goal from “1” to “4”, where:

- “4” represented a goal that is “**very important**” to teaching and learning centers in a research extensive university;
- “3” represented a goal that is “**important**” to teaching and learning centers in a research extensive university;
- “2” represented a goal that maybe “**not very important**” to teaching and learning centers in a research extensive university;
- “1” represented a goal that is “**unimportant**” to teaching and learning centers in a research extensive university.

The results of experts' opinions on how important each goal is for teaching and learning centers in research extensive universities are presented in Table 19. Table 19 presents the distribution of initial mean scores and standard deviations for each goal as well as consensus mean scores and standard deviations for each goal. The goals are listed in descending order based on the consensus mean.

**TABLE 39. Goals for Teaching and Learning Centers in Research Extensive Universities.**

<b>Goals</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
<b>10.</b> To provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning)	3.93	4.00	0.26	0.00
<b>13.</b> To assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources	4.00	4.00	0.00	0.00
<b>16.</b> To improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution	3.80	4.00	0.41	0.00
<b>17.</b> To promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc)	3.73	4.00	0.46	0.00
<b>22.</b> To provide high quality services and programs so faculty can count on excellence from a center	4.00	4.00	0.00	0.00
<b>3.</b> To provide professional development opportunities and training for graduate students and TAs	3.73	3.93	0.46	0.26
<b>4.</b> To provide a safe place where faculty can come to discuss teaching and learning ideas and issues	3.93	3.93	0.26	0.26



TABLE 39. Continued.

Goals	Initial Mean	Consensus Mean	Initial SD	Consensus SD
5. To collaborate with various campus units focused on aspects of learning and teaching	3.87	3.93	0.35	0.26
7. To create and sustain a culture of excellence in teaching and learning on campus	3.87	3.93	0.35	0.26
2. To build and foster collegiality among university teachers and learners	3.60	3.80	0.63	0.41
8. To participate in the scholarly work that advances understanding of teaching and learning as a scholarly process and disseminate that information across campus and across the country/support center personnel to do it	3.53	3.80	0.52	0.41
15. To provide a wide range of services so most faculty (tenure track, non tenure track, adjunct, part-time) and TAs can find a connection to a center/promote a “Can-Do” image of a center	3.67	3.80	0.49	0.41
14. To promote ideas of scholarship of teaching and learning on campus	3.60	3.73	0.51	0.46
1. To provide recognition and reward for excellence in teaching	3.67	3.67	0.72	0.62
6. To provide opportunities and support for faculty to engage in their own investigations of teaching and learning in their specific disciplines	3.47	3.60	0.64	0.63
18. To develop mechanisms and learning opportunities to link faculty development efforts and programs with student learning outcomes	3.47	3.60	0.64	0.63
19. To provide multicultural teaching and learning services so faculty can teach a diverse student body effectively	3.53	3.60	0.64	0.51
23. To prepare and helping others to prepare future faculty	3.53	3.47	0.64	0.64
11. To provide resources and support for <i>individual departments</i> to develop culture and structure that facilitates faculty growth as teachers and learners	3.33	3.40	0.62	0.51

**TABLE 39. Continued.**

<b>Goals</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
<b>9.</b> To conduct campus-specific research on teaching and learning as well as faculty/TAs needs and use the data to enhance a university experience	3.27	3.33	0.60	0.49
<b>21.</b> To serve as a champion to be certain that teaching is explicitly considered for tenure and promotion	3.13	3.27	0.83	0.59
<b>12.</b> To provide one to two day teaching and learning conferences for faculty	3.07	3.20	0.88	0.56
<b>20.</b> To balance attention to instructors with attention to administrators, researching their needs and their understanding of teaching and learning	3.07	3.00	0.88	0.76

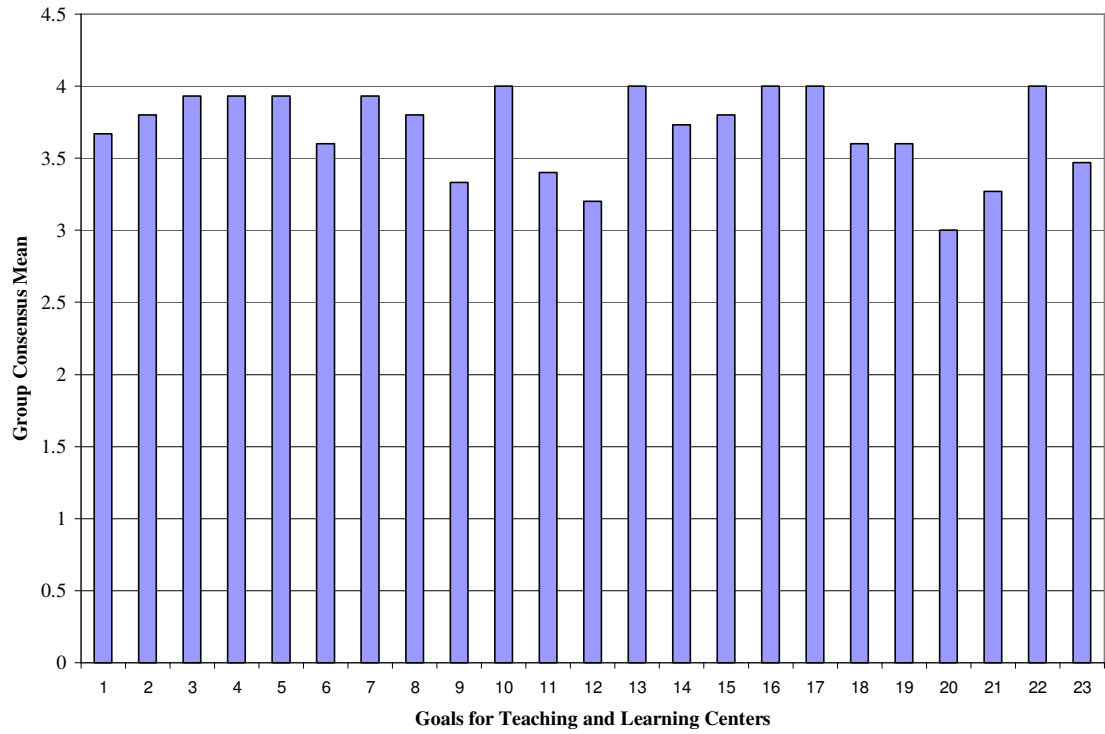
The Delphi panel members perceived seventeen goals to be “very important” to teaching and learning centers in research extensive universities. These seventeen goals had consensus group rank 3.50 or higher. Five goals out of these 17 had group consensus means of 4.00 and consensus standard deviations of 0.00, these goals are:

- to provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning);
- to assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources;

- to improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution;
- to promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc);
- to provide high quality services and programs so faculty can count on excellence from a center.

The Delphi panel members considered six other goals to be “important” to teaching and learning centers in research extensive universities. These six goals had consensus group mean between 2.50 and 3.49.

Figure 28 visually presents the distribution of group consensus means for goals for teaching and learning centers in research extensive universities:



**FIGURE 28.** The Distribution of Group Consensus Means for Goals for Teaching and Learning Centers in Research Extensive Universities.

## Research Question Five

The fifth researched question for this study was: “What are the biggest challenges for teaching and learning centers as reported by directors in selected research extensive universities?” To answer this question, at the end of the first questionnaire, the Delphi panel members were asked to list and briefly describe what challenges they perceive to be the top five for centers for teaching and learning in a research extensive university.

The first round questionnaire returned a variety of challenges for teaching and learning centers in a research extensive university. The Delphi experts suggested a list containing 75 different challenges. All suggested challenges were grouped based on a content analysis and 23 categories were formed. There was no prioritization in the sequence of presentation of the challenges categories. The panel members were asked to rank the perceived impact of challenges from “1” to “4”, where:

- “4” represented a challenge with “**major impact**” on teaching and learning centers in a research extensive university;
- “3” represented a challenge with “**moderate impact**” on teaching and learning centers in a research extensive university;
- “2” represented a challenge with “**minimal impact**” on teaching and learning centers in a research extensive university;
- “1” represented a challenge with “**no impact**” on teaching and learning centers in a research extensive university.

Table 40 presents the distribution of initial mean scores and standard deviations for each challenge as well as consensus mean scores and standard deviations for each challenge. The challenges are listed in descending order based on the consensus mean.

**TABLE 40. Challenges for Teaching and Learning Centers in Research Extensive Universities.**

<b>Challenges</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
<b>1.</b> An institutional culture that values research as opposed to teaching	3.80	3.93	0.41	0.26
<b>9.</b> Lack of faculty time	3.73	3.80	0.70	0.41
<b>2.</b> Lack of meaningful rewards for faculty focus on teaching and lack of integration into Promotion and Tenure decisions and process	3.60	3.67	0.51	0.49
<b>7.</b> Varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made	3.47	3.53	0.52	0.52
<b>11.</b> Developing a “presence” on campus where a teaching and learning center is perceived as a “doer and a shaker”/visibility	3.40	3.47	0.74	0.52
<b>5.</b> Finding, training, and maintaining good staff	3.07	3.40	0.96	0.63
<b>12.</b> Maintaining good relationships and collaborations with various units across campus	3.40	3.40	0.83	0.63
<b>16.</b> Dealing with change: be ready to shift allocation of time and resources and to continually upgrade knowledge base and skills and keep credibility through times of change	3.20	3.33	0.94	0.62
<b>8.</b> Getting faculty to participate in a teaching and learning center’s programs and discussions about teaching and learning	3.33	3.27	0.72	0.59
<b>10.</b> Adequate funding to provide enough personnel to provide effective and quality programs	3.13	3.20	0.74	0.56

**TABLE 40. Continued.**

<b>Challenges</b>	<b>Initial Mean</b>	<b>Consensus Mean</b>	<b>Initial SD</b>	<b>Consensus SD</b>
<b>20.</b> Staying essential: always be prepared to give evidence that the programs and services are essential to a university mission	3.20	3.20	0.77	0.68
<b>22.</b> Need for ways of assessing teaching and learning process	3.13	3.20	0.74	0.68
<b>13.</b> Selling, rewarding and institutionalizing the scholarship of teaching and learning	3.13	3.07	0.74	0.59
<b>14.</b> Helping faculty understand their students and helping students learning; assessment of student learning outcomes	2.93	3.07	0.80	0.26
<b>17.</b> The rapidly changing scene of instructional technology/integrating technology	3.00	3.07	0.85	0.70
<b>6.</b> The overwhelming ratio of instructors to faculty development staff	3.00	3.00	0.76	0.65
<b>19.</b> Lack of teaching and learning center's staff time to be involved in all "good" initiatives	2.87	2.93	0.74	0.46
<b>15.</b> Helping faculty balance their many roles and be ready to continually respond to rapid changes in the faculty role	2.87	2.80	0.92	0.77
<b>4.</b> Maintaining a centralized teaching center that serves the discipline-specific needs of individual departments and schools	2.60	2.73	0.74	0.59
<b>23.</b> Need for coordination of efforts in an environment in which faculty development is becoming increasingly decentralized	2.67	2.73	0.90	0.59
<b>18.</b> Strong separation between academic areas and individual scholars and broad spectrum of needs across instructors	2.60	2.53	0.91	0.74
<b>3.</b> Need for a systematic assessment of effectiveness for a teaching and learning center	2.47	2.47	0.83	0.52
<b>21.</b> Need for further understanding and supporting teaching and learning in interdisciplinary contexts	2.47	2.33	0.83	0.82

The Delphi panel members perceived four challenges as challenges with “major impact” on teaching and learning centers in research extensive universities. The four challenges that had consensus group rank 3.50 or higher included:

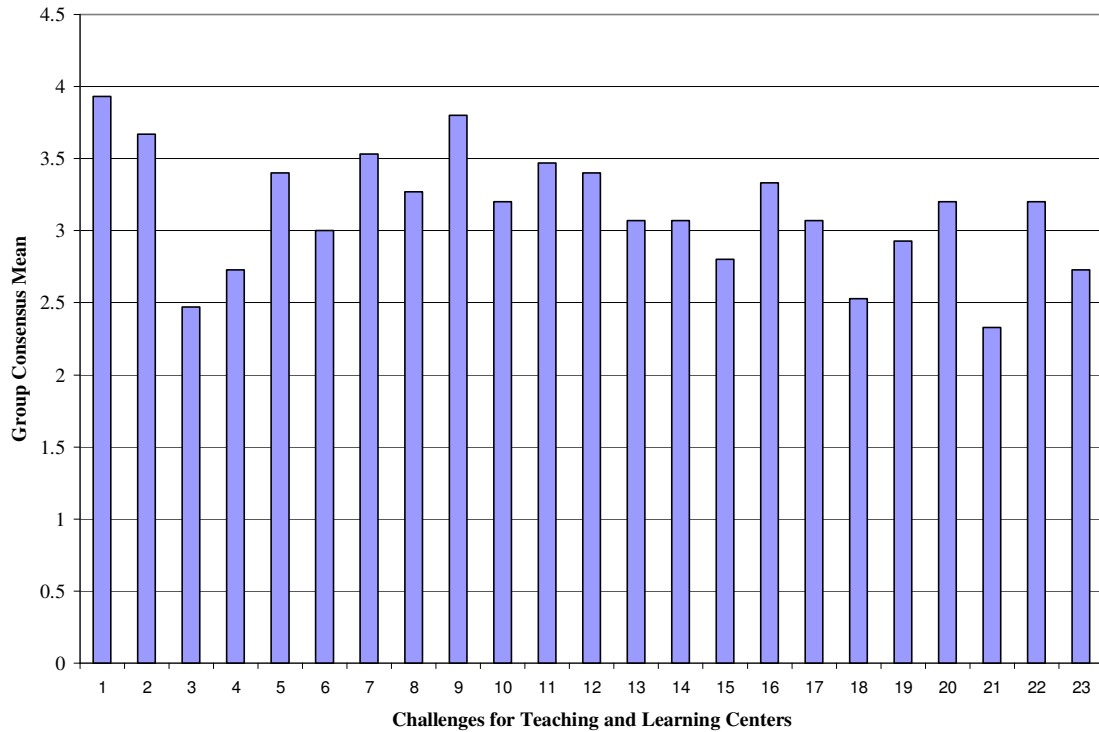
- an institutional culture that values research as opposed to teaching (group consensus mean of 3.93 and consensus standard deviation of 0.26);
- lack of meaningful rewards for faculty focus on teaching and lack of integration into Promotion and Tenure decisions and process (group consensus mean of 3.67 and consensus standard deviation of 0.49);
- varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made (group consensus mean of 3.53 and consensus standard deviation of 0.52);
- lack of faculty time (group consensus mean of 3.80 and consensus standard deviation of 0.41).

The Delphi panel members considered the majority of the challenges as challenges with “moderate impact” on teaching and learning centers in research extensive universities. These seventeen challenges had consensus group mean between 2.50 and 3.49.

Two challenges--need of a systematic assessment of effectiveness of a teaching and learning center; and need for further understanding and supporting teaching and learning in interdisciplinary contexts--were considered as challenges with “minimal impact” on teaching and learning centers in research extensive universities and had consensus group mean scores of 2.47 and 2.33 respectively.



Figure 29 visually presents the distribution of group consensus means for challenges for teaching and learning centers in research extensive universities:



**FIGURE 29. The Distribution of Group Consensus Means for Challenges for Teaching and Learning Centers in Research Extensive Universities.**

## Summary

The Delphi panel members considered 18 faculty development programs in five program categories to be “essential” for teaching and learning centers in research extensive universities. These five program categories included: Consultations,

University-wide Orientations, University-wide Workshops, Resources and Publications, and Other Services. None of the faculty development programs in two program categories--Intensive Programs; and Grants, Awards, and Exchange Programs--were identified as essential for teaching and learning centers.

The Delphi panel members provided descriptions of essential faculty development programs at their institutions as well as named some programs at other institutions and provided website links to most of these programs.

The Delphi panel members considered 28 faculty development programs in five program categories to be “essential” for teaching and learning centers in research extensive universities in the future. These five program categories were the same as in the final framework for currently essential programs and included: Consultations, University-wide Orientations, University-wide Workshops, Resources and Publications, and Other Services. None of the future faculty development programs in two program categories--Intensive Programs; and Grants, Awards, and Exchange Programs--were identified as essential for teaching and learning centers. The Delphi panel members identified ten more faculty development programs as “essential” for teaching and learning centers in the future (28 total) in comparison to currently “essential” faculty development programs (18 total).

The Delphi panel members were assessing 23 categories of key goals and 23 categories of the biggest challenges for teaching and learning centers in a research extensive university. Seventy-four percent (74%) of the identified goals were considered to be “very important” to teaching and learning centers in research extensive

universities. The Delphi panel members perceived four challenges (17%) as challenges with “major impact” on teaching and learning centers in research extensive universities.

A series of conclusions for each of the five research questions have been reached based on the outcomes of the study. The following chapter summarizes the results of the data analysis and the conclusions made from the study results.

## CHAPTER V

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

Clayton (1997) emphasizes that the Delphi method has great strength and utility. It collects and organizes judgments in a systematic fashion. It gains input, establishes priorities and builds consensus. It organizes and helps to focus dissent, turning this group effect into a window of opportunity. The Delphi method is an appropriate way to harness expert opinion for critical-decision making tasks in education (Clayton, 1997; Murry & Hammons, 1995).

According to Singer (2002), as repositories of institutional memory, coordinators of campus conversations on learning and teaching, and part of larger national and international conversations on education, teaching and learning centers maximize the forward momentum of educational reform. Sorcinelli et al. (2006) state that despite all the forces for change pressing on faculty and their institutions--information technology, multiculturalism, performance measures, competition, globalization, and even more rapid pace of academic life--faculty developers are still dedicated to their earliest goal of addressing the needs of the "whole person" in a flourishing campus environment. They are dedicated to creating an academic rainforest that is generative, renewing, based on discourse across boundaries, and offering mutual support, collegiality, and community.

## Summary of Study Methodology and Procedures

In this study, the Delphi method was used to gain consensus from the study experts on essential and model faculty development programs, key goals and biggest challenges for teaching and learning centers in research extensive universities. This study included two major phases:

- (1) Creation of the original survey instrument, and
- (2) Conducting the surveys with the identified experts.

The first phase utilized three experts in the field of faculty development to validate the questionnaire instrument. The second phase was completed by a panel of 15 experts and was conducted in four iterations.

The *initial questionnaire* consisted of 91 suggested essential faculty development programs for teaching and learning centers in a research extensive university. The faculty development programs included in the initial instrument were identified through an extensive review of the literature in the field of faculty development. Each program was assessed twice: once in terms of its current essentiality and a second time in terms of its future essentiality. Overall, the Delphi panel members were assessing a total of 182 variables in the first round. All suggested programs were organized according to seven program categories: Consultations; University-wide Orientations; University-wide Workshops; Intensive Programs; Grants, Awards, and Exchange Programs; Resources and Publications; and Other Services. The Delphi experts were asked to rank the suggested essential faculty development programs on a Likert-type scale indicating a

degree of essentiality from “essential” to “unimportant and should not be included” (in terms of both current and future essentiality). Additionally, the panel members were asked to add any new essential programs that they believed should be included and that were not part of the original list. Two additional study questions were designed as open-ended requests for the panel members (1) to list and briefly describe what goals they perceived to be the top five for centers for teaching and learning in a research extensive university, and (2) to list and briefly describe what challenges they perceived to be the top five for centers for teaching and learning in a research extensive university.

The *second round questionnaire* included all original suggested faculty development programs along with additional faculty development programs suggested by the panelists in the first round. The Delphi panel experts added a total of 32 new faculty development programs during the first round questionnaire. For each suggested essential program (in terms of both current and future essentiality), the second round questionnaire tables provided the mean score and the standard deviation for the group, individual panel member’s score and space for change of rank if deemed appropriate. The Delphi panel experts were asked to provide a new rank if they desired to make a change for each suggested essential faculty development program (in terms of both current and future essentiality). Changes of ranks were permitted in the process of building the consensus. The first round questionnaire returned a variety of goals and challengers for teaching and learning centers in a research extensive university. All suggested goals were grouped based on a content analysis and 23 categories were formed. The Delphi experts were asked to rank the importance of each goal based on a

4-point Likert-type scale indicating a degree of importance from “very important” to “unimportant” (in terms of both current and future importance). All suggested challenges were grouped based on a content analysis and 23 categories were formed. The Delphi experts were asked to rank their perceived impact of challenges on teaching and learning centers in a research extensive university on a 4-point Likert-type scale indicating a degree of perceived impact from a challenge with “major impact” to a challenge with “no impact”. Overall, the Delphi panel members were assessing a total of 292 variables in the second round.

The *third round questionnaire* included the responses for all suggested essential faculty development programs as a result of the responses to the second round questionnaire. The consensus items results (means and standard deviations) were provided for the panel members’ information only. The panel members were asked to review their responses for only those items where consensus had not been reached. The third round questionnaire also continued the exploration of the goals and challenges for teaching and learning centers in a research extensive university. The tables were modified to include the mean score and the standard deviation for the group, an individual panel member’s score and space for change of rank if deemed appropriate. The Delphi panel experts were asked, after reviewing the mean score and the standard deviation for the group and their previous rank, to provide a new rank if they desired to make a change for each goal or challenge. Overall, the Delphi panel members were assessing a total of 121 variables in the third round.

The *fourth round questionnaire* included only those suggested essential faculty development programs where consensus was not reached in one or more ranking (current or future essentiality) during the previous rounds. Those were the programs that went through the third round of assessment. The fourth round questionnaire also continued the exploration of the goals and challenges for teaching and learning centers in a research extensive university. The questionnaire included only the responses for the goals and challenges where consensus had not been reached. One of the additional purposes of this dissertation study was to identify model faculty development programs for each program category that had essential programs. The fourth round questionnaire included the tables that listed those programs that had been determined to be essential by the expert panel. The programs were grouped within their respective group category. The panel members were asked to identify and briefly describe one or more model programs for each program category that related to the essential programs within that category. Overall, the Delphi panel members were assessing a total of 30 variables in the fourth round. At the conclusion of the fourth round questionnaire iteration, consensus was reached about the current and future essentiality of faculty development programs for teaching and learning centers in a research extensive university as well as about the importance of the goals and perceived impact of challenges for teaching and learning centers in a research extensive university.



## Summary of Findings

The following findings were discovered in review and analysis of the study results:

1. Key findings regarding currently essential faculty development programs for teaching and learning centers in a research extensive university:
  - The Delphi panel members considered 18 faculty development programs in five program categories to be “essential” for teaching and learning centers in research extensive universities. These five program categories included: Consultations, University-wide Orientations, University-wide Workshops, Resources and Publications, and Other Services. None of the faculty development programs in two program categories--Intensive Programs; and Grants, Awards, and Exchange Programs--were identified as essential for teaching and learning centers.
  - Five faculty development programs in Program Category 1, Consultations, were considered essential by the panel members. The five faculty development programs in Category 1, Consultations, that had consensus group rank 3.50 or higher included: classroom videotaping, observations, and critique of classroom instruction for individual faculty; consultation on enhancing teaching practices for individual faculty; individual consultations for TAs; consultation with campus groups or departmental units on teaching related issues; and consulting with departments on TA programs.

- One faculty development program under Program Category 1, Consultations--consultation on enhancing teaching practices for individual faculty--had a consensus group rank of 4.0.
- Two faculty development programs in Program Category 2, University-wide Orientations, were considered essential by the panel members. The two faculty development programs in Program Category 2, University-wide Orientations, that had consensus group rank 3.50 or higher included: organized, campus-wide programs for new TAs; and organized, campus-wide programs for new faculty.
- Eight faculty development programs in Program Category 3, University-wide Workshops, were considered essential by the panel members. The two faculty development programs in Program Category 3, University-wide Workshops, that had consensus group rank 3.50 or higher included: 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.
- One faculty development program in Program Category 6, Resources and Publications--updated website (with resources to download and links to other web-based resources)--was considered essential by the panel members. This faculty development program had a consensus group rank of 3.87.

- Two faculty development programs in Program Category 7, Other Services, were considered essential by the panel members. The two faculty development programs in Program Category 7, Other Services, that had consensus group rank 3.50 or higher included: service on university, college and departmental committees in support of teaching and learning; and faculty facilitated sessions for colleagues on issues of teaching and teaching methods.
  - The majority (92 %) of the faculty development programs in Program Category 4, Intensive Programs, were considered “important but not essential” for teaching and learning centers in research extensive universities.
  - The majority (67%) of the faculty development programs in Program Category 5, Grants, Awards, and Exchange Programs, were considered “important but not essential” for teaching and learning centers in research extensive universities.
2. Key findings regarding model faculty development programs for teaching and learning centers in a research extensive university:
- The Delphi panel members provided descriptions of essential faculty development programs at their institutions as well as named and described some programs at other institutions.
  - The Delphi panel members described 10 model programs under Program Category 1, Consultations; 13 model programs under Program Category 2, University-wide Orientations; 4 model programs under Program Category 3,

University-wide Workshops; and 5 model programs under Program Category 7, Other Services. The Delphi experts provided website links to most of these programs.

3. Key findings regarding future essential faculty development programs for teaching and learning centers in a research extensive university:

- The Delphi panel members considered 28 faculty development programs in five program categories to be “essential” for teaching and learning centers in research extensive universities in the future. These five program categories were the same as in the final framework for currently essential programs and included: Consultations, University-wide Orientations, University-wide Workshops, Resources and Publications, and Other Services. None of the future faculty development programs in two program categories--Intensive Programs; and Grants, Awards, and Exchange Programs--were identified as essential for teaching and learning centers.
- The Delphi panel members identified ten more faculty development programs as “essential” for teaching and learning centers in the future (28 total) in comparison to currently “essential” faculty development programs (18 total). Table 41 presents a summary of faculty development programs that were additionally identified as “essential” for teaching and learning centers in the future.

**TABLE 41. Distribution of Additionally Identified Future Essential Programs According to Program Categories.**

<b>Program Category</b>	<b>Number of New Programs</b>
2. University-wide orientations	1
3. University-wide workshops	8
7. Other services	1

- The Delphi panel members expected that some essential faculty development programs will have higher importance in the future than in the present; some will have slightly lower importance; and some will be equally important. Nine faculty development programs had increased consensus group means in comparison with the consensus group means for their current essentiality. The most dramatic increase in group consensus means was for one program under Program Category 7, Other Services--service on university, college and departmental committees in support of teaching and learning. Six faculty development programs had slightly decreased consensus group means in comparison with the consensus group means for their current essentiality. Three faculty development programs kept the consensus group means the same for their current and future essentiality.
- There were dramatic differences between current and future essentiality group consensus means for most of the ten faculty development programs identified as “essential” in the future and that were not identified as currently essential. Such programs as (1) understanding college students (learning styles, developmental patterns, diversity); (2) multicultural teaching and

learning; infusing multiculturalism into a course application of instructional technology; (3) teaching with technology; using various multimedia software; (4) part-time/adjunct faculty development; (5) developing faculty in the scholarship of teaching; (6) peer review as a form of assessment; training faculty and TAs in the peer review process; (7) critical thinking and inquiry (all seven under Program Category 3, University-wide Workshops); and (8) customized programs on instructional issues for individual academic departments (under Program Category 7, Other Services) were considered essential in the future activities of teaching and learning centers in research extensive universities.

- Two faculty development programs received a perfect score of 4.0 regarding their future essentiality. These two programs were: (1) consultation on enhancing teaching practices for individual faculty (under Program Category 1, Consultations), and (2) updated website (with resources to download and links to other web-based resources) (under Program Category 6, Resources and Publications).
- The majority (92 %) of the future faculty development programs in Program Category 4, Intensive Programs, were considered “important but not essential” for teaching and learning centers in research extensive universities.
- The majority (73%) of the future faculty development programs in Program Category 5, Grants, Awards, and Exchange Programs, were considered

“important but not essential” for teaching and learning centers in research extensive universities.

4. Key findings regarding the key goals for teaching and learning centers in a research extensive university:
  - Seventy-four percent (74%) of the identified goals were considered to be “very important” to teaching and learning centers in research extensive universities. The remaining 26% were ranked as “important” to teaching and learning centers in research extensive universities.
  - Five goals received the highest score of 4.0 regarding their importance for teaching and learning centers. These goals were (1) to provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning); (2) to assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources; (3) to improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution; (4) to promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc); and (5) to provide high quality services and programs so faculty can count on excellence from a center.

5. Key findings regarding the biggest challenges for teaching and learning centers in a research extensive university:

- The Delphi panel members perceived four challenges (17%) as challenges with “major impact” on teaching and learning centers in research extensive universities. These four challenges included (1) an institutional culture that values research as opposed to teaching; (2) lack of meaningful rewards for faculty focus on teaching and lack of integration into promotion and tenure decisions and process; (3) varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made; and (4) lack of faculty time.
- The Delphi panel members considered the majority (74%) of the challenges as challenges with “moderate impact” on teaching and learning centers in research extensive universities. The remaining 8% were ranked as challenges with “minimal impact” on teaching and learning centers in research extensive universities.

### **Summary of Dissertation Study Conclusions**

The following general conclusions can be made from a review and analysis of the findings of this dissertation study:

1. Individual consultations with faculty members are essential modes of faculty development. This program element has great potential for promoting change



when combined with classroom videotaping, observations and critique of classroom instruction for individual faculty. The important types of consultation services offered by teaching and learning centers include consultations on enhancing teaching strategies with individual faculty and TAs.

2. Consultations with campus groups and departmental units on teaching related issues and collaborations with departments on TA programs are essential programs for teaching and learning centers. Providing consultations to other units and groups on campus is an important aspect of teaching and learning centers' activities.
3. University-wide orientations are an important part of faculty development programming at teaching and learning centers in research extensive universities. Organized, campus-wide orientation programs for new faculty and new TAs are essential programs for teaching and learning centers.
4. Organized, campus-wide orientation programs for international TAs will be essential for teaching and learning centers in the future.
5. New information or skill-building university-wide workshops that provide an opportunity to stimulate thinking and communication about important topics for faculty members are essential services of teaching and learning centers.
6. The current essential topics for faculty development university-wide workshops include: 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.

7. New and changing educational environment requires new efforts to support and enrich faculty work. In the future the faculty will benefit from university-wide workshops on such topics as developing effective writing assignments; understanding college students (learning styles, developmental patterns, diversity); multicultural teaching and learning, infusing multiculturalism into a course; applications of instructional technology and teaching with technology; part-time/adjunct faculty development; developing faculty in the scholarship of teaching; peer review as a form of assessment; and critical thinking and inquiry.
8. An updated website with resources to download and links to other web-based information is an essential component of teaching and learning centers resources. The essentiality of updated websites for the dissemination of resource materials will increase in the future.
9. It is essential that faculty developers serve on university, college and departmental committees charged with responsibility for supporting and promoting the issues of teaching and learning on campuses.
10. Faculty facilitated sessions for colleagues on issues of teaching and learning methods is an essential aspect of faculty development programming at teaching and learning centers.
11. Building partnering relationships with other units on campuses will be an important activity for teaching and learning centers. Creating and designing

customized programs on instructional issues for individual academic departments is an essential mode of faculty development activities for teaching and learning centers.

12. The top five goals guiding teaching and learning centers' programs are:

- To provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning);
- To assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources;
- To improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution;
- To promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc);
- To provide high quality services and programs so faculty can count on excellence from a center.

13. The challenges that are most influencing the activities of teaching and learning centers include:

- An institutional culture that values research as opposed to teaching;

- Lack of meaningful rewards for faculty focus on teaching and lack of integration into Promotion and Tenure decisions and process;
- Varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made; and
- Lack of faculty time.

14. Teaching and learning centers need to be flexible in order to meet the changing needs of faculty. The activities of teaching and learning centers need to be designed to utilize a variety of approaches and program offerings to serve a large audience.

### **Recommendations for the Field**

The data from this study suggest that in order to enhance teaching and learning excellence on research extensive universities' campuses, directors of teaching and learning centers should do the following:

1. Stay current with an expanding research in the field of faculty careers, adult learning, organizational change, educational reform and faculty development in order to design a variety of essential program offerings to serve a large audience.
2. Effectively communicate the importance of teaching and learning excellence on campuses by serving as key participants in institutional decision-making on issues related to teaching and learning.

3. Plan and coordinate faculty development activities with other units or offices on campus to enhance the focus on institutional initiatives (e.g., assessing students learning outcomes, multiculturalism, diversity, changing faculty roles) and to improve teaching and learning across campus.
4. Design and provide high quality services so that faculty can count on excellence from a teaching and learning center.
5. Assess faculty development program offerings regularly as the role of faculty member continues to change. Use the findings from this study to assess current faculty development program offerings and to inform decision making about future faculty development program offerings.
6. Coordinate and align faculty development programs to ensure that institutional goals and mission are supported.
7. Monitor and regularly review faculty development program offerings at other teaching and learning centers in research extensive universities. Some faculty development programs may serve as model programs of best practice.
8. Integrate key goals for teaching and learning centers identified in this study to teaching and learning centers' strategic planning.

## **Recommendations for Further Studies**

In this study, the Delphi method was used to gain consensus from the study experts on essential and model faculty development programs, key goals and biggest challenges for teaching and learning centers in research extensive universities. This study used an original survey instrument which was created based on an extensive review of the literature in the field of faculty development and which was validated by a pilot study which included three knowledgeable people in the field of faculty development. The expert panel consisted of 15 faculty development experts--directors of teaching and learning centers in research extensive universities--from 14 U.S. states. The issues related to the dissertation study methodology and Delphi panel selection drive the recommendations for further study. To enhance the results from this research, the author recommends the following aspects to be pursued in future studies:

1. A larger Delphi panel may return a different set of results. The panel for this study consisted of 15 faculty development experts from 14 U.S. states. All 15 experts participated in all 4 rounds of the Delphi study. There may have been limitations to the set of opinions based on the number and specific qualifications (the background and experiences) of the study experts. A larger expert sample may provide additional insights into the issues addressed in this study.
2. In most applications of the Delphi method, there are two ways to construct study questionnaires. The first way is when a researcher designs a questionnaire based on the perspectives found in the literature and then sends it out to the experts

(experts have an opportunity to add new information if they wish so). The second way is when the first questionnaire poses the problem in broad terms (an open survey) and invites answers and comments from the experts. The replies to that questionnaire are summarized and used to construct a second questionnaire. In this study the first approach was used. Further research studies may begin by asking the panel experts for their personal ideas and suggestions on essential faculty development programs first, thus it may shed light on aspects of faculty development programming at teaching and learning centers not yet recognized in the literature on the subject.

3. A different panel, by size or make up, may (1) suggest other essential faculty development programs that have not been identified by the researcher and the experts for this study; (2) describe different model programs for teaching and learning centers; (3) identify a different set of goals and biggest challenges for teaching and learning centers and prioritize their importance and impact differently.
4. The focus of this study was on teaching and learning centers in the U.S. Future research might identify essential faculty development programs for teaching and learning centers in other countries, in order to analyze differences and similarities.
5. The focus of this research was on teaching and learning centers in research extensive universities. One of the distinguishing characteristics of American higher education is the diverse array of institutional types available to educate

students. Depending on the institutional type (community colleges, liberal arts colleges), faculty development modes, structures, influences on practice, and current and future priorities may vary. Further research may explore the differences and similarities in faculty development programming among a range of institutional types.

### **Summary: Dissertation Study Significance**

This dissertation study identified 18 currently essential faculty development programs and 28 future essential faculty development programs for teaching and learning centers in research extensive universities. The number of identified essential faculty development programs is substantial and creates an essential faculty development programs framework for teaching and learning centers in research extensive universities for introducing, enhancing, and improving faculty development programs. All essential programs carry substantial importance for teaching and learning centers, as evidenced by the Delphi panel group rank means in reaching consensus. The Delphi panel also provided descriptions of model programs for identified essential faculty development programs that are considered as successful best practices to faculty development. Additionally, the Delphi panel provided insights into key goals and key challenges for teaching and learning centers that can be used by directors to plan essential faculty development programs.



An essential faculty development programs framework may serve as a means for evaluating existing faculty development programming and guiding the planning of new faculty development programs to enhance teaching and learning on research extensive universities campuses. The essential and model faculty development programs identified in this research along with the identified challenges and goals will be useful for teaching and learning centers in research extensive universities in initiating, improving or expanding their faculty development initiatives to enhance faculty performance and achieve greater institutional effectiveness.

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**APPENDIX 1**

**DELPHI PANEL EXPERTS**

**Dr. Gabriele Bauer**

Assistant Director,  
Center for Teaching Effectiveness  
University of Delaware  
Newark, DE

**Dr. Constance E. Cook**

Director and Associate Vice Provost,  
Center for Research on Learning and Teaching  
University of Michigan-Ann Arbor  
Ann Arbor, MI

**Dr. Judy Grace**

Interim Director,  
Center for Learning and Teaching Excellence  
Arizona State University Main  
Tempe, AZ

**Dr. Tara Gray**

Director,  
Teaching Academy,  
New Mexico State University Main Campus  
Las Cruces, NM

**Dr. Alan Kalish**

Director,  
Faculty and TA Development,  
The Ohio State University  
Columbus, OH

**Dr. Karron G. Lewis**

Associate Director,  
Division Of Instructional Innovation and Assessment,  
Center for Teaching Effectiveness  
University of Texas at Austin  
Austin, TX

**Dr. Donna C. Llewellyn**

Director,  
Center for the Enhancement of Teaching and Learning  
Georgia Institute of Technology  
Atlanta, GA

**Dr. Barbara J. Millis**

Director,  
Excellence in Teaching Program  
University of Nevada, Reno  
Reno, NV

**Dr. John C. Ory**

Director,  
Center for Teaching Excellence  
University of Illinois, Urbana-Champaign  
Champaign, IL

**Dr. Gale S. Rhodes**

Director,  
The Delphi Center for Teaching and Learning  
University of Louisville  
Louisville, KY

**Dr. Jennifer M. Robinson**

Director,  
Instructional Support Services  
Indiana University at Bloomington  
Bloomington, IN

**Dr. Nancy Simpson**

Director,  
Center for Teaching Excellence  
Texas A&M University  
College Station, TX

**Dr. Mary Deane Sorcinelli**

Director and Associate Provost,  
Center for Teaching  
University of Massachusetts-Amherst  
Amherst, MA

**Dr. Diane Williams**

Director,  
Center for 21<sup>st</sup> Century Teaching Excellence  
University of South Florida  
Tampa, FL

**Dr. Donald H. Wulff**

Director,

Center for Instructional Development and Research

University of Washington

Seattle, WA

**APPENDIX 2**  
**INFORMATION SHEET**

### Information Sheet

For participation in a Delphi study and use of data in presentation or publication:

#### Essential and Model Programs for Teaching and Learning Centers as Reported by Directors in Selected Research Extensive Universities: A Delphi Study

In accordance with the Institutional Review Board-Human Subjects in Research, Texas A&M University guidelines, it is necessary that you understand the purpose of the study and the nature of your involvement in the study.

Accordingly, the following points are outlined to address these guidelines. The purpose of this study is to identify essential and model faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities. The study will further identify future professional development programs essential to centers for teaching and learning as reported by directors in selected research extensive universities. In addition, the study will determine the key goals and most important challenges for centers for teaching and learning as reported by directors in selected research extensive universities. Fifteen (not fewer than 8 in any round) experts in the area of faculty professional development, recruited from teaching and learning centers in different states, will serve on the study's Delphi panel.

You understand the following about this research:

- You agree to participate in a dissertation research study.
- You understand that the purpose of this study is to identify essential and model faculty development programs for centers for teaching and learning as reported by directors in selected research extensive universities.
- You understand that you are given an option to choose if you want to work with a hard copy of the questionnaire instrument (mailed), or prefer electronic copy sent via email. The time between survey rounds will depend on the method chosen for survey completion, timeliness of responses and time needed for data analysis. For each round, you will need approximately 30-45 min to fill in the questionnaire. It is estimated that one round will take approximately 4-6 weeks (time to reply and analyze the data), i.e. a questionnaire will come to you to fill in once a month 3 times (or more until consensus is reached). Consensus is usually reached by round three.
- You understand that your participation in this study is **confidential** during the study. (1) Only the researcher and the chair of the committee will know who the participants are, (2) upon the computation of data, identifiers will be destroyed.
- You understand that there will be no monetary or other compensation for your participation in this study.
- You understand that your participation is voluntary and you may withdraw at any point or may refuse to answer any questions that make you feel uncomfortable.
- You understand that this research study has been reviewed and approved by the Institutional Review Board-Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you can contact Ms. Angelia M. Raines, Director of Research Compliance, Office of Vice-President for Research at (979) 458-4067, or araines@vprmail.tamu.edu
- You have read and understood the information provided to you. You have had all your questions answered to your satisfaction, and you voluntarily agree to participate in this study. If you agree, your name and affiliated institution will be honored in the final dissertation and in any presentations and/or publications that may result from this study.

If you have any questions, **you can contact: Larissa V. Pchenitchnaia** at tel. (979) 694 0812 and (979) 845 1561, Email: lara\_ru@neo.tamu.edu or **Dr. Bryan R. Cole, Ph.D.**, at tel. (979) 845 5356, Email: b-cole@tamu.edu

**APPENDIX 3**  
**FIRST ROUND QUESTIONNAIRE**

**ESSENTIAL AND MODEL PROGRAMS FOR TEACHING AND LEARNING CENTERS AS REPORTED  
BY DIRECTORS IN SELECTED RESEARCH EXTENSIVE UNIVERSITIES: A DELPHI STUDY**

**INSTRUCTIONS:**

The attached table presents suggested essential programs for teaching and learning centers in a research extensive university as identified in current literature on faculty professional development. *An essential program* is a program that a director for a center for teaching and learning considers as a core program that any research extensive university should have.

The table provides checkboxes for ranking of the essentiality of faculty development programs for teaching and learning centers in research extensive universities. The essentiality of the programs is ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality.

For the table, please place a ranking in each respective "Rank" column for each program.

Rank each item from **1 to 4**, in the context of its essentiality for teaching and learning centers in a research extensive university, where

“**4**” represents a program that is “**essential**” to teaching and learning centers in a research extensive university;

“**3**” represents a program that is “**important but not essential**” to teaching and learning centers in a research extensive university;

“**2**” represents a program that maybe “**helpful but not very important**” to teaching and learning centers in a research extensive university;

“**1**” represents a program that is “**unimportant and should not be included**” to teaching and learning centers in a research extensive university.

Please add any new essential programs that you believe should be included that are not part of the original questionnaire (pages 19-20).

Please ensure that you complete 2 additional questions following the tables (pages 21-22).

**Please return the completed questionnaire within two weeks of receipt.**

**Thank you very much for your time and participation in this important study for teaching and learning centers.**

**ADDITIONAL INSTRUCTIONS (electronic copy)**

**1. Please CLICK the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities. 2. Once you have responded to all items and completed 2 additional questions on pages 21-22, you need to save the questionnaire on your desktop, giving the file a new name. 3. In returning the instrument to me, please attach this saved file to your email. Should you have any questions, please email me at lara\_ru@neo.tamu.edu or call (979) 694 0812**



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
1. Consultations	1.1. classroom videotaping, observations and critique of classroom instruction for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.2. consultation on enhancing teaching practices for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.3. consultation on career goals and other personal questions for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.4. consultations on ethical conduct and teacher-student relationships for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.5. individual consultations for TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.6. mentoring services for TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.7. mentoring services for new faculty members	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.8. pre-tenure review support for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.9. post-tenure review support for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.10. consultation on preparing teaching and course portfolios for individual faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
1. Consultations (cont.)	1.11. consultation to campus groups or departmental units on teaching related issues	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.12. consulting with departments on TA programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	1.13. consultations for individual faculty and TAs involved in peer review of teaching programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
2. University-wide orientations	2.1. organized, campus-wide programs for new TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	2.2. organized, campus-wide programs for international TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	2.3. organized, campus-wide programs for new faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	2.4. organized, campus-wide programs for new international faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
3. University-wide workshops	3.1. enhancing teaching strategies	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.2. course and syllabus design	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.3. testing, test construction and evaluating student performance	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.4. developing effective writing assignments	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.5. assessing student learning outcomes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.6. academic advising and counseling skills	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.7. understanding college students (learning styles, developmental patterns, diversity)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.8. strengthening research skills/scholarly writing for publication; developing skills in graphics and publications	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.9. chairing a department; improving the management of departmental operations	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
3. University-wide workshops (cont.)	3.10. personal development (improving interpersonal skills, career planning, etc.)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.11. multicultural teaching and learning; infusing multiculturalism into a course	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.12. application of instructional technology; teaching with technology; using various multimedia software	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.13. teaching in online and distance environments	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.14. developing course and teaching portfolios	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.15. ESL programs for international TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.16. college teaching for TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.17. developing teaching strategies and methods of active and cooperative learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.18. balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

<b>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.</b>			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
3. University-wide workshops (cont.)	3.19. writing grant proposals and reports	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.20. teaching for student-centered learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.21. acclimating new faculty to the culture of the institution	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.22. writing across the curriculum	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.23. teaching underprepared students	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.24. teaching adult learners	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.25. community service-learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.26. pre-tenure review process	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.27. post-tenure review process	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.28. course and curricular reform	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.29. general education reform	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	3.30. part-time/adjunct faculty Development	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
<b>PROGRAM CATEGORY</b>	<b>PROGRAM</b>	<b>RANK CURRENT ESSENTIALITY</b>	<b>RANK FUTURE ESSENTIALITY</b>
<b>3. University-wide workshops (cont.)</b>	<b>3.31.</b> midcareer faculty renewal strategies	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.32.</b> enhancing senior faculty careers	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.33.</b> developing leadership and management skills	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.34.</b> faculty roles in learning communities	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.35.</b> engaging in small group processes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.36.</b> developing faculty in the scholarship of teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.37.</b> teaching large classes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	<b>3.38.</b> peer review as a form of assessment; training faculty and TAs in the peer review process	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

<b>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.</b>			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
<b>4. Intensive programs (over a period of time)</b>	4.1. preparing future faculty programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.2. college teaching courses (weekly, or several times a year)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.3. 2-3 days conference on learning and teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.4. teaching and learning institutes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.5. faculty learning communities	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.6. general interest discussion groups on teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.7. special-interest groups discussions	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.8. breakfast/luncheon groups (social gatherings)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.9. book/reading groups	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.10. teaching fellow programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	4.11. peer review of teaching programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
5. Grants, Awards, and Exchange Programs	5.1. grants for faculty members developing new or improved instructional approaches/course redesign grants	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.2. grants for <i>new</i> faculty members developing new or improved instructional approaches	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.3. grants for enhancing teaching with technology	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.4. grants for multicultural projects	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.5. research funds/grants to pursue scholarly interests	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.6. institutional awards/honors for teaching excellence	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.7. grants for academic opportunities in international settings/foreign exchange programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.8. faculty exchange program with other institutions	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.9. travel funds/grants to attend professional conferences in the discipline/field	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
5. Grants, Awards, and Exchange Programs (cont.)	5.10. travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.11. travel /funds to attend conferences/programs to enhance teaching skills	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	5.12. summer grants for projects to improve instruction of courses	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
6. Resources and publications	6.1. newsletter on teaching or faculty development	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	6.2. resource rooms (books, videotapes, CD-ROMs, etc)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	6.3. updated website (with resources to download and links to other web-based resources)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	6.4. classroom audio/visual equipment and distance-learning services	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	6.5. faculty listserv (to share ideas on teaching and learning issues)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please <b>CLICK</b> the ranking that best represents your view of the essentiality of these programs for teaching and learning centers at research extensive universities.			
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY	RANK FUTURE ESSENTIALITY
7. Other services	7.1. training of departmental TA supervisors	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.2. technical instruction on software and technical equipment assistance	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.3. customized programs on instructional issues for individual academic departments	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.4. systematic self-assessment techniques	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.5. computerized examination services (examination scoring, test analysis statistics)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.6. faculty socializing programs (faculty movie nights, faculty travel groups, faculty sport events)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.7. inviting visiting scholars/experts to do presentations or lectures	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
	7.8. organizing health/wellness related programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**PLEASE ADD ANY NEW ESSENTIAL PROGRAMS YOU BELIEVE SHOULD BE INCLUDED THAT ARE NOT PART OF THE ORIGINAL LIST. SEE PAGES 19-20.**

**Programs not included (optional). Please provide your answer in a shaded area:**

1. Consultations (pp. 2-4):
2. University-wide orientations(p. 5):
3. University-wide workshops (pp. 6-11):
4. Intensive programs (pp. 12-13):
5. Grants, Awards, and Exchange Programs (pp.14-16):
6. Resources and publications (p.17):
7. Other services (pp. 18-19):

**Please list and briefly describe what you perceive to be the top five goals for centers for teaching and learning in a research extensive university. Please provide your answer in a shaded area:**

1.
2.
3.
4.
5.

**Additional comments (optional):**

**Please list and briefly describe what you perceive to be the top five challenges for centers for teaching and learning in a research extensive university. Please provide your answer in a shaded area:**

1.
2.
3.
4.
5.

**Additional comments (optional):**

**THANK YOU!**

**APPENDIX 4**  
**SECOND ROUND QUESTIONNAIRE**

**ESSENTIAL AND MODEL PROGRAMS FOR TEACHING AND LEARNING CENTERS AS REPORTED  
BY DIRECTORS IN SELECTED RESEARCH EXTENSIVE UNIVERSITIES: A DELPHI STUDY**

**INSTRUCTIONS FOR THE SECOND ROUND:**

The Second Round questionnaire follows the organization of the First Round questionnaire. The attached tables present suggested essential programs for teaching and learning centers in a research extensive university as identified in current literature on faculty professional development and additional programs suggested by panel members on the First Round. *An essential program* is a program that a director for a center for teaching and learning considers as a core program that any research extensive university should have. The essentiality of the programs is ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality.

**For each essential program, the Second Round tables provide the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each essential faculty development program (in terms of both current and future essentiality). If you wish not to change your ranking, please leave the space for "New Rank" blank.**

**New essential programs suggested by the Delphi panelists are marked in bold with "New!" and are added in the Program category panel. Please place a ranking in each respective "rank" column for each new program as these were not previously ranked.**

**Please note that if Your Rank states "0" that means your data was missing from the First Round.**

**The First Round questionnaire returned a variety of goals and challenges for centers for teaching and learning in a research extensive university. All suggested goals and challenges were grouped and results are presented on pages 23-28. Please follow the instructions given on pages 23 and 26.**

Rank each item from **1 to 4**, in the context of its essentiality for teaching and learning centers in a research extensive university, where

**"4"** represents a program that is **"essential"** to teaching and learning centers in a research extensive university;

**"3"** represents a program that is **"important but not essential"** to teaching and learning centers in a research extensive university;

**"2"** represents a program that maybe **"helpful but not very important"** to teaching and learning centers in a research extensive university;

**"1"** represents a program that is **"unimportant and should not be included"** to teaching and learning centers in a research extensive university.

**Please return the completed questionnaire within two weeks of receipt. Thank you very much for your time and participation in this important study for teaching and learning centers.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>1. Consultations</b>	<b>1.1.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty				■				■
	<b>1.2.</b> consultation on enhancing teaching practices for individual faculty				■				■
	<b>1.3.</b> consultation on career goals and other personal questions for individual faculty				■				■
	<b>1.4.</b> consultations on ethical conduct and teacher-student relationships for individual faculty				■				■
	<b>1.5.</b> individual consultations for TAs				■				■
	<b>1.6.</b> mentoring services for TAs				■				■
	<b>1.7.</b> mentoring services for new faculty members				■				■
	<b>1.8.</b> pre-tenure review support for individual faculty				■				■
	<b>1.9.</b> post-tenure review support for individual faculty				■				■
	<b>1.10.</b> consultation on preparing teaching and course portfolios for individual faculty				■				■



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
1. Consultations	1.11. consultation with campus groups or departmental units on teaching related issues								
	1.12. consulting with departments on TA programs								
	1.13. consultations for individual faculty and TAs involved in peer review of teaching programs								
NEW!	1.14. consultations with individuals and university groups on educational grant proposals and teaching grants	N/A	N/A			N/A	N/A		N/A
NEW!	1.15. consultations with individuals and university groups on writing for scholarship of teaching and learning	N/A	N/A			N/A	N/A		N/A
NEW!	1.16. consultations for post-docs who have teaching responsibilities	N/A	N/A			N/A	N/A		N/A
NEW!	1.17. consultations for individual faculty on e-learning and integration of technology	N/A	N/A			N/A	N/A		N/A

**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”. In the **NEW RANK** column please PROVIDE a new ranking, if you desire, in light of the first round results.

**For the NEW program, please provide your rank.**

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
2. University-wide orientations	2.1. organized, campus-wide programs for new TAs				■				■
	2.2. organized, campus-wide programs for international TAs				■				■
	2.3. organized, campus-wide programs for new faculty				■				■
	2.4. organized, campus-wide programs for new international faculty				■				■
NEW!	2.5. organized, campus-wide programs for part-time faculty	N/A	N/A	■	N/A	N/A	N/A	■	N/A
NEW!	2.6. organized, campus-wide programs for academic leaders (e.g., department chairs)	N/A	N/A	■	N/A	N/A	N/A	■	N/A
NEW!	2.7. organized, campus-wide programs for postdocs with teaching responsibilities	N/A	N/A	■	N/A	N/A	N/A	■	N/A
NEW!	2.8. organized, campus-wide programs for undergraduate students who serve as peer instructors	N/A	N/A	■	N/A	N/A	N/A	■	N/A

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
3. University-wide workshops	3.1. enhancing teaching strategies				■				■
	3.2. course and syllabus design				■				■
	3.3. testing, test construction and evaluating student performance				■				■
	3.4. developing effective writing assignments				■				■
	3.5. assessing student learning outcomes				■				■
	3.6. academic advising and counseling skills				■				■
	3.7. understanding college students (learning styles, developmental patterns, diversity)				■				■
	3.8. strengthening research skills/scholarly writing for publication; developing skills in graphics and publications				■				■
	3.9. chairing a department; improving the management of departmental operations				■				■
	3.10. personal development (improving interpersonal skills, career planning, etc.)				■				■



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
3. University-wide workshops	3.21. acclimating new faculty to the culture of the institution				■				■
	3.22. writing across the curriculum				■				■
	3.23. teaching underprepared students				■				■
	3.24. teaching adult learners				■				■
	3.25. community service-learning				■				■
	3.26. pre-tenure review process				■				■
	3.27. post-tenure review process				■				■
	3.28. course and curricular reform				■				■
	3.29. general education reform				■				■
	3.30. part-time/adjunct faculty development				■				■
	3.31. midcareer faculty renewal strategies				■				■

<b>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”. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the first round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>3. University-wide workshops</b>	<b>3.32.</b> enhancing senior faculty careers				■				■
	<b>3.33.</b> developing leadership and management skills				■				■
	<b>3.34.</b> faculty roles in learning communities				■				■
	<b>3.35.</b> engaging in small group processes				■				■
	<b>3.36.</b> developing faculty in the scholarship of teaching				■				■
	<b>3.37.</b> teaching large classes				■				■
	<b>3.38.</b> peer review as a form of assessment; training faculty and TAs in the peer review process				■				■
<b>NEW!</b>	<b>3.39.</b> learning and teaching styles	N/A	N/A	■	N/A	N/A	N/A	■	N/A
<b>NEW!</b>	<b>3.40.</b> critical thinking and Inquiry	N/A	N/A	■	N/A	N/A	N/A	■	N/A
<b>NEW!</b>	<b>3.41.</b> library connections to teaching and learning	N/A	N/A	■	N/A	N/A	N/A	■	N/A
<b>NEW!</b>	<b>3.42.</b> student e-portfolio development	N/A	N/A	■	N/A	N/A	N/A	■	N/A

<b>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”. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the first round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>4. Intensive programs</b>	<b>4.1.</b> preparing future faculty programs				■				■
	<b>4.2.</b> college teaching courses (weekly, or several times a year)				■				■
	<b>4.3.</b> 2-3 days conference on learning and teaching				■				■
	<b>4.4.</b> teaching and learning institutes				■				■
	<b>4.5.</b> faculty learning communities				■				■
	<b>4.6.</b> general interest discussion groups on teaching				■				■
	<b>4.7.</b> special-interest groups discussions				■				■
	<b>4.8.</b> breakfast/luncheon groups (social gatherings)				■				■
	<b>4.9.</b> book/reading groups				■				■
	<b>4.10.</b> teaching fellow programs				■				■

**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”. In the **NEW RANK** column please PROVIDE a new ranking, if you desire, in light of the first round results.

**For the NEW program, please provide your rank.**

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>4.</b> <b>Intensive programs</b>	<b>4.11.</b> peer review of teaching programs								
<b>NEW!</b>	<b>4.12.</b> Symposium on Teaching with Technology	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	<b>4.13.</b> faculty learning communities on scholarship of teaching and learning	N/A	N/A		N/A	N/A	N/A		N/A



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
5. Grants, Awards, and Exchange Programs	5.1. grants for faculty members developing new or improved instructional approaches/course redesign grants				■				■
	5.2. grants for <i>new</i> faculty members developing new or improved instructional approaches				■				■
	5.3. grants for enhancing teaching with technology				■				■
	5.4. grants for multicultural projects				■				■
	5.5. research funds/grants to pursue scholarly interests				■				■
	5.6. institutional awards/honors for teaching excellence				■				■
	5.7. grants for academic opportunities in international settings/foreign exchange programs				■				■
	5.8. faculty exchange program with other institutions				■				■

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
5. Grants, Awards, and Exchange Programs	5.9. travel funds/grants to attend professional conferences in the discipline/field								
	5.10. travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings								
	5.11. travel /funds to attend conferences/programs to enhance teaching skills								
	5.12. summer grants for projects to improve instruction of courses								
NEW!	5.13. distinguished TA awards	N/A	N/A		N/A	N/A	N/A		N/A
NEW!	5.14. grants awarded to departments to support development of departmental teaching programs for TAs	N/A	N/A		N/A	N/A	N/A		N/A
NEW!	5.15. grants awarded to individual faculty members participating in faculty learning communities	N/A	N/A		N/A	N/A	N/A		N/A

<p><b>Ranking: “4”</b> represents a program that is <b>“essential”</b>; <b>“3”</b> represents a program that is <b>“important but not essential”</b>; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b>; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b>. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.</p> <p><b>For the NEW program, please provide your rank.</b></p>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>6. Resources and Publications</b>	<b>6.1.</b> newsletter on teaching or faculty development								
	<b>6.2.</b> resource rooms (books, videotapes, CD-ROMs, etc)								
	<b>6.3.</b> updated website (with resources to download and links to other web-based resources)								
	<b>6.4.</b> classroom audio/visual equipment and distance-learning services								
	<b>6.5.</b> faculty listserv (to share ideas on teaching and learning issues)								
<b>NEW!</b>	<b>6.6.</b> faculty and TAs handbooks and handbooks for international faculty and TAs	N/A	N/A			N/A	N/A		N/A
<b>NEW!</b>	<b>6.7.</b> syllabus construction handbook	N/A	N/A			N/A	N/A		N/A
<b>NEW!</b>	<b>6.8.</b> a periodic collection of essays on teaching by award winning faculty	N/A	N/A			N/A	N/A		N/A

**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”**. In the **NEW RANK** column please **PROVIDE** a new ranking, if you desire, in light of the first round results.  
**For the NEW program, please provide your rank.**

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>6. Resources and Publications NEW!</b>	<b>6.9.</b> online, self-guided tutorials on areas of teaching and student learning	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	<b>6.10.</b> online, self-guided workshop sessions on pertinent instructional topics and issues	N/A	N/A		N/A	N/A	N/A		N/A

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the first round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>7. Other Services</b>	<b>7.1.</b> training of departmental TA supervisors								
	<b>7.2.</b> technical instruction on software and technical equipment assistance								
	<b>7.3.</b> customized programs on instructional issues for individual academic departments								
	<b>7.4.</b> systematic self-assessment techniques								
	<b>7.5.</b> computerized examination services (examination scoring, test analysis statistics)								
	<b>7.6.</b> faculty socializing programs (faculty movie nights, faculty travel groups, faculty sport events)								
	<b>7.7.</b> inviting visiting scholars/experts to do presentations or lectures								
	<b>7.8.</b> organizing wealth/wellness related Programs								
<b>NEW!</b>	<b>7.9.</b> organizing diverse student panels on their perceptions of teaching and learning	<b>N/A</b>	<b>N/A</b>		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>		<b>N/A</b>

**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”**. In the **NEW RANK** column please **PROVIDE** a new ranking, if you desire, in light of the first round results.

**For the NEW program, please provide your rank.**

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
7. <b>Other Services NEW!</b>	7.10. recognition for teachers and TAs, such as “Thank-a-Prof” programs	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.11. Weekly Teaching Tips	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.12. continual research of new instructional technology and integration of technology	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.13. broader support of teaching large classes	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.14. service on university, college and departmental committees in support of teaching and learning	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.15. scholarship on individual teaching and learning center’s staff practice	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.16. assistance with scholarship of teaching and learning, including consulting on human subjects approval process, research methods, data analysis, networking among faculty for research mentoring	N/A	N/A		N/A	N/A	N/A		N/A
<b>NEW!</b>	7.17. faculty facilitated sessions for colleagues on issues of teaching and teaching methods	N/A	N/A		N/A	N/A	N/A		N/A

**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”**. In the **NEW RANK** column please **PROVIDE** a new ranking, if you desire, in light of the first round results.

**For the NEW program, please provide your rank.**

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
NEW!	7.18. faculty showcases of best practice	N/A	N/A		N/A	N/A	N/A		N/A

**GOALS for centers for teaching and learning in a research extensive university:**

The First Round questionnaire returned a variety of goals for teaching and learning centers in a research extensive university. All suggested goals were grouped and 23 categories were formed. The table provides checkboxes for ranking of the importance of goals for teaching and learning centers in a research extensive university. There is no prioritization in the sequence of presentation of the goal categories.

For the table, please place a ranking in the “Rank” column for each goal.

Rank each item from **1 to 4**, in the context of its importance for teaching and learning centers in a research extensive university, where

“**4**” represents a goal that is “**very important**” to teaching and learning centers in a research extensive university;

“**3**” represents a goal that is “**important**” to teaching and learning centers in a research extensive university;

“**2**” represents a goal that maybe “**not very important**” to teaching and learning centers in a research extensive university;

“**1**” represents a goal that is “**unimportant**” to teaching and learning centers in a research extensive university.

GOAL	RANK IMPORTANCE
1. To provide recognition and reward for excellence in teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
2. To build and foster collegiality among university teachers and learners	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
3. To provide professional development opportunities and training for graduate students and TAs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
4. To provide a safe place where faculty can come to discuss teaching and learning ideas and issues	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
5. To collaborate with various campus units focused on aspects of learning and teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
6. To provide opportunities and support for faculty to engage in their own investigations of teaching and learning in their specific disciplines	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
7. To create and sustain a culture of excellence in teaching and learning on campus	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
8. To participate in the scholarly work that advances understanding of teaching and learning as a scholarly process and disseminate that information across campus and across the country/support center personnel to do it	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
9. To conduct campus-specific research on teaching and learning as well as faculty/TAs needs and use the data to enhance a university experience	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
10. To provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1



GOAL	RANK IMPORTANCE
<b>11.</b> To provide resources and support for <i>individual departments</i> to develop culture and structure that facilitates faculty growth as teachers and learners	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>12.</b> To provide one to two day teaching and learning conferences for faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>13.</b> To assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>14.</b> To promote ideas of scholarship of teaching and learning on campus	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>15.</b> To provide a wide range of services so most faculty (tenure track, non tenure track, adjunct, part-time) and TAs can find a connection to a center/promote a “Can-Do” image of a center	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>16.</b> To improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>17.</b> To promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc)	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>18.</b> To develop mechanisms and learning opportunities to link faculty development efforts and programs with student learning outcomes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>19.</b> To provide multicultural teaching and learning services so faculty can teach a diverse student body effectively	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>20.</b> To balance attention to instructors with attention to administrators, researching their needs and their understanding of teaching and learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>21.</b> To serve as a champion to be certain that teaching is explicitly considered for tenure and promotion	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>22.</b> To provide high quality services and programs so faculty can count on excellence from a center	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
<b>23.</b> To prepare and helping others to prepare future faculty	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

**CHALLENGES for centers for teaching and learning in a research extensive university:**

The First Round questionnaire returned a variety of challenges for teaching and learning centers in a research extensive university. All suggested challenges were grouped and 23 categories were formed. The table provides checkboxes for ranking the challenges on the basis of your perceived impact on teaching and learning centers in a research extensive university. There is no prioritization in the sequence of presentation of the challenge categories. For the table, please place a ranking in the “Rank” column for each challenge.

Rank each item from **1 to 4**, on the basis of your perceived impact on teaching and learning centers in a research extensive university, where

“**4**” represents a challenge with “**major impact**” on teaching and learning centers in a research extensive university;

“**3**” represents a challenge with “**moderate impact**” on teaching and learning centers in a research extensive university;

“**2**” represents a challenge with “**minimal impact**” on teaching and learning centers in a research extensive university;

“**1**” represents a challenge with “**no impact**” on teaching and learning centers in a research extensive university.

CHALLENGE	RANK IMPACT
1. An institutional culture that valorizes research as opposed to teaching	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
2. Lack of meaningful rewards for faculty focus on teaching and lack of integration into Promotion and Tenure decisions and process	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
3. Need of a systematic assessment of effectiveness of a teaching and learning center	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
4. Maintaining a centralized teaching center that serves the discipline-specific needs of individual departments and schools	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
5. Finding, training, and maintaining good staff	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
6. The overwhelming ratio of instructors to faculty development staff	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
7. Varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
8. Getting faculty to participate in a teaching and learning center’s programs and discussions about teaching and learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
9. Lack of faculty time	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
10. Adequate funding to provide enough personnel to provide effective and quality programs	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

CHALLENGE	RANK IMPACT
11. Developing a “presence” on campus where a teaching and learning center is perceived as a “doer and a shaker”/visibility	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
12. Maintaining good relationships and collaborations with various units across campus	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
13. Selling, rewarding and institutionalizing the scholarship of teaching and learning	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
14. Helping faculty understand their students and helping students learning; assessment of student learning outcomes	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
15. Helping faculty balance their many roles and be ready to continually respond to rapid changes in the faculty role	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
16. Dealing with change: be ready to shift allocation of time and resources and to continually upgrade knowledge base and skills and keep credibility through times of change	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
17. The rapidly changing scene of instructional technology/integrating technology	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
18. Strong separation between academic areas and individual scholars and broad spectrum of needs across instructors	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
19. Lack of teaching and learning center’s staff time to be involved in all “good” initiatives	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
20. Staying essential: always be prepared to give evidence that the programs and services are essential to a university mission	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
21. Need for further understanding and supporting teaching and learning in interdisciplinary contexts	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
22. Need for ways of assessing teaching and learning process	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1
23. Need for coordination of efforts in an environment in which faculty development is becoming increasingly decentralized	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1

THANK YOU!

**APPENDIX 5**  
**THIRD ROUND QUESTIONNAIRE**

**ESSENTIAL AND MODEL PROGRAMS FOR TEACHING AND LEARNING CENTERS AS REPORTED  
BY DIRECTORS IN SELECTED RESEARCH EXTENSIVE UNIVERSITIES: A DELPHI STUDY**

**INSTRUCTIONS FOR THE THIRD ROUND:**

The Third Round questionnaire follows the organization of the two previous questionnaires. This questionnaire includes the responses for all items as result of the responses to the Second Round. Please note that you **ONLY** need to complete those items where consensus has not been reached. The consensus items results have been provided for your information only. *An essential program* is a program that a director for a center for teaching and learning considers as a core program that any research extensive university should have.

The essentiality of the programs is ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality.

**For each essential program, the Third Round tables provide the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate (ONLY FOR ITEMS -- additionally marked in RED -- WHERE CONSENSUS HAS NOT BEEN REACHED). After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each essential faculty development program (in terms of both current and future essentiality). If you wish not to change your ranking, please leave the space for ‘New Rank’ blank.**

**Two additional tables on Goals and Challenges for centers for teaching and learning in a research extensive university are presented on pages 23-28. Please follow the instructions given on pages 23 and 26.**

Rank each item from **1 to 4**, in the context of its essentiality for teaching and learning centers in a research extensive university, where

“**4**” represents a program that is “**essential**” to teaching and learning centers in a research extensive university;

“**3**” represents a program that is “**important but not essential**” to teaching and learning centers in a research extensive university;

“**2**” represents a program that maybe “**helpful but not very important**” to teaching and learning centers in a research extensive university;

“**1**” represents a program that is “**unimportant and should not be included**” to teaching and learning centers in a research extensive university.

**Please return the completed questionnaire within two weeks of receipt.**

**Thank you very much for your time and participation in this important study for teaching and learning centers.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>1. Consultations</b>	<b>1.3.</b> classroom videotaping, observations and critique of classroom instruction for individual faculty			Consensus Reached				Consensus Reached	
	<b>1.4.</b> consultation on enhancing teaching practices for individual faculty			Consensus Reached				Consensus Reached	
	<b>1.8.</b> consultation on career goals and other personal questions for individual faculty			Consensus Reached				Consensus Reached	
	<b>1.9.</b> consultations on ethical conduct and teacher-student relationships for individual faculty			Consensus Reached				Consensus Reached	
	<b>1.10.</b> individual consultations for TAs			Consensus Reached				Consensus Reached	
	<b>1.11.</b> mentoring services for TAs			Consensus Reached				Consensus Reached	
	<b>1.12.</b> mentoring services for new faculty members			Consensus Reached				Consensus Reached	
	<b>1.10.</b> pre-tenure review support for individual faculty			Consensus Reached				Consensus Reached	
	<b>1.11.</b> post-tenure review support for individual faculty			Consensus Reached				Consensus Reached	



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
2. University-wide orientations	2.1. organized, campus-wide programs for new TAs			Consensus Reached				Consensus Reached	
	2.2. organized, campus-wide programs for international TAs			Consensus Reached				Consensus Reached	
	2.3. organized, campus-wide programs for new faculty			Consensus Reached				Consensus Reached	
	2.4. organized, campus-wide programs for new international faculty				■				■
	2.5. organized, campus-wide programs for part- time faculty				■				■
	2.6. organized, campus-wide programs for academic leaders (e.g., department chairs)				■				■
	2.7. organized, campus-wide programs for postdocs with teaching responsibilities				■				■
	2.8. organized, campus-wide programs for undergraduate students who serve as peer instructors				■				■



<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>3. University-wide workshops</b>	3.1. enhancing teaching strategies			Consensus Reached				Consensus Reached	
	3.2. course and syllabus design			Consensus Reached				Consensus Reached	
	3.3. testing, test construction and evaluating student performance			Consensus Reached				Consensus Reached	
	3.4. developing effective writing assignments			Consensus Reached				Consensus Reached	
	3.5. assessing student learning outcomes			Consensus Reached				Consensus Reached	
	3.6. academic advising and counseling skills			Consensus Reached				Consensus Reached	
	3.7. understanding college students (learning styles, developmental patterns, diversity)			Consensus Reached				Consensus Reached	
	3.8. strengthening research skills/scholarly writing for publication; developing skills in graphics and publications								
	3.9. chairing a department; improving the management of departmental operations			Consensus Reached				Consensus Reached	
	3.10. personal development (improving interpersonal skills, career planning, etc.)			Consensus Reached				Consensus Reached	

**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 complete ONLY those items where consensus has not been reached. In the **NEW RANK** column please **PROVIDE** a new ranking, if you desire, in light of the second round results.

PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
3. University-wide workshops	3.11. multicultural teaching and learning; infusing multiculturalism into a course			Consensus Reached				Consensus Reached	
	3.12. application of instructional technology; teaching with technology; using various multimedia software			Consensus Reached				Consensus Reached	
	3.13. teaching in online and distance environments			Consensus Reached				Consensus Reached	
	3.14. developing course and teaching portfolios							Consensus Reached	
	3.15. ESL programs for international TAs								
	3.16. college teaching for TAs			Consensus Reached				Consensus Reached	
	3.17. developing teaching strategies and methods of active and cooperative learning			Consensus Reached				Consensus Reached	
	3.18. balancing a personal life with the rigors of teaching, research, and service; balancing multiple faculty roles			Consensus Reached				Consensus Reached	
	3.19. writing grant proposals and reports			Consensus Reached				Consensus Reached	

<b>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 complete ONLY those items where consensus has not been reached. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the second round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
3. University-wide workshops	3.20. teaching for student-centered learning			Consensus Reached				Consensus Reached	
	3.21. acclimating new faculty to the culture of the institution			Consensus Reached				Consensus Reached	
	3.22. writing across the curriculum			Consensus Reached				Consensus Reached	
	3.23. teaching underprepared students			Consensus Reached				Consensus Reached	
	3.24. teaching adult learners			Consensus Reached				Consensus Reached	
	3.25. community service-learning			Consensus Reached				Consensus Reached	
	3.26. pre-tenure review process			Consensus Reached				Consensus Reached	
	3.27. post-tenure review process			Consensus Reached				Consensus Reached	
	3.28. course and curricular reform			Consensus Reached				Consensus Reached	
	3.29. general education reform			Consensus Reached				Consensus Reached	
	3.30. part-time/adjunct faculty development			Consensus Reached				Consensus Reached	
	3.31. midcareer faculty renewal strategies			Consensus Reached				Consensus Reached	

<b>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 complete ONLY those items where consensus has not been reached. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the second round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
3. University-wide workshops	3.32. enhancing senior faculty careers			Consensus Reached				Consensus Reached	
	3.33. developing leadership and management skills			Consensus Reached				Consensus Reached	
	3.34. faculty roles in learning communities			Consensus Reached				Consensus Reached	
	3.35. engaging in small group processes			Consensus Reached				Consensus Reached	
	3.36. developing faculty in the scholarship of teaching			Consensus Reached				Consensus Reached	
	3.37. teaching large classes			Consensus Reached				Consensus Reached	
	3.38. peer review as a form of assessment; training faculty and TAs in the peer review process			Consensus Reached				Consensus Reached	
	3.39. learning and teaching styles				■				■
	3.40. critical thinking and inquiry				■				■
	3.41. library connections to teaching and learning				■				■
3.42. student e-portfolio development				■				■	

<b>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 complete ONLY those items where consensus has not been reached. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the second round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>4. Intensive programs</b>	<b>4.1.</b> preparing future faculty programs			Consensus Reached				Consensus Reached	
	<b>4.9.</b> college teaching courses (weekly, or several times a year)			Consensus Reached				Consensus Reached	
	<b>4.10.2-3</b> days conference on learning and teaching			Consensus Reached				Consensus Reached	
	<b>4.11.</b> teaching and learning institutes			Consensus Reached				Consensus Reached	
	<b>4.12.</b> faculty learning communities			Consensus Reached				Consensus Reached	
	<b>4.13.</b> general interest discussion groups on teaching			Consensus Reached				Consensus Reached	
	<b>4.14.</b> special-interest groups discussions			Consensus Reached				Consensus Reached	
	<b>4.15.</b> breakfast/luncheon groups (social gatherings)			Consensus Reached				Consensus Reached	
	<b>4.9.</b> book/reading groups			Consensus Reached				Consensus Reached	
	<b>4.10.</b> teaching fellow programs			Consensus Reached				Consensus Reached	

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete <b>ONLY</b> those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>4. Intensive programs</b>	<b>4.11.</b> peer review of teaching programs			Consensus Reached				Consensus Reached	
	<b>4.12.</b> Symposium on Teaching with Technology								
	<b>4.13.</b> faculty learning communities on scholarship of teaching and learning								

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
5. Grants, Awards, and Exchange Programs	5.1. grants for faculty members developing new or improved instructional approaches/course redesign grants								Consensus Reached
	5.2. grants for <i>new</i> faculty members developing new or improved instructional approaches				Consensus Reached				Consensus Reached
	5.3. grants for enhancing teaching with technology				Consensus Reached				Consensus Reached
	5.4. grants for multicultural projects				Consensus Reached				Consensus Reached
	5.5. research funds/grants to pursue scholarly interests				Consensus Reached				Consensus Reached
	5.6. institutional awards/honors for teaching excellence				Consensus Reached				Consensus Reached
	5.7. grants for academic opportunities in international settings/foreign exchange programs				Consensus Reached				Consensus Reached
	5.8. faculty exchange program with other institutions				Consensus Reached				Consensus Reached

<b>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 complete ONLY those items where consensus has not been reached. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the second round results.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
5. Grants, Awards, and Exchange Programs	5.9. travel funds/grants to attend professional conferences in the discipline/field			Consensus Reached					<input type="checkbox"/>
	5.10. travel funds/grants for conference presentations of successful teaching methods or for reporting on research findings			Consensus Reached					<input type="checkbox"/>
	5.11. travel /funds to attend conferences/programs to enhance teaching skills			Consensus Reached					<input type="checkbox"/>
	5.12. summer grants for projects to improve instruction of courses			Consensus Reached				Consensus Reached	
	5.13. distinguished TA awards				<input type="checkbox"/>				<input type="checkbox"/>
	5.14. grants awarded to departments to support development of departmental teaching programs for TAs				<input type="checkbox"/>				<input type="checkbox"/>
	5.15. grants awarded to individual faculty members participating in faculty learning communities				<input type="checkbox"/>				<input type="checkbox"/>





<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete <b>ONLY</b> those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the second round results.									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>6. Resources and Publications</b>	<b>6.9.</b> online, self-guided tutorials on areas of teaching and student learning								
	<b>6.10.</b> online, self-guided workshop sessions on pertinent instructional topics and issues								





**GOALS for centers for teaching and learning in a research extensive university:**

The Third Round questionnaire follows the organization of the Second Round questionnaire. **For each GOAL, the Third Round table provides the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each GOAL. If you wish not to change your ranking, please leave the space for “New Rank” blank.**

There is no prioritization in the sequence of presentation of the goal categories.

Rank each item from **1 to 4**, in the context of its importance for teaching and learning centers in a research extensive university, where














“**4**” represents a goal that is “**very important**” to teaching and learning centers in a research extensive university;

“**3**” represents a goal that is “**important**” to teaching and learning centers in a research extensive university;

“**2**” represents a goal that maybe “**not very important**” to teaching and learning centers in a research extensive university;

“**1**” represents a goal that is “**unimportant**” to teaching and learning centers in a research extensive university.

GOAL	M	SD	Your Rank	New Rank
1. To provide recognition and reward for excellence in teaching				
2. To build and foster collegiality among university teachers and learners				
3. To provide professional development opportunities and training for graduate students and TAs				
4. To provide a safe place where faculty can come to discuss teaching and learning ideas and issues				
5. To collaborate with various campus units focused on aspects of learning and teaching				
6. To provide opportunities and support for faculty to engage in their own investigations of teaching and learning in their specific disciplines				
7. To create and sustain a culture of excellence in teaching and learning on campus				
8. To participate in the scholarly work that advances understanding of teaching and learning as a scholarly process and disseminate that information across campus and across the country/support center personnel to do it				
9. To conduct campus-specific research on teaching and learning as well as faculty/TAs needs and use the data to enhance a university experience				
10. To provide a voice for keeping teaching and learning in the thoughts of higher administrators (professional staff members within a center serve on university-level committees and task forces on issues related to teaching and learning)				

GOAL	M	SD	Your Rank	New Rank
11. To provide resources and support for <i>individual departments</i> to develop culture and structure that facilitates faculty growth as teachers and learners				
12. To provide one to two day teaching and learning conferences for faculty				
13. To assist faculty with enhancing their teaching skills through consultations, training, workshops and providing various resources				
14. To promote ideas of scholarship of teaching and learning on campus				
15. To provide a wide range of services so most faculty (tenure track, non tenure track, adjunct, part- time) and TAs can find a connection to a center/promote a “Can-Do” image of a center				
16. To improve teaching and learning across campus in ways that support the goals and missions of individual faculty/TAs, departments/units/programs, and an institution				
17. To promote new initiatives and active engagement in teaching and learning as the role of faculty member continues to change (diversity, instructional technologies, working with under prepared students, etc)				
18. To develop mechanisms and learning opportunities to link faculty development efforts and programs with student learning outcomes				
19. To provide multicultural teaching and learning services so faculty can teach a diverse student body effectively				
20. To balance attention to instructors with attention to administrators, researching their needs and their understanding of teaching and learning				
21. To serve as a champion to be certain that teaching is explicitly considered for tenure and promotion				
22. To provide high quality services and programs so faculty can count on excellence from a center				
23. To prepare and helping others to prepare future faculty				

**CHALLENGES for centers for teaching and learning in a research extensive university:**

The Third Round questionnaire follows the organization of the Second Round questionnaire. **For each CHALLENGE, the Third Round table provides the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each CHALLENGE. If you wish not to change your ranking, please leave the space for ‘New Rank’ blank.**

There is no prioritization in the sequence of presentation of the challenge categories.

For the table, please place a ranking in the ‘Rank’ column for each challenge.

Rank each item from **1 to 4**, on the basis of your perceived impact on teaching and learning centers in a research extensive university, where





‘‘4’’ represents a challenge with ‘‘**major impact**’’ on teaching and learning centers in a research extensive university;

‘‘3’’ represents a challenge with ‘‘**moderate impact**’’ on teaching and learning centers in a research extensive university;

‘‘2’’ represents a challenge with ‘‘**minimal impact**’’ on teaching and learning centers in a research extensive university;

‘‘1’’ represents a challenge with ‘‘**no impact**’’ on teaching and learning centers in a research extensive university.

CHALLENGE	M	SD	Your Rank	New Rank
1. An institutional culture that valorizes research as opposed to teaching				<input type="text"/>
2. Lack of meaningful rewards for faculty focus on teaching and lack of integration into Promotion and Tenure decisions and process				<input type="text"/>
3. Need of a systematic assessment of effectiveness of a teaching and learning center				<input type="text"/>
4. Maintaining a centralized teaching center that serves the discipline-specific needs of individual departments and schools				<input type="text"/>
5. Finding, training, and maintaining good staff				<input type="text"/>
6. The overwhelming ratio of instructors to faculty development staff				<input type="text"/>
7. Varying levels of administrative support and understanding and getting invited to the table when policy decisions are being made				<input type="text"/>
8. Getting faculty to participate in a teaching and learning center’s programs and discussions about teaching and learning				<input type="text"/>
9. Lack of faculty time				<input type="text"/>
10. Adequate funding to provide enough personnel to provide effective and quality programs				<input type="text"/>

<b>CHALLENGE</b>	<b>M</b>	<b>SD</b>	<b>Your Rank</b>	<b>New Rank</b>
<b>11.</b> Developing a “presence” on campus where a teaching and learning center is perceived as a “doer and a shaker”/visibility				
<b>12.</b> Maintaining good relationships and collaborations with various units across campus				
<b>13.</b> Selling, rewarding and institutionalizing the scholarship of teaching and learning				
<b>14.</b> Helping faculty understand their students and helping students learning; assessment of student learning outcomes				
<b>15.</b> Helping faculty balance their many roles and be ready to continually respond to rapid changes in the faculty role				
<b>16.</b> Dealing with change: be ready to shift allocation of time and resources and to continually upgrade knowledge base and skills and keep credibility through times of change				
<b>17.</b> The rapidly changing scene of instructional technology/integrating technology				
<b>18.</b> Strong separation between academic areas and individual scholars and broad spectrum of needs across instructors				
<b>19.</b> Lack of teaching and learning center’s staff time to be involved in all “good” initiatives				
<b>20.</b> Staying essential: always be prepared to give evidence that the programs and services are essential to a university mission				
<b>21.</b> Need for further understanding and supporting teaching and learning in interdisciplinary contexts				
<b>22.</b> Need for ways of assessing teaching and learning process				
<b>23.</b> Need for coordination of efforts in an environment in which faculty development is becoming increasingly decentralized				

**THANK YOU!**



**APPENDIX 6**  
**FOURTH ROUND QUESTIONNAIRE**

**ESSENTIAL AND MODEL PROGRAMS FOR TEACHING AND LEARNING CENTERS AS REPORTED  
BY DIRECTORS IN SELECTED RESEARCH EXTENSIVE UNIVERSITIES: A DELPHI STUDY**

**INSTRUCTIONS FOR THE FOURTH ROUND:**

The Fourth Round questionnaire follows the organization of the previous questionnaires. This questionnaire includes ONLY the responses for the items where consensus has not been reached in one or more ranking (current or future essentiality). One objective of a Delphi study is to seek consensus between and among expert panel members; while consensus is desirable, it is not obligatory. **If you wish not to change your ranking, please leave the space for ‘New Rank’ blank.**

*An essential program* is a program that a director for a center for teaching and learning considers as a core program that any research extensive university should have. The essentiality of the programs is ranked twice: once in terms of its current essentiality and a second time in terms of its future essentiality. **For each essential program, the Fourth Round tables provide the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each essential faculty development program (in terms of both current and future essentiality). Two additional tables on Goals and Challenges for centers for teaching and learning in a research extensive university are presented on pages 23-28. Please follow the instructions given on pages 7 and 8.**

Rank each item from **1 to 4**, in the context of its essentiality for teaching and learning centers in a research extensive university, where

- “4” represents a program that is “**essential**” to teaching and learning centers in a research extensive university;
- “3” represents a program that is “**important but not essential**” to teaching and learning centers in a research extensive university;
- “2” represents a program that maybe “**helpful but not very important**” to teaching and learning centers in a research extensive university;
- “1” represents a program that is “**unimportant and should not be included**” to teaching and learning centers in a research extensive university.

**PLEASE NOTE NEW QUESTION ON PAGE 9.**

**Please return the completed questionnaire within two weeks of receipt.  
Thank you very much for your time and participation in this important study for teaching and learning centers.**

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please PROVIDE a new ranking, if you desire, in light of the third round results. <b>If you wish not to change your ranking, please leave the space for “New Rank” blank.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
<b>1. Consultations</b>	<b>1.16.</b> consultations for post-docs who have teaching responsibilities			Consensus Reached					
	<b>1.17.</b> consultations for individual faculty on e-learning and integration of technology			Consensus Reached					

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please <b>PROVIDE</b> a new ranking, if you desire, in light of the third round results. <b>If you wish not to change your ranking, please leave the space for “New Rank” blank.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
2. University-wide orientations	2.5. organized, campus-wide programs for part- time faculty			Consensus Reached					
	2.6. organized, campus-wide programs for academic leaders (e.g., department chairs)			Consensus Reached					
	2.8. organized, campus-wide programs for undergraduate students who serve as peer instructors			Consensus Reached					

<b>Ranking: “4”</b> represents a program that is <b>“essential”</b> ; <b>“3”</b> represents a program that is <b>“important but not essential”</b> ; <b>“2”</b> represents a program that maybe <b>“helpful but not very important”</b> ; <b>“1”</b> represents a program that is <b>“unimportant and should not be included”</b> . Please complete ONLY those items where consensus has not been reached. In the <b>NEW RANK</b> column please PROVIDE a new ranking, if you desire, in light of the third round results. <b>If you wish not to change your ranking, please leave the space for “New Rank” blank.</b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
5. Grants, Awards, and Exchange Programs	5.15. grants awarded to individual faculty members participating in faculty learning communities	2.47	0.64	Consensus Reached		2.67	0.72		

<b>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 complete ONLY those items where consensus has not been reached. In the NEW RANK column please PROVIDE a new ranking, if you desire, in light of the third round results. <b>If you wish not to change your ranking, please leave the space for “New Rank’ blank.</b></b>									
PROGRAM CATEGORY	PROGRAM	RANK CURRENT ESSENTIALITY				RANK FUTURE ESSENTIALITY			
		M	SD	Your Rank	New Rank	M	SD	Your Rank	New Rank
6. Resources and Publications	6.6. faculty and TAs handbooks and handbooks for international faculty and TAs			Consensus Reached					
	6.7. syllabus construction handbook								
	6.8. a periodic collection of essays on teaching by award winning faculty								
	6.10. online, self-guided tutorials on areas of teaching and student learning							Consensus Reached	
	6.10. online, self-guided workshop sessions on pertinent instructional topics and issues			Consensus Reached					



**GOALS for centers for teaching and learning in a research extensive university:**

The Fourth Round questionnaire follows the organization of the previous questionnaire. This questionnaire includes ONLY the responses for the items where consensus has not been reached. **For each GOAL, the Fourth Round table provides the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each GOAL.**

**If you wish not to change your ranking, please leave the space for “New Rank” blank.**

Rank each item from **1 to 4**, in the context of its importance for teaching and learning centers in a research extensive university, where

“**4**” represents a goal that is “**very important**” to teaching and learning centers in a research extensive university;

“**3**” represents a goal that is “**important**” to teaching and learning centers in a research extensive university;

“**2**” represents a goal that maybe “**not very important**” to teaching and learning centers in a research extensive university;

“**1**” represents a goal that is “**unimportant**” to teaching and learning centers in a research extensive university.

GOAL	M	SD	Your Rank	New Rank
2. To build and foster collegiality among university teachers and learners				<input type="text"/>
8. To participate in the scholarly work that advances understanding of teaching and learning as a scholarly process and disseminate that information across campus and across the country/support center personnel to do it				<input type="text"/>
12. To provide one to two day teaching and learning conferences for faculty				<input type="text"/>



**CHALLENGES for centers for teaching and learning in a research extensive university:**

The Fourth Round questionnaire follows the organization of the previous questionnaire. This questionnaire includes ONLY the responses for the items where consensus has not been reached. **For each CHALLENGE, the Fourth Round table provides the mean score (M) and the standard deviation (SD) for the group, your individual score and space for change of rank, if deemed appropriate. After reviewing the mean score and standard deviation for the group and your previous rank, please provide your new rank, if you desire to make a change, for each CHALLENGE.**

**If you wish not to change your ranking, please leave the space for “New Rank” blank.**

For the table, please place a ranking in the “Rank” column for each challenge.

Rank each item from **1 to 4**, on the basis of your perceived impact on teaching and learning centers in a research extensive university, where

“4” represents a challenge with “**major impact**” on teaching and learning centers in a research extensive university;

“3” represents a challenge with “**moderate impact**” on teaching and learning centers in a research extensive university;

“2” represents a challenge with “**minimal impact**” on teaching and learning centers in a research extensive university;

“1” represents a challenge with “**no impact**” on teaching and learning centers in a research extensive university.

CHALLENGE	M	SD	Your Rank	New Rank
5. Finding, training, and maintaining good staff				<input type="text"/>
14. Helping faculty understand their students and helping students learning; assessment of student learning outcomes				<input type="text"/>
16. Dealing with change: be ready to shift allocation of time and resources and to continually upgrade knowledge base and skills and keep credibility through times of change				<input type="text"/>
23. Need for coordination of efforts in an environment in which faculty development is becoming increasingly decentralized				<input type="text"/>

## MODEL PROGRAMS

One of the additional purposes of this dissertation study is to identify model faculty development programs for each PROGRAM CATEGORY that have essential programs. The following tables list those programs that have been determined to be essential by the expert panel (the ones that have consensus mean 3.50 and higher). The programs are grouped within their respective group category. For purposes of this study *a model program* is a specific program that is currently operating in a teaching and learning center and that a director for teaching and learning center perceives represents best practice.

Accordingly, you are asked to identify and briefly describe ONE or more model programs for each PROGRAM CATEGORY that relates to the essential programs within that category. Your model program may relate to “an individual essential program” or it maybe a model program that encompasses more than one essential programs in its design and delivery. **In providing the description if you have brochures or website information or other communications that describe a model program, please feel free to identify a model program in the table and then refer to the source of the description.** In the identification of these model programs you are asked to consider both programs that you may have at your institution and programs that you are aware of at other institutions (research extensive universities).

The end result is to provide teaching and learning centers a listing of what is considered to be essential programs and sources of best practices/model programs that they may use to improve and enhance their own faculty development initiatives.

PROGRAM CATEGORY	PROGRAM	MODEL PROGRAM
<b>1. Consultations</b>	Classroom videotaping, observations and critique of classroom instruction for individual faculty	
	Consultation on enhancing teaching practices for individual faculty	
	Individual consultations for TAs	
	Consultations with campus groups or departmental units on teaching related issues	
	Consulting with departments on TA programs	

<b>PROGRAM CATEGORY</b>	<b>PROGRAM</b>	<b>MODEL PROGRAM</b>
<b>2. University-wide orientations</b>	Organized, campus-wide programs for new TAs	
	Organized, campus-wide programs for new faculty	

<b>PROGRAM CATEGORY</b>	<b>PROGRAM</b>	<b>MODEL PROGRAM</b>
<b>3. University-wide workshops</b>	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	
	Teaching large classes	

<b>PROGRAM CATEGORY</b>	<b>PROGRAM</b>	<b>MODEL PROGRAM</b>
<b>6. Resources and Publications</b>	Updated website (with resources to download and links to other web-based resources)	

<b>PROGRAM CATEGORY</b>	<b>PROGRAM</b>	<b>MODEL PROGRAM</b>
<b>7. Other Services</b>	Service on university, college and departmental committees in support of teaching and learning	
	Faculty facilitated sessions for colleagues on issues of teaching and teaching methods	

**THANK YOU!**

## VITA

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## EDUCATION

- 2007**      **Ph.D., Educational Administration (Higher Education)**, Texas A&M University, College Station, TX
- 2002**      **M.S., Educational Administration (Higher Education)**, Texas A&M University, College Station, TX
- 1996**      **Master's Degree, Linguistics (Germanic Philology, ESL Teaching, Translation)**, Ivanovo State University, Ivanovo, Russia

## CERTIFICATION

- 2005**      **College Teaching Certificate**, Texas A&M University, College Station, TX
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## PROFESSIONAL EXPERIENCE

- 2007-Present** **Curriculum Renewal Specialist**, Artie McFerrin Department of Chemical Engineering, Dwight Look College of Engineering, Texas A&M University, College Station, TX
- 2002-2006** **Graduate Research Assistant**, Educational Administration and Human Resource Development Department, College of Education and Human Development, Texas A&M University, College Station, TX
- 2000-2002** **Graduate Research Assistant**, Transportation System Planning, Policy and Environment Group, Texas Transportation Institute, College Station, TX
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## PROFESSIONAL INTERESTS

Faculty professional development, instructional development, curriculum development, college teaching, assessment of teaching practices and learning outcomes, adult education and learning.