The first part of this monograph contains three essays that define faculty development and describe development activities, including library-related initiatives. "Using Faculty Development to Meet the Challenges of Higher Education" (Martin Tessmer) describes how development activities can help college educators meet teaching, professional, and personal challenges, focusing on their information service needs. "Understanding Faculty Development" (James L. Pence) presents a model for linking faculty development to institutional strategic planning. "The Role of the Academic Library in Providing Support for Faculty Development" (Evelyn Haynes) describes development programs academic libraries have initiated, sponsored, or supported. A second set of essays describes the variety of structures built to accommodate faculty development programs. "Organizational Structures for Faculty Development" (Clyde Tucker, Mary Ann Shea) identifies major factors affecting the framework within which development may occur. "Centralized Campus Program" (Mary Ann Shea) describes an example of a centralized approach to serving information and development needs of faculty across the disciplines. "A Decentralized Approach: The Departmental Program at the U.S. Air Force Academy" (Carl Reddel) provides an example of a decentralized approach to serving faculty in a disciplinary context. "Faculty Development Opportunities in Academic Administration" (James Pence) describes a program that gives faculty administrative experience while they perform tasks critical to the institution. Ninety references are contained overall. (KRN)
ACADEMIC LIBRARIES IN THE SERVICE
OF
FACULTY DEVELOPMENT

A COLLECTION OF ESSAYS
COMMISSIONED BY THE
COLORADO ACADEMIC LIBRARY COMMITTEE

Edited by
James L. Pence and Evelyn Haynes

1992

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TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

According to the "Standards for University Libraries" recently adopted by the Association of Collegiate Research Libraries, academic libraries exist "to provide information services in support of the teaching, research, and public service missions of the university." These services include "directional, informational, instructional, and reference services ... designed for all levels of users from freshman to faculty members." The purpose of this monograph is to assist academic librarians in providing faculty development services to faculty members on their campuses.

The Colorado Academic Library Committee (CALC) asked a study group representing different segments of higher education in Colorado to investigate the role of the academic library in faculty development. CALC was interested in determining the extent to which the academic libraries of Colorado's colleges and universities were involved in faculty development activities.

The study group, chaired by Clyde Tucker, Director of the Office of Educational Services at the University of Colorado Health Sciences Center, included in its membership:

- Ron Camp, University of Northern Colorado, Director, Educational Materials Services
- Sharon Gause, University of Colorado at Boulder, Engineering Librarian
This monograph, Academic Libraries in the Service of Faculty Development, represents the efforts of the study group to accomplish the following goals:

1. To provide information about the need for faculty development.
2. To acquaint readers with a useful definition of faculty development and examples of faculty development activities.
3. To explain the role of the academic library in supporting faculty development projects and to provide examples of library-based initiatives.
4. To describe organizational structures for faculty development activities in selected Colorado institutions.

The intended primary audience of this monograph is the academic library staff; faculty members and academic administrators will find the chapters helpful in the design or expansion of faculty development programs.
The monograph was edited by Dr. James Pence with the assistance of Evelyn Haynes and typed by Ms. Virginia Mathews of the University of Southern Colorado.

The authors hope that their efforts will result in an increase in the number and quality of faculty development activities in Colorado's colleges and universities and that faculty members will benefit substantially from the faculty development services provided by academic librarians on their behalf.

January, 1990
Academic Libraries in the Service of Faculty Development is divided into two parts:

Part I contains three essays devoted to definitions of faculty development and descriptions of faculty development activities, including references to institutional initiatives based in or supported by academic libraries.

"Using Faculty Development to Meet the Challenges of Higher Education", written by Martin Tessmer, Ph.D., Assistant Professor of Instructional Design at the University of Colorado at Denver, describes the ways in which faculty development activities can help college educators meet the teaching, professional, and personal challenges they face. In outlining those challenges, Tessmer focuses on faculty needs for information services such as those available in college and university libraries.

"Understanding Faculty Development," authored by James L. Pence, Ph.D., Associate Vice President for Academic and Student Affairs at the University of Southern Colorado, defines faculty development and presents a model for linking faculty development activities to institutional strategic planning.

"The Role of the Academic Library in Providing Support for Faculty Development," by Evelyn Haynes, Social Sciences/Humanities Librarian, at Colorado State University, shows how faculty members use the library as teachers and
learners and describes some of the faculty development programs which academic libraries have initiated, sponsored, or supported.

Part II contains four chapters describing the variety of campus organizational structures built to accommodate faculty development programs.

"Organizational Structures for Faculty Development," by Clyde Tucker, M.D., Director of the Office of Educational Services at the University of Colorado Health Sciences Center, and Mary Ann Shea, Ph.D., Director of the Faculty Teaching Excellence Program at the University of Colorado at Boulder, identifies major factors affecting an institution's choice for the organizational framework within which faculty development programs and activities may occur.

"Organizational Structures for Faculty Development," by Mary Ann Shea, describes the Faculty Teaching Excellence Program at the University of Colorado-Boulder, an example of a centralized approach to serving information and development needs at a large research university of faculty from across the disciplines.

"A Decentralized Approach: The Departmental Program at the U.S. Air Force Academy," by Col. Carl Reddel, Professor and Head of the Department of History at the United States Air Force Academy, describes the faculty development initiatives sponsored by that department, an example of a decentralized approach to serving the needs of faculty in a disciplinary context.
"Faculty Development Opportunities in Academic Administration," by James Pence, describes a University of Southern Colorado program designed to give faculty members administrative experience while they perform tasks critical to the health and vitality of the institution.
Faculty development is challenge-driven. It is an educational process targeted to meet faculty needs, which arise from the challenges that face today's institutions of higher education. Some of these challenges stem from the traditional aspects of the educational process, such as the challenge of teaching students of diverse abilities and backgrounds. More contemporary challenges result from the changing conditions of our society, such as the challenges of technology and the demands for increased accountability in education.

This chapter will outline some of the most important and prevalent challenges facing today's college educators. Properly met, these challenges can result in the growth and revitalization of faculty and their institutions. Unmet, they can result in the atrophy or stagnation of both. These challenges will be grouped into three categories: teaching, professional, and personal.

Why outline faculty challenges? Because assessment of these challenges constitutes an agenda for stimulating discussion of faculty development topics at an institution. Faculty development means more than instructional development (see Chapter 2), since faculty development activities can be geared to all types of professional and personal needs. Since faculty needs arise from the challenges that confront them and their institutions, these challenges constitute a general faculty development agenda. From
this agenda, an institution can formulate specific faculty development plans and projects. Subsequent chapters of this monograph will describe faculty development projects and programs designed to meet some of these challenges.

The Challenges of Teaching: Knowledge, Technology, Evaluation and Student Characteristics

Most contemporary models of teaching recognize the importance of instructional activities that occur outside the classroom, activities that occur before and after direct instruction (Figure 1).

![Diagram of Teaching Phases](image)

Figure 1. Components of Effective Teaching
Faculty members and administrators have increasingly recognized the importance of pre-and-post instructional activities to effective instruction. Additionally, the very concept of teaching is being redefined. Teachers are now seen as facilitators of learning who create and manage the proper conditions of learning for students. Instruction may not involve lecturing and may not take place in a classroom or even on campus.

As the pre- and post-instructional factors of good teaching become more recognized, as the information explosion impacts academic disciplines, and as teaching technologies advance, certain teaching challenges become more prominent to today's faculty. Some of these prominent challenges are outlined next.

**Knowing and Updating Subject Matter Knowledge**

One of the recognized components of good teaching is the subject matter expertise of the teacher: the depth and currency of the teacher's knowledge. However, the 1980s have been the age of the information explosion, threatening a teacher's ability to master subject matter. Professional journals have proliferated, with over 40,000 journals now in the sciences alone. Desktop publishing is reducing the cost and effort required to publish books and word processing has made it easier to write them, thus increasing the numbers.

Overlaying this information explosion is what some experts regard as an "ideas explosion," where the number of innovations, inventions, and theory shifts has greatly increased in some
disciplines. In computer science, books are outdated by the time they are published, while current semiconductor research has led to almost weekly scientific advances. In short, many faculty members find it increasingly difficult to update their knowledge in their subject field. Many are either unaware of the information technologies offered by their academic libraries to help them or are unable to use these technologies.

With the information explosion and the advent of new information tools and technologies, the concept of "information literacy" has emerged as an important component of contemporary literacy [2,3]. Faculty who cannot access the information they need may be "information illiterate," unable effectively to cope with the information explosion. This same literacy problem confronts the faculty member's students, who are also challenged by the emergent information society. Information literacy then becomes a set of skills that: 1) faculty must master to pursue their own teaching and research goals; and 2) their students must learn to function effectively in life and school.

The proliferation in knowledge and innovation has also meant that many faculty members find their subject areas outmoded, or that they are required to teach in new subject areas that are specializations of their discipline. In English, the development of a Technical Writing field has sent some faculty "back to school" to learn how to teach this discipline. Many college music curricula are now being overhauled to incorporate digital music instruments and recording technology. In business, the field of
Business Ethics is rapidly developing as a separate degree specialty in a number of universities. In education, the development of the computer and videodisc has led many educational technology faculty "back to the drawing board" before their students know more than their teachers! Now more than ever, many teaching faculty must commit themselves to lifelong learning in their own field, taking additional courses and acquiring additional degrees. Today's expert faculty do not become experts as much as they maintain their expertise in the face of change and innovation. Commonly in faculty development programs, faculty are awarded institutional grants to update their course knowledge or retrain themselves in a new teaching area.

Just as faculty are expanding their subject matter knowledge, more faculty are becoming aware of the wide variety of alternative teaching methods available to them [12]. The lecture format of instruction is being challenged by self-paced instruction, computer-assisted instruction, jurisprudential models of teaching, distance education, and telecourse teaching. Along with this emphasis on alternative teaching methods has come an emphasis on teaching affective as well as cognitive skills to students, in order to develop the proper motivation to learning as part of the teaching process. In short, faculty are encouraged to learn about alternative teaching processes that improve teaching or the enrollment and retention of students. Consequently, faculty development programs choose development of teaching expertise as their primary agenda.
Understanding and Using Instructional Technology

With the advent of computer and video teaching technologies, faculty are faced with a variety of instructional tools that heretofore have not existed. Computer-based education, interactive videodisc, and CD-ROM have all emerged as new teaching technologies, along with the increased use of videotape as an instructional tool. Coupled with these technological developments is a nationwide push by institutions to reach new "markets" of students who cannot attend classes or even reach the campus, or who have other special instructional needs. Thus, faculty members may find themselves pressed to learn more about how to reach various students through the use of new technologies and more traditional ones such as audiotape or radio. The challenge is to understand how to use teaching technologies that are alternatives or supplements to traditional classroom instruction.

Meeting Evaluation and Accountability Standards

In recent years, the evaluation of teaching has been given increased attention. Parents, civic groups, government task forces, college administrators and students have all demanded that education be more "accountable" [13]. A number of states (including Colorado) have stepped up their efforts to measure how many students have learned from college classes [11]. Not only is college teaching closely scrutinized by a variety of people, but
people are also taking action against teachers and institutions about perceived failures to deliver quality education; college students have sued teachers over poor quality instruction. Various commissions and panels have assessed the quality of teaching in higher education, such as the National Commission on Excellence in Educational Administration, which recommended that 300 of the nation's 500 educational administration programs were instructionally inadequate and should be shut down [6].

"It is my duty to inform you that my client expects and deserves a 4.0 on all of his papers."

Student evaluations have also become a more prominent part of many institutions' evaluation systems. College administrations have mandated the use of a standardized course evaluation form for
all classes on campus. At some institutions, teachers' course evaluations are published in the campus newspapers.

As a result of this emphasis on accountability and evaluation, faculty are increasingly challenged to produce demonstrable proof of the quality of their teaching, and (if necessary) to improve their teaching in demonstrable ways. In response to this challenge, many faculty development programs offer consultative services to teachers on how to assess or improve aspects of their teaching.

Understanding Contemporary Student Characteristics and Interests

Over the last several decades, the postsecondary student population has markedly changed [7, 12]. Today's college students are older, and more are part time students. Student populations are increasingly composed of minorities and individuals with nontraditional family backgrounds. Many of these students will have basic literacy problems or limited English proficiency.

In particular, there is a growing institutional emphasis on understanding and meeting the needs of students from foreign countries and American subcultures. These students may have a cultural and cognitive framework that markedly differs from that of mainstream American students, as well as a different language. These students not only have problems in understanding oral or written instruction, but also in understanding how to function effectively in a campus classroom.
With the change in student characteristics has come a nationwide institutional emphasis on understanding student characteristics that affect learning. Faculty are expected to understand more about the role that students' knowledge, ability and learning style can play in learning. In order to promote the institutional retention of students, faculty are encouraged to better recognize and meet the personal needs of students, to become more "personalized" in their teaching, and to help academically or emotionally troubled students.

Faculty development sessions on student characteristics and learning styles are a common program item. A growing number of faculty development workshops deal with ways faculty may design instruction for special student "markets," such as off-campus (distant) learners, foreign students and returning students. Other workshops focus on the use of teaching strategies and remedial materials for students who have literacy or English proficiency problems, or discuss means for easing students' cultural adaptation difficulties.

In fact, English proficiency and cultural adaptation problems are no longer endemic to students alone. With a growing influx of foreign teachers and graduate assistants into American colleges, more and more faculty have English as their second language and come from different social/educational systems. As a result, classroom instruction may be impaired by teacher and students' inability to communicate with each other, and to relate to one another [1]. For some colleges, there is a growing need to remedy
faculty teaching difficulties through training on speaking and writing skills and classroom conduct.

Other Professional Challenges: Service, Grant Writing, Research Publication

The Importance of On-Campus and Off-Campus Service

Through the years, the variety and volume of faculty committee work seems to have proliferated. Self studies, faculty governance, curriculum development and search committees have become more a part of a faculty's life, to the point where faculty development seminars are frequently held on meeting management, team building, and time management.

At the same time, many faculty are asked to "interface" more with off-campus people in business, industry, civic groups, and the media. Many teaching departments now include business/industry advisory boards to aid in curriculum development, boards that faculty must attend or manage. Conversely, faculty are themselves encouraged to consult in the civic and business community, to promote the service of their department/institution.

In a growing trend, college faculty are collaborating with local high schools as part of their service duties [10]. Thus, the inside and outside service expectations have increased for many teachers, expectations that must be balanced with their teaching and research/publication requirements.

To help faculty effectively meet the service challenges of their jobs, faculty development programs offer workshops on
consulting in the business world, participating in college or department community fund-raisers, and working in advisory committees.

Grant Writing

Grants and awards have long been a part of postsecondary education, and for generations faculty members have applied for them. Although, grantsmanship has not traditionally been a part of most teaching faculty's expected regular duties, this trend may be changing. Many teaching faculty job advertisements include grant writing experience or success as part of the position qualifications. At the same time, economic conditions for
postsecondary education have changed since the boomtimes of the 1960's; not only do more institutions require grants to support their educational programs, but also there is less money to be granted. This means that grant writing has become more important and more competitive.

Thus, faculty who seek to create or improve their teaching/research programs are increasingly forced to seek funding from outside sources, such as government funding agencies, foundations, or local businesses. Grant writing has become more a part of a faculty member's stock in trade, to the point where grant success may weigh heavily in retention, tenure, or promotion decisions. As a result, grantsmanship training in grant preparation has emerged as an important agenda item in many faculty development programs at all types of academic institutions.

Research, Publication, and Creative Activity

Along with teaching and service, research has been a basic duty (and challenge) to college faculty. The problem of combining quality teaching, service, and publication into one job is a persistent one for college teachers. Where faculty members have to update their subject matter knowledge, learn about new teaching technologies and methods, and/or apply for grants, publishing or creative activity of any sort may seem out of the question.

Today, many faculty development programs recognize that faculty need publication help of two kinds: 1) how to research, compose, and submit their publications; 2) how to publish in the
face of heavy workload obligations from other faculty challenges. To answer the first need, many institutions have initiated faculty seminars and colloquia on how to write for publication, conduct research, find funding for research or creative activities, and submit work. To answer the second need, institutions have created and advertised more campus support for publication, support such as research consultation by librarians, library computer searches for references, word processing and desktop publishing, and faculty mini-grants for research or creative work.

As many faculty are being challenged to increase their research activity, the emerging undergraduate research movement poses additional challenges to their research activities. Colleges and universities are beginning to encourage undergraduate collaboration in faculty research as a means of enriching the student's college learning experience and enhancing student retention [9]. Faculty who engage in such collaborative efforts will need to learn how to employ undergraduates in research to make the collaboration meaningful to students and useful to the faculty member.

Personal Challenges to Faculty: Wellness, Careers, and Money Management

Faculty Development has often been misconstrued as synonymous with teaching development. The purpose of the previous section on Other Professional Challenges was to indicate that today there are myriad other faculty professional duties that can be part of faculty development efforts. Similarly, faculty development
programs are now offering more personal development programs. One of the reasons for these offerings is the belief that a faculty member's ability to cope easily and successfully with personal challenges contributes to the ability to handle professional challenges. Faculty development must be deep enough to consider the whole person [5]. The second reason is the belief that faculty development programs should help improve the quality of life of the faculty.

The personal challenges outlined in this section include three broad areas of faculty concern but are by no means exhaustive of the personal challenges that face faculty today. Instead, these areas reflect some of the most current nationwide faculty development efforts to meet faculty's "nonprofessional" needs.

Wellness as a Coping Factor for Faculty Challenges

"Burnout," which has become a watchword in recent times, denotes the exhaustion that faculty members can feel in coping with the various professional challenges outlined in this chapter.

As a recognition of this problem, recent books and articles propose solutions for burnout and stress. Colorado governor Roy Romer has even proposed state jobs for teacher burnout victims [14].

With the growing recognition of faculty burnout/stress has come the recognition that the physical and mental health of the faculty member plays a vital role in how well faculty can cope with the professional challenges mentioned earlier in this chapter.
Institutions have begun to realize that faculty wellness programs can offer substantial paybacks, as they have done in industry. Consequently, faculty development programs have begun to offer a variety of wellness programs for their clientele that may cover topics such as weight loss, relaxation, quitting smoking, nutrition, and recreation.

**Career Concerns: Promotion, Job Mobility, Retraining**

Recent research in higher education has indicated that many faculty will work at several postsecondary institutions in their career and may move out of higher education altogether, indicative of their job mobility. In addition, faculty may move through several different job levels in their careers, moving from assistant to associate professor, or from professor to college administrator. Consequently, the career needs of faculty have become viable faculty development targets, needs such as how to prepare a *curriculum vitae*, how to prepare a portfolio for promotion and tenure considerations, and how to research career openings and options. In addition, some faculty development programs are focusing on the creation of career advancement opportunities for teachers, both within and without the institution [4].

At the same time, the information and ideas explosion has meant that faculty may need retraining as part of their career needs to maintain their expertise through updating or cross-disciplinary training. While faculty development programs cannot
provide all the training necessary, some institutions have initiated resource programs that assess faculty's retraining needs and provide the needed released time or resources for them. As one of the more "nontraditional" faculty development offerings, retraining is not yet a consideration of very many faculty development programs.

**Personal Finances Management**

While faculty salaries have shown a steady increase during the 1980's, the cost of living has shown a roughly similar increase, mitigating the buying power of a historically underpaid profession [8]. To meet the expressed and perceived financial needs of teachers, many institutions have offered financial consultation and instruction to their faculty, frequently as part of their faculty development programs. With the change in federal tax laws, the demand for such financial help has increased. Consequently, faculty development programs are offering aid and instruction on retirement planning, tax laws, and investment strategies. With the reality that faculty may not make more money, faculty development programs can help them spend it better, to meet their financial challenges.

**Conclusion**

If faculty development programs are aimed at helping faculty meet the myriad challenges that directly and indirectly affect their professional performance, there are a large number of
services that such programs may offer. In meeting the personal and professional challenges to faculty, faculty development programs can offer training, consultation, and resources to teachers. These services can relate to teaching, publication, service, health, or finances.

This chapter has described the types of challenges that faculty development programs can meet. In designing faculty development programs, each campus must answer two important questions for itself: what is faculty development? What forms can a faculty development program take to meet our faculty's needs? These questions will be answered in subsequent chapters of this monograph. The next chapter will define faculty development, and subsequent chapters will describe different forms of faculty development programs.
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1. "Academia faces a language gap at the lectern" (1987), The Denver Post, November 15, 1-3F.


Increasingly, institutions of higher education are being held responsible for their actions or lack of action. The reform reports of the eighties clearly indicate the growing importance of accountability for the nineties, proposing in various ways that colleges and universities should be measured by indicators of quality as well as those of efficiency. Consumers, critics, and observers of higher education, including taxpayers, accrediting agencies, parents, legislators, trustees, and the growing numbers of non-traditional and re-entry students, are seeking quality, which they define in terms of the striving for or the achievement of "excellence."

From many segments of society come the calls for superior academic programs integrally related to institutional missions, for the production of well-educated graduates capable of contributing to society and performing effectively in the workplace, for meritorious performance by faculty in teaching, scholarly activities, and service, and for leadership capable of articulating vision, managing change, and producing measurable outcomes. A commonly held view of a sizeable portion of the American public seems to be that higher education is too costly, anachronistic, inefficient and ineffective, and incapable of doing something quickly to meet the real and emerging needs of its clientele, the students it enrolls and the society it serves. "The university now
offers no distinctive visage to the young person," writes Allan Bloom in *The Closing of the American Mind*: "...there is no vision, nor is there a set of competing visions, of what an educated human being is...The student gets no intimation that great mysteries might be revealed to him, that new and higher motives of action might be discovered within him, that a different and more human way of life can be harmoniously constructed by what he is going to learn. Simply, the university is not distinctive" [2, p. 337].

From within the academy come a variety of responses to calls for reform or to critiques of performance. This variety is exemplified by the September/October 1987 issue of *Change*, wherein Alexander Astin writes of the importance of a "cooperative world view" with teaching being seen as "a metaphor for cooperation"; Parker Palmer discusses knowing and learning as communal acts and argues that our educational agenda is "deepened" when institutions realize that the "way we know has powerful implications for the way we live"; and Jon Wagner recommends teaching and research be viewed as student responsibilities to achieve a more meaningful integration of academic life with community service [5]. The 1987 Annual Assembly of the National Center for Higher Education Management Systems (NCHEMS) featured four nationally prominent speakers who emphasized the importance of managing institutional missions as an appropriate response to the calls for educational reform. A 1988 national conference on improving quality in undergraduate education sponsored by the American Association of State Colleges and Universities and Northwest Missouri State
University, explored the theme of quality and diversity as institutional priorities. The 1989 Annual Meeting of the American Council on Education, "Education for the Common Good," called attention to appropriate institutional responses to reform agendas. The 1989 National Conference on Higher Education sponsored by the American Association on Higher Education took as its theme "Stand and Deliver," focusing attention on the hard-to-teach students about whom the reform reports have much to say.

With increasing frequency, articles in *Chronicle of Higher Education* report on successful individual or institutional initiatives to effect meaningful change on campuses nonetheless beset with financial, personnel, or curricular problems. While it seems to be true that calls for reform are coalescing around major themes or topics, the responses to those calls are indicating to some of its critics that higher education is incapable of making clear, unified responses.

Within this context of inspection and introspection, issues of faculty development have new and increased significance for all segments of the higher education community.

Not surprisingly, the literature on faculty development is extensive and growing. Recent studies focusing on the faculty workplace and the conditions of academic life indicate that the American professoriate is troubled: low morale, a decline in numbers of promising young scholars entering the profession, lack of progress in increasing the numbers of women and minorities holding faculty positions, downward trends in real and relative
salaries, and increased campus tensions caused by declining enrollments are frequently cited as sources of problems. One national study concludes that "three congeries of problems today press hard upon the professoriate and affect also those who contemplate academic careers: inadequate compensation, a deteriorating work environment, and an inhospitable academic labor market" [3, p. 268].

In responding to calls for accountability and reform, colleges and universities are establishing student outcomes assessment programs, revising core curricula, developing performance-based or incentive-based funding mechanisms, and engaging in a variety of activities designed to enhance their image or to gain a competitive advantage in the marketplace. Among such activities are faculty development programs, now being initiated, revised, or reinvigorated to meet the challenges of the nineties so well defined for us in the eighties, increasingly described, retrospectively, as an age of adversity in American higher education.

**Defining Faculty Development**

Faculty development programs and activities are not new to higher education. Sabbatical and study leaves, funded research projects, sponsored travel to professional meetings, and released time from teaching to pursue scholarly interests are examples of conventional faculty development initiatives. Group or corporate renewal activities have gained popularity in recent years, especially in liberal arts colleges and small institutions where
collegiality is highly prized [9, pp. 72-76]. National organizations and centers exist to promote various kinds of development activities; and individual campuses, including several in Colorado, support development programs or centers with the purposes and services varying according to institutional type, mission, goals, and resources.

In spite of the prevalence of successful models and proven, effective approaches to faculty development, the literature continues to show that "faculty development programs cannot simply be transplanted from one campus or consortium to another. Programs must grow out of the special needs and potentialities of local situations" [10, p. 8]. In addition, faculty members have not traditionally been required to develop the survival skills to cope with the kinds of external forces impacting on higher education in this decade, and many institutions are finding themselves unable to devote the time or resources to the developmental needs of faculty. On the one hand, colleges and universities have spent enormous amounts of time and resources to assemble their faculty; on the other hand, the pressing needs of the present prevent investing the necessary time and resources to allow for their continual growth and development. "Always a concern," says Jerry Gaff, "the development of faculty is absolutely essential during the hard times that now beset the profession. This is precisely the time to turn to faculty development for solutions to some of the vexing problems confronting individuals and institutions" [7, p. 138].

As colleges and universities begin new programs or revise
existing ones in an attempt to revitalize faculty and, concomitantly, the institutions themselves, they are guided by key questions of process and product: How should faculty development programs and activities be initiated or changed? What are the benefits to the individual and the institution in the short and the long term? Answers to these questions are neither easy to find nor simple to state. Frequently, problems of definition impede the establishment or revision of faculty development programs: if campus constituencies cannot agree on the meaning of faculty development, the chances of achieving success in programming are slim and answers to the questions are even more difficult to discover.

While no universally preferred definition of faculty development exists, the categories of faculty development activities as identified by the Association of American Colleges in its Project on Faculty Development [10] still provide a useful schema for understanding the concept of faculty development. In reporting on the AAC Project, Nelsen and Siegel enumerate four categories of development activities:

1. Professional Development
2. Instructional Development
3. Curriculum Change
4. Organizational Change

Professional development refers to the continuing growth of individual faculty members as academics. In this context, faculty development means renewal activities in the domains of scholarship
and research. Conventional activities include sabbatical leaves, sponsored travel, and released time from teaching to engage in scholarly and creative activities.

**Instructional development** refers to the continuing growth of faculty, individually or collectively, as teachers. In this context, faculty development means renewal (or fundamental) activities in the domain of pedagogy. Junior faculty often partake of these activities if they have not served as teaching assistants in graduate school; senior faculty engage in these activities to learn new technology in application to teaching. Conventional programs include seminars, faculty mentor and observer activities, informal gatherings to discuss teaching improvement, and specific activities, such as micro-teaching, designed to improve instructional effectiveness.

**Curriculum change** refers to faculty participation in the continual reformation of the curriculum. In this context, faculty development means individual or collaborative efforts within disciplinary (and, increasingly, inter-disciplinary) contexts to alter or transform the substance of instruction being delivered to students. Typical activities include summer grants, released time from teaching, travel to peer institutions, and involvement with curriculum bodies in the system of institutional governance.

**Organizational change** refers to faculty participation in the continual reformation of the organization. In this context, faculty development means individual or collaborative efforts in governance to modify and improve the effectiveness of the
organization in its quest to fulfill its mission. Typical activities include involvement in governance units dealing with faculty affairs, including, for example, compensation committees, faculty development and instructional improvement committees, library acquisition committees, and other such governance bodies that relate to policy formulation and implementation.

These four categories of faculty development activities constitute a workable "definition" of faculty development to the extent that institutional and individual efforts at development and renewal of faculty may fittingly be grouped into one or more of these standard categories. Academic libraries and library professionals have an important participatory role in programs or activities in each category, although they may have not historically been much involved.

Faculty development, then, may properly be defined as referring to an activity designed to promote the growth or renewal of faculty members as scholars, teachers, curriculum designers, and participants in the complex organizations we know as colleges and universities.

**Doing Faculty Development**

When institutions design or revise faculty development programs in view of the process and product questions stated earlier, they sometimes discover that these programs, no matter how splendid and how successful, are not integrally related to the mission of the institution. In reality, in times of tight budgets, development programs for faculty are targeted for
reduction or elimination as frequently as development programs for students. Something about our priorities in higher education leads us to sacrifice those services and programs most related to our growth and development when we most need them; departmental travel budgets, for example, are often the first to go when fiscal constraints are upon us.

Effective approaches to faculty development are well documented; the processes of establishing them are clearly described in the literature; the results achieved by them are effectively summarized; and the tools to evaluate them have been developed and disseminated. But not enough campuses are doing faculty development in sufficient contexts to meet the staggering need for faculty revitalization and renewal. If they were, forty percent of the faculty would not be considering leaving academe (as reported in a nationwide survey by the Carnegie Foundation for the Advancement of Teaching in 1985), and Eble and McKeachie would paint a more optimistic picture than they do of an aging, restless, and "trapped" faculty not adjusting well to changing and declining enrollment patterns, increased emphasis on accountability on and off campus, and continuing financial pressures on campuses [6, p. 3].

Doing faculty development ultimately means accomplishing more than the establishment of a center or the initiation of a pilot program. Doing it means identifying and meeting the developmental needs of faculty members for growing professionally, improving teaching skills, gaining a better understanding of students,
improving interpersonal relationships with students and colleagues, understanding the relationships between disciplinary contexts and student learning, increasing motivation and enthusiasm for their work, developing the skills of life-long learners, and improving abilities to communicate with colleagues about the important purposes they are mutually aiming to achieve [7, pp. 14-17].

In "To Secure the Blessings of Liberty," the report of the National Commission on the Role and Future of State Colleges and Universities, one of the several recommendations of the Commission deals with faculty vitality and excellence in college teaching: "The Commission recommends that state fiscal and institutional policies be adopted or modified to ensure that faculty vitality and excellence in teaching are maintained and enhanced" [12, p. 36]. This and similar recommendations from the reform reports suggest the need for commitment to faculty development as a requisite condition of transforming the academic workplace. Too often, campus communities spend more time and energy arguing about the nature, magnitude, and scope of the commitment than about the importance of the commitment itself. Faculty governance units may postulate that no development activities can possibly occur without administrative commitment in the form of support (meaning money) and incentives (meaning money). Administrators counter that money alone will not solve problems associated with revitalizing the faculty; a renewed commitment from the faculty itself to higher standards for promotion and tenure, for example, will lessen the need for revitalization and allow for reasonable allocation of
resources for development programs.

Doing faculty development does require commitment, but the nature of that commitment must be understood in terms of institutional cultures and contexts, as well as in terms of the requirements for leadership. "Cooperation-not competition: this is the new challenge for leadership in higher education," states the AASCU report [12]. Applying this statement to the subject of faculty development, the issue of commitment is perhaps best understood within the framework of institutional strategic planning, where cooperation and collaboration govern the activities of decision making.

**Linking Faculty Development to Institutional Planning**

In the eighties, institutional planning has come to mean "strategic" planning, "the process of developing and maintaining a strategic fit between the organization and its changing market opportunities" [8, p.471]. While many useful models of strategic planning exist, the one developed by Robert C. Shirley provides a meaningful context for considering the ways in which faculty development may be profitably linked to institutional planning.

In Shirley's model, strategic planning begins on an institutional level, which focuses on the strategic direction of the institution as a whole as determined by assessments of the external environment, identification of intended strengths and weaknesses, and analysis of the educational values held by members of the community. Strategic direction results from key decisions made about basic mission, clientele, programs and services,
comparative advantage, and institutional goals and objectives, such as decisions being driven by the "matching process" which relates external opportunities and constraints to internal strengths and values [11, p. 94]. Graphically, the model looks like this:

**TABLE 1**

A STRATEGIC PLANNING SYSTEM FOR COLLEGES AND UNIVERSITIES

![Diagram of strategic planning system for colleges and universities](image-url)
Once the institutional strategy is determined, Shirley argues, college and department level strategies necessarily follow, becoming the operationalization of the strategic vision determined initially at the institutional level.

Faculty development initiatives are rarely related to institutional planning. Although most sabbatical leave applications ask, for example, that the applicant demonstrate ways in which the institution will benefit from the proposed sabbatical, decisions about the rewarding of sabbaticals seem to have little to do with an institution's strategic direction and much to do with campus politics, availability of resources, or, in optimal situations, the merits of the application.

If faculty development initiatives were more integrally related to institutional planning, faculty development might maintain higher visibility among campus constituencies and receive sufficient resources to outlast fiscal crises. In reality, faculty development is rarely intimately related to institutional mission, goals, or priorities and is often delegated to college or departmental units. While decentralization of faculty development efforts is not unhealthy, as Carl Reddel's chapter in this text demonstrates, delegation of responsibility to academic units without a strategic tie to institutional aims jeopardizes even the best of programs.

Doing an effective job of faculty development, then, requires integration of faculty development initiatives with institutional planning. A paradigm which shows the strategic relationship
between faculty development initiatives and institutional plans is shown in the figure below:

### TABLE 2

Strategic Analysis Paradigm for Faculty Development

<table>
<thead>
<tr>
<th>Personal and Educational Values</th>
<th>The &quot;Matching Process&quot; relating individual abilities to institutional goals within the contexts of a values orientation and collaborative setting</th>
<th>Faculty Development Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Determination of Strategic Direction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Professional Activities and Abilities
In this paradigm, derived from Shirley's model, faculty development plans result from the "matching process" in which individuals' professional abilities are related to institutional goals, within the context of a values orientation and in a collaborative setting. The audit of professional activities and abilities is analogous to Shirley's internal resource audit; the environmental assessment becomes the individual's understanding of the institution's strategic direction.

To determine personal and educational values as a prelude to the completion of a faculty development plan may seem uncommon or even unnecessary. However, the literature on faculty development in the eighties stresses the importance of values clarification as a prerequisite to career planning. A junior faculty member who, for example, does not value the general education curriculum might not be a suitable candidate for faculty development dollars devoted to initiating curriculum change for undergraduate majors.

Identification of personal and educational values involves faculty assessment of outcome and process goals dealing with issues and topics related to their careers in academia. Some examples of those issues and topics are categorized as follows:
If faculty members were asked to identify and analyze their personal and educational values and then offered the opportunity to compare their values to those of their peers and colleagues, significant understanding of cultural context is likely to occur. Even if no comparison is possible, the activity of engaging in a values clarification exercise such as this should produce substantial benefits to the individual and to the department chair.
or dean responsible for making decisions about that individual's future in the academic community. In its simplest form, this assessment might consist of faculty members being asked to write a brief narrative explanation of the values they hold in certain specific categories related to their annual development plans. Academic librarians are, of course, good sources for recommendations on reading material related to each of the issues listed in Table 3.

To assess professional abilities prior to completing a development plan requires an accurate accounting of professional activities and an estimation of one's own abilities as a teacher, scholar, and member of the academic profession. Thorough self-assessment, focusing on identification and explanation of performance-based abilities in the three domains, serves as a necessary ingredient of the "matching process" because the individual faculty member knows herself or himself better than any colleague; although the possibility for bias in self-assessment always exists, the experience of the AAC Project interviewers and others who have used self-assessment activities as a part of faculty growth planning report more successes than failures.

Assessment of activities and abilities in teaching effectiveness might make use of a matrix like this one:
<table>
<thead>
<tr>
<th>Activities Inventory</th>
</tr>
</thead>
</table>

**Directions:** Write a brief description of your activities in teaching over the past three years, referring (for example) to:

- courses taught in 3-year cycles
- FTES generated
- enrollment patterns/retention
- number of preparations
- level of courses
- special innovations, development of courses
Using information provided by self-assessment, student perceptions of teaching, and/or colleague perceptions, describe your abilities, referring as appropriate to the items listing in the three categories:

<table>
<thead>
<tr>
<th>Skills</th>
<th>Self</th>
<th>Students</th>
<th>Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>speaking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>listening</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problem-solving</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intellectual Capacities</th>
<th>Self</th>
<th>Students</th>
<th>Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>synthesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>inferential reasoning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>critical thinking</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Self</th>
<th>Students</th>
<th>Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>discipline-based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interdisciplinary</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessing scholarly activity, a more difficult task of self-assessment, might follow this matrix:

<table>
<thead>
<tr>
<th>Activities Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions: Write a brief description of your scholarly activities over the past three years, referring (for example) to:</td>
</tr>
<tr>
<td>- publications</td>
</tr>
<tr>
<td>- mss submitted</td>
</tr>
<tr>
<td>- research projects/activities</td>
</tr>
<tr>
<td>- disciplinary reading</td>
</tr>
<tr>
<td>- inter-disciplinary reading</td>
</tr>
<tr>
<td>- papers/lectures/presentations</td>
</tr>
<tr>
<td>- grants/proposals</td>
</tr>
<tr>
<td>- colloquia</td>
</tr>
<tr>
<td>- creative performances/inventions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abilities Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions: Using information provided by self-assessment, student perceptions, and/or colleagues perceptions, describe your abilities referring both to quantity and quality of scholarly productivity over the past three years.</td>
</tr>
</tbody>
</table>
Finally, assessment in the domain of service, an area requiring careful definition to account for campus variables, might take this form:

**TABLE 6**

<table>
<thead>
<tr>
<th>Activities Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write a brief description of your service activities over the past three years, referring (for example) to:</td>
</tr>
<tr>
<td>participation in</td>
</tr>
<tr>
<td>institutional governance</td>
</tr>
<tr>
<td>academic advising</td>
</tr>
<tr>
<td>campus sponsorships</td>
</tr>
<tr>
<td>community relations</td>
</tr>
<tr>
<td>professional associations</td>
</tr>
<tr>
<td>leadership activities</td>
</tr>
</tbody>
</table>
Abilities
Inventory

Directions: Using information provided by self-assessment, student perceptions, and/or colleague perceptions, describe your abilities, referring both to duration of services and accomplishments over the past three years.

<table>
<thead>
<tr>
<th></th>
<th>Self</th>
<th>Students</th>
<th>Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accomplishments</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In all instances, faculty members are assessing their activities and abilities from their own perspectives, asking themselves the following questions:

1. What do I think of my abilities in this domain? What evidence do I have?
2. What do I believe my students think of my abilities? What evidence do I have?
3. What do I believe my colleagues think of my abilities? What evidence do I have?

The virtue of this detailed self-analysis is that the results of it are not to be used in making personnel decisions but for the purposes of identifying the relationship between individual abilities and institutional goals and strategies.
The determination of institutional strategic direction is, for the most part, outside the responsibility of individual faculty members or even faculty collectives. The key to success in doing faculty development lies in the effectiveness of the "match" between institutional goals and individual abilities and values. In other words, once the institution determines its strategic direction, individual faculty members and groups of faculty are able to develop career plans which mesh tightly with institutional plans, and the result is an inseparable union of the individual and the institution, moving together on the same strategic track toward the future.

In this strategic paradigm for faculty development, then, individual faculty development plans are written as the outcome of a "matching process" which involves:

1. Determination of the institution's strategic direction and clear communication of that direction to faculty members.

2. Assessment of personal and educational values which inform individual faculty member's decisions about everything they do while engaged in the activity of teaching and learning.

3. Assessment of activities and abilities related to the profession and its domains of teaching, scholarly activity, and service, with an emphasis on honest introspection and careful analysis of how one perceives herself or himself, how one perceives others (students...
and colleagues) perceive her or him, and how one believes she or he is achieving.

Because these plans are not used for making personnel decisions, that is, for decisions on retention, promotion, tenure, or salary determination, they become living documents with a kind of strategic and tactical force not ordinarily present in conventional development plans. They become the springboards for action in the sense that they drive the decisions by department chairs, deans, or faculty committees charged with identifying resources necessary to make these plans successful. Without resources, faculty development initiatives are doomed to failure; this strategic paradigm provides a useful and fitting context for those charged with resource allocation responsibilities to see immediately and clearly the relationship of faculty growth plans to institutional direction.

Doing faculty development within the parameters of strategic planning makes sense; they are mutually interdependent. The destiny of the individuals who teach in an institution should be yoked meaningfully with the planned future of the institution itself. In a very real sense, therefore, doing faculty development means getting serious about institutional development and making the strategic decisions required to allow individual, collective, and organizational growth and advancement.
Using Faculty Development

In College: The Undergraduate Experience in America, Ernest Boyer and the Carnegie Foundation for the Advancement of Teaching discuss findings on the state of faculty in American colleges and universities:

The condition of teaching is, in short, a pattern of contradictions. We found faculty committed to the enterprise, in spite of eroding incomes and the quality of campus life. We found continuing commitment to the disciplines and little dissatisfaction with the curriculum. Faculty, while strongly identifying with a common culture, live within disciplines and work at institutions that have sharply contrasting values and traditions. While great prestige comes from research and publications, many faculty members prefer teaching, and we suspect that many endure personal discontentment about the conflict which they hardly dare to voice. There is a yearning for community, although each individual goes on his or her individualistic competitive way [4, p. 138].

In Habits of the Heart, Robert Bellah writes about work in America: In the sense of a "job," work is a way of making money and making a living. It supports a self defined by economic success, security, and all that money can buy. In the sense of a "career," work traces one's progress through life by achievement and advancement in an occupation. It yields a self defined by a broader sort of success, which takes in social standing and prestige, and by a sense of expanding
power and competency that renders work itself a source of self-esteem. In the strongest sense of a "calling," work constitutes a practical ideal of activity and character that makes a person's work morally inseparable from his or her life. It subsumes the self into a community of disciplined practice and sound judgment who activity has meaning and value in itself, not just in the output or profit that results from it. But the calling not only links a person to his or her fellow workers. A calling links a person to the larger community, a whole in which the calling of each is a contribution to the good of all. [1, p. 66].

The quotations from Boyer and Bellah address the most important uses of faculty development for the immediate future of higher education: to build community and encourage collaboration in the midst of chaos, competition, and relentless change. Faculty development initiatives, properly tied to the strategic plans of institutions, are bound to foster the kind of community-building and cooperative activities necessary to bring renewal to individuals and revitalization to institutions. Institutional investment in effectively constructed faculty development programs is a kind of preventative maintenance, ensuring that, in the long run, the intellectual capital of the institution is enhanced.

When faculty development is used to make us "aware of our intricate connectedness and interdependence" [1, p. 289], we may be able to achieve for the professoriate a "reappropriation of the idea of vocation or calling" [1, p. 287] and revitalize faculty and
institutions in ways never before thought possible. In an age of adversity, using faculty development to achieve these ends may mean the difference between mere survival and a future defined by a legitimate commitment to an achievable excellence.
REFERENCES


Faculty members use the library in two primary ways: as learners themselves and as teachers of others engaged in the learning process. Both uses are enhanced by thorough knowledge and skillful use of the wide scope of resources available.

In order to fulfill its role in the improvement of teaching, the library must be regarded by faculty and administrators as one of the vital campus resources for instruction. Librarians must be included in campus planning and administration of professional development programs and be valued as knowledgeable consultants to the teaching faculty. Their distinctive expertise in the field of information resources is fundamental to the learning that is necessary in order for development efforts to succeed. Their knowledge of the means of access to these resources covers all subject disciplines and underlies the broadest aspects of the curriculum. Ernest Boyer, President of the Carnegie Foundation, identified this basic function of librarians in his address at the Symposium on Libraries and the Search for Academic Excellence held at Columbia University in March, 1987:

Those in charge of information services on a campus are the renaissance people who are able to guide students through the typology of knowledge and help them discover the relationships
that no single department and no single professor can provide. [7, p. 46].

Librarians and teaching faculty must form partnerships and forge collegial relationships in the classroom and on other projects to improve and advance both areas of academic life. Without such collegiality, the library will probably remain underutilized, in spite of the high financial and personal investment required to develop and maintain it and in spite of the abundance of resources which it contains. Opportunity should be provided for classroom faculty to observe that librarians possess an area of expertise in the information world that they themselves lack. When librarians share that special knowledge, it "allows faculty to observe a librarian as a teacher and an information consultant, two roles of a librarian that are unfamiliar to most faculty." This role establishes librarians as valuable colleagues who possess essential knowledge that they are willing to share. [36, p. 20].

To achieve these partnerships, librarians must take a more active role than they have traditionally assumed:

Librarians have not been particularly noted for their assertiveness around college campuses in respect to the place of their discipline and their profession in the curriculum and on the campus as a whole.... [42, p. 196].

They must assert the importance of their contribution to academic life and assume responsibility for sharing their expertise:
As a profession we must stop hoarding our bibliographic knowledge and concealing our awareness of the problems of information retrieval. We must stop waiting to be asked to share this special knowledge. We must insist upon making it available to all users, in every conceivable form and at every accessible point of need. Then, and only then, can we claim to be complete librarians. [27, p. 14].

This active role is even more vital as information resources increasingly include machine-readable data files, use telecommunication systems, and require knowledge of information systems available only to those who can understand and access such systems.

Assertiveness by librarians, however, must not be misinterpreted as arbitrary prescriptions about how faculty and students should use the library. It does mean that librarians should take the initiative in establishing dialog with faculty, learn how they perceive their own and their students' information needs, and articulate how the library can meet those needs. In their eagerness to emphasize their professional expertise, librarians must not lose sight of the support role of the library that remains constant despite changing methods and technologies. "...librarians need to emphasize how they can help solve the problems of others. They need to make it clear that the agendas of... libraries are the same as those of their institutions, that libraries do have much to offer in the addressing of identified educational priorities, and that library personnel and resources
can be strong tools of empowerment for achieving those priorities." [8, p. 9].

It may be possible, for example, that faculty and student expectations are based on what they think is possible or available, whereas librarians can provide information that will help them revise their expectations to a level that more fully meets their research needs.

"Academic librarians interested in promoting educationally productive use of the academic library should develop a good understanding of the educational attitudes of the classroom faculty and how these attitudes relate to the academic library. Librarians then need to develop coherent strategies to relate the academic library to the educational goals and purposes of the classroom faculty. This may involve some change of attitudes on the part of members of both groups." [19, p. 155].

Librarians who fail to make this essential connection with the attitudes, knowledge, and goals of the faculty and the institution will find themselves left out of the mainstream of academic endeavors and irrelevant to the learning that takes place on campus. They may have invested a great deal of time and effort in programs that do not work and that are not used. [14, p. 48].

Faculty as Learners

The library both contains, and can acquire or locate, many of the resources required by faculty to meet the challenges described by Martin Tessmer in Chapter 1. The access to electronic networks
connecting libraries with other libraries or organizations that produce information, the numerous directories, indexes, abstracts and other finding tools contained in libraries all serve to make users aware of the abundance of resources and to help locate them. Only with the fullest possible collaboration between faculty and librarians can both fulfill their missions.

In their own subject fields faculty must maintain their subject expertise in spite of the rapidly accelerating rate at which knowledge is produced, they must keep up-to-date on the latest research in progress and completed, and they must be tuned in to new trends and schools of thought in the field. The difficulties of keeping pace are graphically described by the retiring librarian of Yale University, Rutherford D. Rogers, in a 1985 New York Times article. He observed that many scholars "have been unwilling or unable to cope with the profusion of new sources" to the detriment of their research. [10, p. 10].

As a means of coping with the growing complexities of knowledge, professors will continue to rely upon their familiar information networks, such as consultation with trusted colleagues in their disciplines, use of their own subscriptions and personal libraries, and contacts at conferences or on research projects as their primary information sources. However, those who limit themselves to these means may miss essential information for their research and teaching purposes as well as the opportunity of profiting by the comprehensive, systematic, organized and selective approach to information that is available through libraries.
Perceptive librarians will certainly concur with the description of the obvious limitations of indexing and abstracting services by S.K. Stoan. However, it would be a mistake to conclude, as he does, that these sources are useless. They must still be considered as essential aids to faculty research because they are the most systematic, organized resources available. Stoan observes: "Overall, faculty are generally satisfied with the way they are carrying on their research and doing literature retrieval for research purposes. Their behaviors in this regard have been 'successful.'" However, he fails to account for the many inquiring scholars who search for better results or for the possibility that performance could be enhanced by updated knowledge of systematic information retrieval methods. [38, p. 253-54].

Even those faculty who remain satisfied with the tried-and-true informal research methods characteristic of their discipline will find them inadequate for new fields of inquiry. For example, efforts to develop their teaching abilities will require them to use resources not acquired in the familiar ways. New research tools and methods are becoming available at a rapid rate although many faculty still remain unaware of existing sources. The numerous indexing, abstracting, reviewing, and other finding sources provide the student or researcher with a systematic means of making intelligent selections. Electronic access through online bibliographic searches and computer-based reference services to many of these databases provides powerful discovery and selection capabilities not available through traditional searching means.
The ability to construct search inquiries for precise retrieval of information, now minimally possible with print indexes, is greatly enhanced with electronic retrieval methods. These provide numerous access points, not previously available, to information, as well as the ability to define specifically what the searcher wants. They enable precision in the inclusion of desired items as well as the exclusion of undesired. Further, libraries now provide assisted access to non-bibliographic data and textual files published by the U.S. government and commercial sources, applying similar search processes to information itself rather than references to information sources.

The searching process, according to Kenneth Boulding, is one whereby "We gain knowledge by the orderly loss of information.... If a very large amount of information reaches us, the general effect is that of noise. If we are to make the information intelligible we must either filter out the irrelevant or devise some other means of making the relevant stand out. Indexing is a process of filtering out irrelevant information." [4, p. 71].

The process of selecting search specifications also requires researchers to refine their queries and to define the purpose and scope of the research project, necessities often dealt with only vaguely in traditional search methods. It allows for more purposeful searching, besides saving considerable research time. Librarians often serve as intermediaries in this process, consulting, advising and performing online information and
reference searches, or as teachers of those who wish to learn to do their own searching.

Even in instances where faculty direct the work of others doing the actual library research, for example, research assistants, secretaries, or undergraduate researchers, they must have first-hand knowledge of, and experience with, the information system. They will still be required to know the power and potential of research to explore the invaluable world of peripheral and relational data, or students and staff will not be directed toward appropriate resources.

The academic world also continues to place new demands upon its faculty to acquire knowledge in different fields. In an age of narrowing subject specialization, there is at the same time a counter trend toward cross-disciplinary programs such as women's, ethnic and area studies, and toward ideas that seek to integrate knowledge. Involvement in these programs will require faculty to learn in new disciplines.

The Scientific Revolution, and its younger sibling the Industrial Revolution, were made possible by our capacity to divide into separable disciplines the proven methods of inquiry, and to retrieve from bins of manageable size and complication the knowledge we accumulated by observing, experimenting, and theorizing. But in the latter part of the twentieth century, we came to realize that most of our troubles stem from neglecting the interconnectedness of
knowledge and the interdisciplinary character of all real-world problems. [12, p. 10].

One faculty member has discovered that the library offers a readily available means of discovering how knowledge is interrelated. "The point is not that one should try reading or hearing everything in its entirety but rather that one should develop an awareness of the connections between selected passages and their surroundings. This is one reason that it is so important for students to be encouraged to use the whole library on a regular basis, not just the reserve room. One of the beauties of open stacks is their browsability; the physical relationship of books on the shelves reveals so much about patterns and history of thought." [39, p. 53].

In addition, practical and personal concerns may involve some basic knowledge of, if not actual expertise in, other areas, e.g., the use of technology as applied to teaching and learning, career change, money management, retirement planning, personal and psychological development, personal health, legal issues and others. New and enhanced information systems provide the possibility of efficient learning in these multiple areas.

Professional and service requirements expected of most faculty may involve the study of new subject matter; for example, serving on a curriculum committee assumes some knowledge of other disciplines but also of curriculum development theory. The preface to any policy making or planning effort should, at minimum, require a search in the professional literature to avoid duplication of
effort and to learn from the experience of others. The need to obtain grant money to conduct most research projects requires that one learn some of the skills of writing grants as well as study available funding sources.

Successful grant writers also need to know what research has been done, as well as what is in progress, in view of the enormous commitment of resources required for field and laboratory research. Professional responsibility assumes that the results of research in any field will be communicated to colleagues and students. Much information about sources for publishing is available in libraries, as are helps to writing, citing sources, and preparing documents for publication. Once the results are published, libraries and library systems often become the chief means of disseminating the information.

Faculty members who attempt to upgrade their teaching skills as well as keep up with the many other professional and personal demands placed upon them are likely to find themselves thrust back into the role of beginning learners. Though they may have learned how to do research in their professional discipline, they may not be prepared to search in a new or different field. They need generalizable research skills that are transferrable to information search needs in any subject area, skills which librarians are distinctively qualified to teach by preparation and experience.

**Faculty as teachers**

Faculty members who undertake efforts to enhance their teaching abilities will acquire a host of new information needs,
not just for their own learning, but also for direct application to improving their teaching. These will include knowledge of the varied teaching theories and methods, the psychology of how students learn, communication skills, improved methods for measuring and evaluating students, the use of teaching aids and materials, and the applications of automation to teaching, to name some of the most important. They will also become more vitally concerned with how effectively their students learn. Growing student diversity and increasing numbers of minority, non-traditional age and foreign students will necessitate study of psychological, cultural and social issues not dealt with previously. The alliance of libraries with other campus departments involved in instructional development provides the essential support network for those engaged in these learning efforts.

More significantly, the influence that faculty exercise over their students' learning, specifically as it involves library use, argues convincingly for instructors to be knowledgeable information researchers themselves. Although their need to use the library for their own research and information gathering is conditioned by the other information networks available to them, their students do not have access to these alternative sources. For students, the library remains their most important information source, next to the faculty themselves. Faculty who neglect insuring that their students develop adequate information research skills may be depriving them of an important part of their education as well as
the ability to pursue the lifelong learning required in an occupationaly-mobile, information-dominated society.

Although librarians share a part of this responsibility, it is primarily the faculty who will determine how and to what extent their students become information literate, since they are the ones who direct the course of their students' education. Numerous studies, most of them conducted by librarians, bear out this assumption. Despite the desire of librarians to exert a stronger influence on students, the results remain constant. "More than any other factor, the value the classroom instructor attaches to library research determines the students' interest in use of library materials. Instructors give direction and motivation to students as to how library materials are to be used in meeting course requirements." [26, p. 3]. "Most students will use library materials in their courses only if professors require them to.... Not surprisingly... many students do not use the library as a primary information source." [2, p. 320]. Although only the most naive librarians would insist that the library is the only information source available, most would argue that it is too important to be overlooked or neglected.

Since faculty exercise the strongest influence upon student use of the library, it is also necessary to ask how and how well they instruct their students when they do undertake the task of teaching research skills themselves. [11, p. 231]. Equally troublesome from the library perspective is the proliferation of what seem to be poorly designed and executed library exercises
which appear to have no better purpose than to "get students into the library." Librarians may resent their inevitable involvement in helping students complete these often unworkable exercises, especially when they were not consulted or even informed about them beforehand. These dilemmas may be the result of a serious lack of communication between librarians and faculty about learning objectives and methods. "The teacher... believes that the student, like himself or herself, understands the library, and that for the most part he or she uses it in an orderly way, and, if not, has enough common sense to ask questions of librarians. In some ways our differing perspectives may be the result of our point of contact with the student. As a colleague insightfully remarked, faculty see the outcome and librarians see the process." [24, p. 135]. The result for students is too important to allow these perspectives to divide the process when collaboration between faculty and librarians can create an integrated and productive outcome: improved course work and increased learning.

Much of the impetus and motivation for learning takes place in the classroom, but a good deal of the actual process and application happens outside the class. Faculty who have undertaken the task of improving their teaching will probably also place greater emphasis upon the quality and extent of learning that their students acquire. In the words of the Carnegie report on undergraduate education, "This means encouraging students, through creative teaching, to become intellectually engaged." The report goes on to describe the library's role in student learning:

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The quality of a college is measured by the resources for learning on the campus and the extent to which students become independent, self-directed learners.... The college library must be viewed as a vital part of the undergraduate experience.... All undergraduates should be introduced carefully to the full range of resources for learning on a campus. They should be given bibliographic instruction and be encouraged to spend at least as much time in the library—using its wide range of resources as they spend in classes. [5, p. 21].

One of the most effective ways to insure quality learning is to involve students actively in their own learning process. The library's main role is expert assistance in the means of discovering and using information. It functions best as an information laboratory, the full use of its resources requiring students to become active participants in discovery and learning. It enables them to explore significant questions that justify the amount of time required to pursue them, to attempt finding solutions to the pressing problems of the day, and to engage their minds and wills in the discovery of knowledge. Every research project should be regarded as a learning opportunity by both faculty and students. Open-ended questions that require more than simple answers and the elemental thought processes of comprehension and recall will direct students into the more advanced learning levels: analysis, synthesis, application and evaluation of information in the process of making it part of their own
knowledge. Library publications offer numerous examples of significant undergraduate research projects that have been developed jointly by faculty and librarians. [17, p. 45-47; 3, p. 58; 18, p. 302 ff.]

One library-sponsored faculty development project worked out jointly a list of characteristics of effective library assignments, which will be listed here. Readers should consult the original article for a full discussion of the characteristics: 1) Library assignments should originate from and be directly related to the course subject matter; 2) The students must understand the purpose of the project and how it will benefit them; 3) Analysis should be emphasized over answers; 4) Students should be encouraged to plan their research before and as they retrieve information; 5) The assignment should be a progressive project, with time and opportunities for concrete feedback from a variety of sources; 6) Library research and information use should be presented at increasing levels of complexity, moving from basic retrieval of information to evaluating information sources; 7) Students should be helped to generalize the skills they learn in one research project so that they may be applied in others.

With emphasis placed on the development of these skills, library research should be viewed as providing faculty with an additional teaching tool, not as an "extra" which takes valuable time from the class schedule. Library research becomes integral to the course, rather than peripheral. Courses should then be structured to include information research that directly furthers
the course objectives. [43, p. 176-78]. Ideally such courses would be developed in consultation between librarians, who understand the use of information resources, and faculty members who know the subject matter and who determine the learning objectives of the course.

More specifically, the library provides direct support to the important goals involved in the improvement of instruction, as outlined in the University of Colorado Committee on Teaching Report:

While each teacher has unique qualities, we agree that the teaching profession aims at achieving five distinct goals: creating an appropriate learning environment; conveying a body of knowledge; promoting conceptual understanding of a subject; developing critical thinking and learning skills; and inspiring students to further inquiry. The more effectively each teacher achieves these goals the more successfully the University fulfills its educational commitment to students. [40, p. 60].

**Creating an appropriate learning environment**

Through their role as classroom teachers, faculty are in a strong position to model the qualities of the educated mind that often motivate their students to achieve: respect and enthusiasm for learning, intellectual curiosity, wide-ranging interests that transcend narrow subject disciplines, tolerance for differing viewpoints, and openness to new ideas.
The Carnegie report, referred to earlier, speaks about the library's role in supporting the goal of developing the college student's desire for lifelong learning. However, the strongest influence will come from faculty members in the classroom as they model the desire for learning, the respect for the recorded knowledge of civilization, and the realization that knowledge is cumulative and our present understanding is based upon all that has been learned in the past. Without this motivation, many of the significant works of knowledge will remain unread on library shelves.

**Conveying a body of information**

Faculty understand only too well the limitations of the 50-minute class hour for conveying all the information they wish to cover and must constantly deal with the frustration of paring their material down to the bare bones essentials. Students can never be provided all the information they will need to function effectively in their chosen profession. What they require is knowledge of the structure of a discipline and skill in using the tools and methods of acquiring additional information, which directly involves the library in the learning process. Ernest Boyer of the Carnegie Foundation for the Advancement of Teaching emphasized the importance of the library's role in his address to the Symposium on Libraries and the Search for Academic Excellence:

"Libraries are shockingly neglected as the centerpiece of undergraduate education," Boyer said. He placed the responsibility for this neglect "squarely in the classroom at
the feet of the professor." "We [the Carnegie Foundation] found a passivity on campus," he said, "a feeling that learning takes place only in the classroom and resources outside the classroom are no business of the faculty." [6, p.444].

Promoting conceptual understanding of a subject

Faced with an overwhelming amount and variety of information, students in any subject will not be able to deal with the overload without some organizing principles, or concepts, that enable them to understand the significance and interrelatedness of knowledge. This task is primarily the responsibility of the instructor, but the concepts are often reinforced in the way that libraries and information sources are organized to provide access to materials. The vocabulary that students learn in the process teaches a great deal about the structure of the subject and often deals with its hierarchies through expression of broader and narrower subject ranges.

Developing critical thinking and learning skills

As part of their learning process, students must become able to reflect upon what and how they are learning and to evaluate the quality and validity of the ideas they encounter. This process is developed in class under the guidance of the teacher; it may be practiced in the library where adequate information exists for relating and comparing ideas.

Frank Newman, president of the Educational Commission of the States, also stressed the librarian as a promoter of active
learning, helping to teach students how to think about data, knowledge, and information, and how to integrate ideas. "Fewer than 20 percent of college courses concentrate on digging for information or ideas, or engage students in a true learning process," he noted. [6, p. 444].

**Inspiring students to further inquiry**

Not only is it important that students learn to question critically the information they receive in class or through their independent research, but it is also essential that they learn the means of acquiring further information to integrate with their existing knowledge. The limitations on the amount of information that can be conveyed and retained through classroom instruction requires that students augment their learning by exploring, testing, and evaluating facts and theories for themselves in the campus information laboratory, the library. The rate at which knowledge becomes obsolete, especially in scientific and technical fields, necessitates continual relearning, as does the rate at which information is lost through the memory. Developing learning habits that will enable students to continue this process throughout their professional lifetimes will prepare them far better for living and working in the modern information society than will mastering a finite amount of information.

More important is the intellectual challenge that can be generated through exposure to the best minds of the ages. Knowledge is to be gained by using their works as foundation and stimulus to further ideas:
Books are not made to be believed, but to be subjected to inquiry. When we consider a book, we mustn't ask ourselves what it says but what it means.... [16, p. 286].

**Library Instruction as a Program for Faculty Development**

Administrators and faculty are fond of referring to the library as the "heart of the university," but that recognition is not always translated into practical terms. On too many campuses the library remains uninvolved in the mainstream of academic life and students graduate from college without having learned the basics of information research. "The gap between the classroom and the library, reported on almost a half-century ago, still exists today." [31, p. 21.]

**General statement of the problem**

The key to increased use of these important resources is the faculty, whose teaching style and assignments determine the extent to which students pursue the kind of independent research that is possible in the library. One survey of academic libraries reported the significant finding that "...the most notable factor influencing [undergraduate] student utilization [of the library] has been found to be the attitude of individual instructors." [1, p. 29]. However, a large percentage of the faculty remain ignorant of how to use the library themselves and hence undervalue its potential as an information laboratory for student learning. This reality is attested to by both faculty and librarians. One source estimated that perhaps only one-third of the faculty on a given
campus have an adequate knowledge of their library resources. [9, p. 14].

A faculty member speaks candidly about his own experience: "...I did not know how to help my students figure out how to do research, how to distinguish good from bad material to use for research.... I have a sense that my colleagues do not know much more about research than any of us did when we first got out of graduate school.... If I am right in this, it would follow that many of us who are now teaching in colleges and universities are only slightly at home in libraries." [22, p. 21]. Another concurs: "Most of us faculty, however, lack the training in library skills, accessing, and developing search strategies. Overall, we lack the training for effectively incorporating library training into our academic courses and into our departmental programs. I know this from my own experience." [37, pp. 81-82].

The fact is that few faculty were taught how to use libraries when they were students; institutions assumed that students would pick up library usage somehow on their own. However, there is no reason to expect that they know as faculty what they never learned as students. Even if they did receive instruction in library research methods, the shift to machine-based information systems requires mastery of new concepts and different skills. "But one does not learn to use today's large research libraries intelligently without months of practice, in addition to considerable help from the people who work there. This the faculty, for the most part, do not realize or do not want to
acknowledge. The fact is that few university professors know very much about bibliographic research, even in their own disciplines."

[25, p. 142].

However, the fact that many faculty lack information research skills should not be interpreted to mean that they do not possess sophisticated research skills appropriate to their area of specialization. What they may need to learn is how to integrate the information research factor into their overall research process. [36, p. 18].

Model Programs

A number of libraries have recognized their responsibility to provide instruction for teaching faculty in the use of libraries. Several have offered faculty development programs that are proving to be highly useful. Some emphasize faculty research needs, others the knowledge of research methods for directing their students, and still others the skills required to perform computer information searches.

Programs with Emphasis on Faculty Research Needs in Subject Disciplines

Among those which emphasize faculty discipline-oriented information research, the workshop method developed at the University of California at Berkeley is notable.

Conducted annually since 1976, the Faculty Seminars have emphasized advanced research in the social sciences and humanities and library updates on changing research tools and techniques. Of necessity, however, they have usually also covered basic research
methods, with which many faculty are unfamiliar. Each annual program has consisted of six to eight in-depth seminars covering general reference and bibliographic sources, emphasizing interdisciplinary, recently published and difficult-to-use tools, problems with the library catalogs, and reference sources in specialized areas.

The experience gained by librarians at Berkeley through this program provides some informative insights for any libraries considering efforts to provide faculty library instruction:

Finally, some generalities about what we have learned from this experience. I hope that the myth that faculty won't admit to their lack of library know-how is exploded. We now know that (1) many, if not most, faculty need an update course; (2) many faculty need guidance in elementary concepts and tools in addition to the more advanced ones; (3) if given the opportunity, faculty want to be educated about the library; (4) although it is true that most faculty may neither understand nor appreciate the crucial role of librarians in the information-retrieval process, faculty can be educated about this role, and no one but librarians can do the job. [23, pp. 262-267.]

By itself, this statement may appear to be self-serving, but the response and evaluations of faculty who attended the seminars amply substantiated the conclusions. Seminars of recent years at Berkeley have gone beyond these basics to emphasize the access to, and use of, computerized data. [7, p. 52].
A program for faculty development in library research at Bergen Community College in Paramus, New Jersey, took the form of a credit course in the bibliographic resources of the faculty members' subject fields. Since many of the faculty were also graduate students, the course appealed to their need to become capable researchers in their disciplines as well as better teachers of undergraduate students. It followed a research strategy outline, with each faculty-student maintaining a research log analyzing research process and results. The term project was an extensive documented bibliographic search of their chosen topic. [29, p. 191-96]. Benefits of this kind of course, in addition to demonstrated improvement in research skills, were seen in the development of a colleague relationship between faculty and librarians.

Librarians at Michigan State University developed a series of library seminars in 1980/81 to provide a systematic effort for keeping faculty and graduate students informed of new reference tools and library services augmented or altered by automation. The seminars were usually organized by broad subject divisions, and they presented search techniques and use of reference sources in each field. Others dealt with access to type of resources such as government documents or grant sources, while still others introduced computer search capabilities, including the online catalog.

The response to the seminars, including faculty who returned for more than one session, indicated the need for instruction
emphasizing the special requirements of researchers. The seminars proved to be a flexible means of providing this group with information and training, particularly with respect to the many changes brought about by technology. In the process, librarians learned a great deal more about their clientele and the application of the library's resources to their research needs than they had known before the seminars. [15, pp. 326-327].

Instruction Programs for Faculty to Enhance Student Use of the Library

Librarians at Miami-Dade Community College, South Campus in Miami, Florida suspected that much of their students' lack of motivation to learn proper use of the library stemmed partially from their instructors' limited knowledge of library services and materials. They also were concerned about faculty who did not communicate with librarians about library assignments and who sent students to the library with instructions for finding non-existent materials. The results, understandably, were often frustrated students and unrewarding library experiences.

The solution devised by the librarians was a one-credit, five-week library orientation workshop for faculty. The goals were 1) to help faculty guide students more effectively in library research, and 2) to encourage faculty to make better use of library services and resources in their own research. Specific objectives of the workshop were:

1) To acquaint faculty members with library services available to assist them in the planning of courses, provision
of materials, and coordination of classroom instruction with the use of library resources.

2) To identify ways in which individual faculty members might use the professional staff of the library as members of their teaching teams.

3) To foster the continuing cooperation among librarians and other faculty members in developing the library collection as an important academic resource of the college. [20, p. 162].

The response to the workshop more than justified the expectations. Faculty who attended rated it highly, and some asked for further workshops in particular subject areas. The experience at Miami-Dade offers further evidence of the measurable benefits of faculty-librarian cooperation.

Another program aimed at better research projects for students was developed at Salem Academy and College, Winston-Salem, North Carolina. The librarians there learned from experience that faculty who were knowledgeable about library research had learned the methods and tools appropriate to specialized, graduate level study. However, these means proved to be inappropriate for undergraduate requirements. They had also concluded that the thoroughness of the faculty member's knowledge of the library became a significant factor in the quality of instruction provided to the students.

The objectives for the program developed at Salem Academy and College were directed toward forming a faculty-librarian partnership through a faculty development program; it took the form
of a workshop in basic library research. To counteract the prevailing notion that faculty should leave nothing to chance in making student research assignments, resulting in lengthy reading lists and overfull reserve shelves, the librarians used a more open-ended approach. They stressed the use of reference tools and periodical articles to overcome the traditional overreliance on books, along with instruction in research methods.

The tangible results of the program were several: 1) students were introduced to resources that enriched their course learning but that they would not have consulted without specific direction from their instructors; 2) faculty members attempted more creative teaching methods; 3) many faculty returned to the library each time they prepared for a new course to work out library exercises; and 4) many maintained frequent contact with the librarians to be apprised of new library resources. [32, p. 55-61].

Acting out of concern for students frustrated with unworkable library research assignments, the instruction librarian at Southern Technical Institution in Marietta, Georgia offered a series of introductory sessions to give faculty an overview of the "nuts and bolts" of library operations. The liberal use of humor to keep the classes in a light-hearted vein was accompanied by a special briefing to teach faculty how to facilitate student use of the library in completing class assignments. These included 1) the use of the reserve system to see that materials were available for students before assignments were made; 2) the process of ordering materials to insure that needed items were owned by the library;
and 3) an orientation to library locations and services. Elementary as this approach might be, it generated a significantly positive response from faculty members at Southern Technical who realized that they were unaware of even the basics of library use. [33, pp. 90-92].

A series of exercise-planning workshops at Northern Kentucky University concentrated on the design and writing of effective research assignments, using criteria that were jointly developed by faculty and librarians. A highly useful feature of the sessions was the opportunity to critique several anonymous exercises designed and used by faculty prior to the workshop. This activity allowed for peer review of both poor and well-designed assignments and helped to attain the desired result of defining the characteristics of good exercises. "The faculty-librarian collaboration resulted in assignments which promoted information literacy, while fulfilling the instructors' course goals." [43, p. 172].

**Special Focus Programs: Online Searching**

The advent of electronic publishing has created new opportunities and means for librarians to provide specific, up-to-date information to their users. Initially, use of these online databases required considerable training, and searches were necessarily performed by those who had received the training and had gained enough proficiency to do skilled searches. Efficient searching was also mandated by the per-minute costs of the
searches, which were often passed on to the users of the information.

More recently the increases in ownership of personal computers and new user-friendly software that can be used without extensive training and experience has made possible direct searching by the persons who want to use the information. Many librarians have viewed this trend as an opportunity and responsibility to pass on their knowledge of search techniques to these end users. This task is usually viewed as an extension of the traditional librarians' roles in bibliographic instruction as well as online searching. It has also provided librarians with a new means of overcoming user resistance to learning; it seems much easier for faculty especially to admit the need for instruction in electronic searching than with traditional research tools, which they are expected to know already.

A program developed at the Library/Learning Center, University of Wisconsin-Parkside was originally designed to introduce students, staff and faculty to the use of microcomputers. The librarians soon became aware that the logical extension of these efforts was to teach the broader application of computers to finding and utilizing needed information, much of which was becoming available in electronic format.

The microcomputer workshops were then expanded into a series of seminars to teach faculty the use of microcomputers in library-related research and teaching tasks. These included sessions on end-user searching, bibliography management and presentation
Like the workshops, these seminars were conceptual in approach, stressing the principles of information access and management. "Faculty in particular, have been prepared to introduce their students to discipline-specific applications of microcomputers, which otherwise might have been ignored." [28, p. 377].

In response to user requests, librarians at Creighton University Health Sciences Library/Learning Resources Center in Omaha developed an educational program for microcomputer users consisting of a series of seminars open to both faculty and graduate students. Sessions included instruction in the electronic search process in general and introduction to some of the specialized medical databases and new easy-to-use search software. The seminars generated understanding of the search process, increased skills in structuring and conducting online searches, and improved cooperation between faculty and librarians. Most importantly, it involved librarians directly in furthering the educational concepts of Creighton University—encouraging students to assume active, self-directed roles in their learning. [41, pp. 95-101].

Librarians at Saint Xavier College in Chicago developed a series of workshops to instruct faculty in how to do their own online information searching using the DIALOG "native mode" (the standard search protocols, not mediated by "user friendly" programs). The objectives of the workshops were to enable participants to 1) understand online searching and its appropriate
uses; 2) formulate a search strategy and conduct a practice online search; 3) understand the appropriate use of search aids; and 4) know the various data bases and programs available for access to online searching.

The enthusiastic response from faculty justified the librarians' assumption that this kind of training was needed. Participants cited improved ability to define research questions and conduct research, to design appropriate assignments for students, and to facilitate student research projects.

The library also received substantial benefit from the program through greater awareness and use of its services by faculty and students, increased number of bibliographic instruction classes scheduled, and improved opportunities for librarians to serve as teachers and consultants. Overall, it contributed to development of a collegial relationship between faculty and librarians. [35, pp. 147-151].

Similar workshops designed to teach the appropriate uses of, and searching methods for, online database indexes were developed by the University of North Carolina at Greensboro. Librarians were particularly concerned about the number of inappropriate recommendations from faculty that students use computer searching to meet any research need. They planned the workshops with two goals in mind: 1) to explain how computer searching could improve the quality of faculty research and/or classroom instruction; 2) to provide more complete and accurate information about computer searching to pass on to their students. The positive responses
from the 15-18% of the University faculty who attended the workshops (voluntarily) indicated a significant sense of need as well as receptivity to instruction by librarians. [30, p. 33].

Librarians at *Syracuse University* conducted successful faculty workshops in online catalog searching to deal with some key problems often encountered by users of automated systems: word order, trying to key in too much information, initials, and finding too many hits. For solutions, they presented several distinctive features that characterize online searching in general, or that have special applications to computer searching: truncation, call number searching, combining subject searches and choice of terminology. Although their instruction was based upon their own online system, the principles have wide application to computer catalogs and indexes in general. [34, p. 35-42].

**Library/Information Literacy as a Primary Library Responsibility**

Librarians have discovered that they are most effective as teachers when they work closely with faculty in the various academic programs and attempt to set their goals to support those of the teaching function of the institution. Whether such working relationships materialize or not, however, librarians have a distinctive responsibility to the students of their institution to provide them with necessary information research skills that will prepare them to function in the information age.

Librarians are increasingly adopting the goal of library/information literacy as a primary means of fulfilling their responsibility to improve instruction in the academic community.
One group representing Colorado librarians made the following recommendation:

All graduates from institutions in higher learning in Colorado should acquire competency in the use of libraries and information resources, including modern methods of information retrieval.... On campuses where competency requirements exist in areas such as reading, writing, and math, library related competencies should also be expected as one of the basic literacy skills. As part of their learning experience, students should gain an awareness of the literature of their fields and how to access, evaluate and manipulate it so that they are prepared to continue learning after graduation. [21, p. 28].

For this objective to be realized, it must be shared by faculty and administrators. At the institutional, governing board and state levels, the requirement for students to become competent in information handling research capabilities should be officially endorsed. [31, p. 28].

A Colorado library task force has characterized information literacy in the following way: The information literate person will be able to 1) define and identify information, 2) use the structure and function of information, 3) select relevant information, and 4) locate information. [13].

Broad goals such as these enable the library to relate its mission to that of the academic community as a whole and to become a vital aspect of the campus efforts to improve instruction.
Conclusion

The library is the principal unit of the college that supports all academic programs, the one location on campus where all disciplines are represented, organized and integrated, and the best laboratory within which to explore the interdisciplinary aspects of knowledge. To fulfill its mission, the library must make itself indispensable to faculty and students as the principal information provider.

The appearance of informal satellite libraries in various departments throughout campus, the tendency of faculty and students to seek other information sources as their first choice, the proliferation of scattered electronic database searching services, and declining support for libraries characterize many academic communities. These could all be symptoms of the possibility that libraries have abdicated some of their responsibility as information providers or have failed to inform their constituents of the multiplicity of sources available in libraries.

Active faculty development programs can serve to bring libraries into the mainstream of academic life. These will create effective opportunities, not only for librarians to listen to their constituents and learn what their information needs actually are, but also to inform them of how the library supports their study, teaching and research.
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ORGANIZATIONAL STRUCTURES FOR FACULTY DEVELOPMENT

Can you imagine a faculty development program that was created with a well defined mission and budget, located in a seemingly appropriate base on campus, and never having a client? It could happen.

The program might be administratively and physically located in the wrong place or it might have the wrong "image" in the minds of the faculty. Its focus might have been on evaluation of faculty rather than providing support for their teaching. It could have been imposed by administrative decree rather than evolving as a faculty-owned program. Key campus decision makers may not have been involved in planning and consideration may not have been given to the results of previous efforts to establish a similar program. Complex factors such as these can determine the success or failure of a faculty development program.

In this chapter we identify some major factors that should be considered when planning a faculty development operation and offer some suggestions to help you avoid the disaster described in the opening paragraph. Chapters 5 and 6 describe different successful organizational models.

A faculty development project operates in the midst of the unique and complex environment of an individual campus. The success of a program will depend on how well the project can blend
into and complement the milieu of that campus.

Successful faculty development operations in different institutions are as unique as the academic environments in which they operate. Copying a successful program from one campus to another could be disastrous if planners fail to recognize and consider the differences in the environments of the two institutions.

The faculty must perceive the program to be an asset and not a prescription like castor oil, which they will find hard to swallow. Simply creating a new center by fiat may provide some help, but that benefit could be amplified greatly if more attention is given to cultivating a positive attitude toward the project. The attitude of the faculty will be a critical determinant of success or failure.

In 1985 the Professional and Organizational Development Network for Higher Education (POD) conducted a national survey of faculty development practices. After analyzing that survey, Ebel reported that "A firm conclusion from this study is that faculty development programs need to be shaped by the individual college or university and be invested with a sense of faculty ownership" [1, pp. 209-210].

Before selecting the organizational structure for a new faculty development program, a campus planning group should give consideration to a wide variety of issues:

1. **Image**

   Planners should ask: In the minds of the majority of the faculty, what "image" does each potential site have? Is the
unit generally perceived as being supportive and nurturing of their efforts, or is it frequently perceived as a threat or an obstacle?

2. **Liaison with other support units**

Faculty development projects frequently work closely with other academic support services such as television (for video taping of lectures), media production, computer based education, etc. Close organizational and physical relationships with these other support services can increase the frequency and efficiency of collaborative efforts and can minimize unnecessary duplication.

3. **Funding Source**

The operation should report to an administrative unit that can supply suitable funding. Faculty development operations need not be luxurious but will not function well if they are starved. The pathway for funding should parallel the administrative responsibility. If there are disinterested parties involved in controlling the flow of funds, cuts are more likely to occur in times of financial hardship.

4. **Campus traditions**

On your campus, is it customary to centralize or decentralize support services? If there are traditional patterns on a campus, the new program should be consistent with these traditions.

5. **Commitment**

Which unit has suitable commitment, energy and enthusiasm to run a solid program? If the administrators responsible for the operation are not persuaded that faculty development activity is a high priority and are not willing to promote it at every
opportunity, its probability of success is greatly diminished.

6. Target clients

If a faculty development program is focused on a specific group it will be most successful if it is physically and administratively based within or near that unit. If the operation is to benefit the entire campus it should be physically and administratively located in a neutral or centralized territory. Basing the operation within any given unit will significantly reduce its value to and impact on other academic units.

7. Access

The physical location should provide convenient access for as many faculty as possible. Ease of access will increase faculty interaction with the program.

8. Campus mission

The mission of the university or college could make any particular location more or less suitable. Each of the next chapters describes a different organizational arrangement for a faculty development operation. Each model, developed by a Colorado institution to meet its own needs, is successful in its own environment. These models are provided to illustrate descriptions of the principle of "grow-your-own" faculty development programs, not to stand as examples of successful programs to be copied by other campuses.
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Goal and Methods of the Faculty Teaching Excellence Program,

University of Colorado at Boulder

The overarching goal of the Faculty Teaching Excellence Program is the improvement of teaching and learning at the University of Colorado at Boulder. In terms of contact, the Program works toward this broad goal by assisting faculty members with improving their teaching.

Some of the specific methods by which the Program brings faculty members into contact with teaching concepts and techniques include:

- disseminating pedagogical information to faculty in printed form (Memo to the Faculty, the series of brochures "On Diversity in Teaching and Learning,"
- offering group sessions in which teaching and learning methods are presented and discussed (Professional Lecture Series, Instructional Workshops and Symposia),
- providing individual guidance to faculty members (Faculty Consultation Services),
- conducting programs designed primarily to aid junior faculty (new Faculty Program, Teaching Portfolio Consultation).

The Five Dimensions of Good Teaching

Underlying all of the programs that the Faculty Teaching Excellence Program has established are a set of five aspects that we feel are basic constituents of good teaching. We call these
components the Five Dimensions of Good Teaching:

1. Knowledge of Content
2. Clarity and Organization
3. Rapport with Students
4. Dynamism and Enthusiasm
5. Fair Exams and Grading

This breakdown of teaching into specific areas can be extremely helpful to the college-level instructor because each of these dimensions is essential to successful teaching and learning. By concentrating on one aspect at a time, while not forgetting the importance of the five as a group, faculty can make genuine progress toward teaching excellence.

The specific importance of each of the Five Dimensions of Good Teaching may be explained as follows:

1. Knowledge of Content. This is a component of teaching that nearly all students will justly demand of their college teachers. This is one responsibility for which faculty are well-prepared. However, this is not a static requirement; new developments in each discipline must be followed and new epistemologies for teaching these developments will have to be learned as well.

2. Clarity and Organization. Organization is a multi-step process that begins in the mind. It requires a good grasp of the subject in all of its parts. Organizing these subject components so that students can absorb them requires a knowledge of what information, concepts, and vocabulary the students may lack as well as the ability to reconstitute the knowledge into easily learnable
modules. Clarity is the punctuation connecting these modules, providing clear delineations that mark them as distinct learning units.

3. **Rapport with Students.** The concept of rapport implies a certain harmony existing between students and faculty that allows students to relate comfortably with their teachers in the joint search for knowledge. It does not suggest that teachers need to portray themselves as close friends or political allies of their students. Indeed, faculty and students have a right—perhaps a duty—to disagree with each other from time to time, as long as such a difference of opinion does not hinder the learning process. The benefit of rapport for students is the feeling of support and cooperation that they should derive from their relationship with each of their instructors during their years at the university.

4. **Dynamism and Enthusiasm.** Generally, men and women choose to be university teachers because they feel enthusiastic toward their discipline and wish to spend their working careers involved in learning more about it. An integral part of this relationship between person and knowledge is the need to share that learning with others, and this is where teaching interacts with enthusiasm. Faculty who develop ways to release this internal enthusiasm, to share it with their students, not only further its spread throughout the university community, but find their own interest in their discipline constantly renewed and fresh.

5. **Fair Exams and Grading.** Two facts of college teaching are that many students regard a teacher's job as consisting mainly of
testing and grading, while many faculty find testing and grading the most onerous tasks connected with teaching. For both students and their instructors, testing can be a relatively smooth operation if a number of conditions are met:

- Effective tests are related closely to the goals of the course.
- Tests should reflect the type of work that students are doing in the course.
- Students should have some idea in advance of the contents of the test and the type of questions that will be asked.

Grading should recognize good work for what it is, should not be used as a punitive measure, and should be a deliberate act, considering the potential effect of grades on the student's future choices.

**Services to Faculty**

As it is currently constituted, the Faculty Teaching Excellence Program offers a wide range of services to faculty members. In the area of group events, the Program sponsors the Professional Lecture Series and the Instructional Workshop and Symposia Series. Generally, these group sessions involve faculty members sharing their insights and innovations with colleagues.

The Program caters to the needs of individual faculty members with a voluntary and confidential consultation system that provides a flexible range of services. Because the consultations are viewed as both non-threatening and beneficial, a wide variety of faculty from such diverse fields as Dance, Biology, and Psychology take
advantage of these services each semester.

**Professional Lecture Series on Teaching and Learning**

The Professional Lecture Series presents several lectures on teaching and learning each year. Some of the talks are delivered by CU Boulder faculty members while outside speakers are brought to the campus to deliver others. Typical subjects of these lectures include relating to students in large lecture environments, the relationship between teaching and research, and how to engage students when teaching controversial issues.

Examples of recent events in the Professional Lecture Series are:

"Women as Teachers—or Teaching About Women." An annual event in the form of a panel discussion on the concerns of women in academe

"Canst thou pull out Leviathan with a hook: A multimedia approach to teaching a large lower division course."
Brian Fagan (UC Santa Barbara)

"Teaching as Listening." Elise Boulding (international peace activist)

"Knowing and Gender." Blythe Clinchy (Wellesley College)

**Instructional Workshops and Symposia**

We believe that college teachers are as much in need of periodic refreshment of their skills as are doctors and dentists. The purpose, therefore, of the Workshops and Symposia organized and presented by the Program is to bring groups of faculty members into contact with stimulating pedagogical ideas and techniques. In this
way, they can renew and expand their approaches to classroom teaching.

Topics of Instructional Workshops presented in recent years have included the following:

"Performance in a Nutshell." Lee Potts (Theatre & Dance)

"Lexicon of Discrimination." Manning Marable (Political Science and History)

"Provoking Critical Thought in the Classroom: Teaching with the Socratic Method." Ed Gac (Business), Norton Steube (Law), Mary Wilder (Univ. of Denver)

"Teaching in the Sciences." Michael Grant (EPO Biology), Kim Malville (APAS), Joann Silverstein (Civil & Environmental Engineering), John Taylor, (Physics)

"How to Evaluate Student Learning." Lee Chambers-Schiller (History), Polly McLean (Journalism), Jim Palmer (Humanities), Larry Singell (Economics)

Instructional Symposia are an innovation that is a variation on the workshop theme combining the advantages of workshops and lectures. Instead of an individual demonstrating a teaching technique or lecturing on a pedagogical topic, a short presentation is followed by an open exchange of views on the subject among the faculty members in attendance. Examples of the Symposia that the Program has presented are:

- "Bringing the Creative Spirit to Teaching." Jim Downton (Sociology)

- "Teaching Large Lecture Courses." David Clough (Engineering
and Applied Science), Evelyn Hu-DeHart (CSERA), Charles Middleton (Dean, College of Arts and Sciences)

- "Difficult Teaching Situations." Herbert Covert (Anthropology), Steve Everett (Journalism), William Krantz (Chemical Engineering), Robert Pois (History)

**New Faculty Program: "Becoming a Teacher"

From our experience in assisting faculty members with their teaching, we can draw some significant conclusions. First, the best instructors only rarely can be said to have a natural talent for teaching; more often, excellent teachers are those who conscientiously reflect on their teaching and constantly try to develop and perfect new skills. Second, we have faith in the abilities of all of our faculty. We believe that they all can become excellent teachers.

Recognizing that the first year of college teaching can be a time of challenge for new faculty, the Faculty Teaching Excellence Program conducts a series of symposia on teaching and learning under the title "Becoming a Teacher." These sessions assist new faculty in taking their first steps toward feeling confident in their teaching. Each symposium addresses a topic that is relevant to the challenges faced by beginning teachers and provides them with strategies for ensuring excellence in each area.

Following are descriptions of the "Becoming a Teacher" symposia on teaching and learning that have been offered:

- **Course Visioning** covers all facets of course planning. Beginning with the initial concept of the course, participants
consider the finer points of setting goals for the course, text selection and syllabus construction. Discussion then proceeds to classroom activities, homework assignments and evaluation and grading. Finally, ways of evaluating the course and improving it for the future are considered.

- **Difficult Teaching Situations** provides a forum where new faculty members can suggest strategies and discover new methods for dealing with situations such as these: an obstreperous student threatens the stability of the class; an embarrassed silence follows an invitation for class discussion; the seemingly unending variations of grading hassles.

- **Microteaching** is a collegial group method for getting feedback on teaching techniques that has proved to be a productive way of improving teaching. Each participant in the symposium will give a short presentation in his or her own discipline. This presentation is videotaped and then critiqued by peers from other departments.

- **Creating and Establishing a Teaching Portfolio** offers suggestions for developing a personalized portfolio that suits the faculty member's individual style and needs. Participants learn about the concepts underlying use of the portfolio as a means of reflecting on and improving one's teaching, and discuss the components of a portfolio. They then develop a plan of the contents and creation process for their own portfolio.

- **Performance in a Nutshell** concentrates on three principles of enhancing presentational skills and provides each participant
with a seven-item checklist of techniques for utilizing the principles of good presentation. It is based on two assumptions: first, most of us can use such content and suggestions from time to time about how to put our best self forward, and second, we know much more about choosing words that help students understand what we are trying to teach than we do about nonverbal communication.

Faculty Consultation Services

Just as important as the mass contact with faculty in lectures, workshops and symposia are the one-to-one consultations offered by the Faculty Teaching Excellence Program. Faculty can apply on a voluntary basis to seek validation of their teaching methods as well as to learn of ways to improve their effectiveness in the classroom. Of course, confidentiality is assured. The Program offers assistance to individuals in the following forms:

- The 37-Item Student Survey -

The 37-Item Survey asks students to help an instructor in evaluating his or her teaching. We have found the survey to be an excellent way to identify students' perceptions about specific teaching areas and see how the students' perceptions match the instructor's own expectations. The 37 items of the survey are representative of the 5 dimensions of good teaching: Clarity and Organization, Knowledge of Content, Fair Exams and Grading, Dynamism and Enthusiasm, and Rapport With Students (see above) have been demonstrated to be the key points of the nexus of teaching and learning.

Requiring only 10 minutes of class time, the 37-Item Survey
can be administered as part of a mid-semester evaluation or at any
time that feedback from students is desired. This survey may be
administered on its own or in conjunction with the classroom
observation or videotape consultation. After the results of the
survey are tabulated, an Associate of the Program will meet with
the instructor to discuss a detailed analysis of student
perceptions of the instruction they are receiving.

- The Student Group Interview —

Suitable for either mid-semester or end-of-semester
administration, the Group Interview is a more thorough survey of
student reactions to teaching than the 37-Item Survey and requires
approximately 40 minutes of class time. In this process an
Associate of the Program asks students to divide into small groups
to discuss the strengths of a faculty member's teaching methods, as
well as those areas they see as needing improvement. The
suggestions of the groups are then written on the board and votes
are taken on each item to measure the degree of class consensus.
Both the suggestions and the voting results are then compiled in
the form of a detailed written report that is sent to the
instructor within a few days.

- Classroom observation —

At the request of faculty, Associates of the Faculty Teaching
Excellence Program regularly visit classes and assess those areas
in which the instructor's teaching is strong and those that might
be improved. The faculty member meets with the Associate at a
later date to discuss the observation. This service is usually
accompanied by a videotaping of the class.

**Videotaping a class**

At the request of a faculty member, an Academic Media Services representative will videotape that instructor teaching a class session. Afterwards in a personal (and fully confidential) consultation with an Associate of the Faculty Teaching Excellence Program, the tape will be viewed by the faculty member who will have the opportunity to set his or her own goals for improving classroom performance. The faculty member will be able to recognize and validate the strengths in his or her teaching and the learning environment created in a specific course and discuss techniques to try in areas that can be improved. Research studies have indicated that faculty who participate in a videotape consultation do improve their performance in specific skills and that the improvements in teaching are durable. The only copy of the videotape is presented to the faculty member to keep.

**Teaching Portfolio Consultation**

The Faculty Teaching Excellence Program offers a consultation service for faculty who could benefit from assistance with the creation of a Teaching Portfolio, a collection of documents recording their teaching performance. The service assists those faculty who wish to join a growing trend toward documentation and recognition of the act of teaching. An Associate of the Program will guide faculty through the process of creating a Teaching Portfolio from the time that they decide to establish one through the acts of revision and updating.
We base this consultation on the belief that teaching portfolios represent an opportunity for faculty to be "reflective practitioners," that is, teachers who are highly conscious of the relationship between pedagogy and their experiences as directors of student learning.

The ultimate responsibility for the contents of the portfolio rests in hands of the individual faculty member. However, we do stress that the centerpiece of the portfolio should be a personal statement containing the instructor's philosophy and approach to teaching, past and present teaching methods, and future goals as a teacher.

Our Teaching Portfolio Consultation Service is purely voluntary and is totally independent of the promotion and tenure evaluation process. The Faculty Teaching Excellence Program plays no role in such decisions, but will continue to promote the use of teaching portfolios as a way of improving teaching practice on our campus.

The faculty members that we have advised so far in our pilot program have been pleased to have the opportunity to discuss with us their teaching approaches and the progress they have made as teachers since joining the University. They also appreciate the portfolio as a way of expressing what it means to them to be college instructors. Some seem relieved to be offered a procedure for unlocking experiences and achievements that no one has ever asked them about before.

The Portfolio provides an excellent chance for faculty to
promote themselves as good teachers. Developing a portfolio is a relatively independent and creative process, which can showcase work such as curriculum and materials development. We hope that faculty will view their portfolio as a mirror of their teaching careers, reflecting their success as teachers through their constant striving towards excellence.

Publications of the Faculty Teaching Excellence Program

Memo to the Faculty.: To assist faculty in keeping up with developments in the field of teaching, the Faculty Teaching Excellence Program sifts through the mass of articles written on instructional methods and distributes copies of the best materials to all tenured faculty. Appearing 3 times each semester, this series is entitled Memo to the Faculty. A copy of each Memo is sent without charge to tenured faculty members on the Boulder campus. Examples of past Memos illustrating the range of subjects that they cover are:

Number 19: "Discussion Method Teaching: How to Make It Work," by William Welty (Pace Univ.)

Number 22: "Teaching Strategies for the Culturally Diverse Classroom," by Jonathan Collett (State Univ. of New York, College at Old Westbury)

Number 25: "Teaching by the Case Method: One Teacher's Beginnings," by Nona Lyons (Harvard Univ.)

Number 27: "Inquiry and Exploration in Introductory Science," by John L. Southin (McGill Univ.)

On Teaching. The Faculty Teaching Excellence Program has also
published two volumes in a series entitled *On Teaching*. These are books of essays written by Boulder faculty members on pedagogy, usually from a practical and personal point of view.

*On Teaching*, Volume I (1987) contains seven articles with the following titles and Boulder campus authors:

"Aloof Professors and Shy Students." Patricia Nelson Limerick (History)

"Teaching the Thundering Herd: Surviving in a Large Classroom." Charles R. Middleton (Dean, College of Arts and Sciences)

"The Scientist as a Story Teller." R. Igor Gamow (Chemical Engineering)

"Active Learning in the University: An Inquiry into Inquiry." Martin Bickman (English)

"The Continuity of Research and Classroom Teaching, or How to Have Your Cake and Eat It Too." Sam Gill (Religious Studies)

"The Professional Schools: The Influence of a Professional Ethic on Teaching Styles." Emily M. Calhoun (Law)

"From a Student's Point of View." R L Widmann (English)

*On Teaching*, Volume II (1990) has ten essays with the following titles and authors:

"Teaching as Architecture: Humanities the Foundation." Nancy Klenk Hill (Humanities)

"So You Want to Be an Actor. . . Stages of Learning in the University Setting." Joel G. Fink (Theatre and Dance)
"Facilitating Discussion." R.G. Billingsley (English)
"Ways of Knowing." David Hawkins (Emeritus, Philosophy)
"You Can Get Good Help These Days: Working with Teaching Assistants in Large Lecture Courses." Walt Stone (Political Science)
"Memory for Classroom Algebra." Lori Meiskey, Alice F. Healy, and Lyle E. Bourne, Jr. (Psychology)
"Teaching Anthropology: Writing Captions for the Blind." A.J. Kelso (Anthropology and Honors)
"Do Professors Need Professional Ethics as Much as Doctors and Lawyers?" James W. Nickel (Philosophy)
"Use of the Socratic Method." Marianne Wesson (Law)
"Gendered Subjects." Joyce McCarl Nielsen (Sociology)

The *Compendium of Good Teaching Ideas*, has been developed from interviews with teachers on the Boulder campus who have been cited for excellence in the classroom; it contains 180 practical teaching tips. This advice to instructors is divided into five sections. Following are examples of the teaching tips contained in each of the sections of the *Compendium*:

**Organization and Clarity:** "Have the first assignment include material that should have been learned in prerequisite course. This will enable you to establish whether or not the students are working from the same base of knowledge that you are assuming that they are." (Tip #13)

**Rapport with Students:** "One professor explains that 'Every week I hold some office hours in the UMC—on students' territory,
Communication Skills: "One professor noted that guessing the meaning of a student's question and attempting a hurried answer is never a satisfactory strategy. He finds that, after a brief dialogue with the student, he can get to the heart of the question." (Tip #95)

Promoting Discussions: "One professor said, 'When I ask a question in class, I don't usually have a particular answer that I want the students to convey to me. I'm not looking for my view to be corroborated.' She notes that nothing 'kills' a discussion faster than conveying to the students that you're looking for the right answer." (Tip #118)

Fair Exams and Grading: "If your students give class presentations, put some questions on the exam that cover the material they presented. One professor who does this noted two benefits of this practice: (1) it tells students that their input is vital and (2) it encourages high attendance when student presentations are given." (Tip #170).

The Compendium and the two volumes of On Teaching are available at the University Book Center.

Research on Teaching

The work of the Faculty Teaching Excellence Program is heavily dependent on research on teaching. In order to improve teaching, we both monitor work being done at other universities and conduct
our own research on classroom teaching. Our consultation services to faculty, the 37-Item Survey and the *Compendium of Good Teaching Ideas* all rest on a foundation of research on teaching and learning.

An excellent example of the innovative research on teaching conducted on our campus is the Peer Perspectives Project. This project placed several faculty members from non-scientific disciplines in a physics course where they spent a semester as "students." Their insights helped us understand more about student learning styles and how to organize and teach a large lecture section, while also providing the course instructor with valuable feedback of a highly detailed nature.

Currently, we are seeking both to learn more about how teachers embrace diversity in the classroom in a positive and beneficial way as well as to pass this information along to CU-Boulder faculty. The first step in this process was to administer a Diversity Survey to students in selected classes on the campus. The survey asked students to identify the degree to which instructors addressed diversity issues in their teaching. The results of the survey are being printed in a series of brochures on the subject entitled *On Diversity in Teaching and Learning*. Brochures published so far in the Diversity Series include:

I: "Fostering Diversity in the Classroom: Teaching by Discussion." Ron Billingsley (English)

II: "Developing and Teaching an Inclusive Curriculum."
Deborah Flick (Women Studies)

III: "Fostering Diversity in a Medium-Sized Classroom."

Brenda Allen (Communication)

IV: "The Influence of Attitudes, Feelings and Behavior Toward Diversity on Teaching and Learning." Lerita Coleman (Psychology)

In addition to its formal publishing projects, the Faculty Teaching Excellence Program disseminates pedagogical information packets to teachers. These packets contain a selection of informative research articles on specific aspects of teaching and are available from our office upon request. Topics of packets already prepared include Teaching by Discussion, Large Lecture Courses, and Teaching through Case Studies. However, we will be happy to search for information on nearly any subject related to college teaching. There is no charge for this service.

**Toward Future Excellence**

Recognizing that the road to teaching excellence has no end, the Faculty Teaching Excellence Program at the University of Colorado is constantly planning improvements to its services. Three new projects have been implemented recently to address specific concerns in undergraduate teaching.

First, the Teaching Portfolio Consultation Service was started in the Spring 1992 semester. As described above, this service provides individual attention to faculty members who are creating a dossier promoting their work as teachers.

Second, in order to ease the orientation of new faculty
members on our campus, especially those who are new to teaching, the New Faculty Program has been initiated, also in Spring 1992.

Third, the Teaching Excellence Program is planning a study of how best to teach large groups. The Large Lecture Study will ask faculty who are teaching such groups to experiment with innovative methods that facilitate learning in the increasingly prevalent large lecture halls.

Getting in Touch

We pride ourselves on offering swift and congenial responses to all faculty inquiries. Whether faculty seek advice on teaching techniques, the latest pedagogical research, a classroom observation, a survey of their students, or an analysis of their FCQs, they may simply contact us and we will see to their needs.

Following is information on how to get in touch with our services:

Office Location: M400A Norlin Library (use the south staircase)

Office telephones: Mary Ann Shea 492-4985
Program Associates 492-1734

Campus Address: Campus Box 360
Mailing Address: Faculty Teaching Excellence Program
Campus Box 360
Boulder, CO 80309-0360
President's Teaching Scholars Program Goals

The President's Teaching Scholars Program is founded on the time-honored principle of learning the art and craft of teaching. It is designed to encourage confidence in teaching and firmly establish and support the teaching excellence of assistant professors by pairing a younger teaching scholar with a tenured faculty member known for excellence in teaching, research, and scholarship. In addition, the Program draws on the breadth and depth of teaching experience of the Teaching Scholars by asking the Scholars to create projects that will improve aspects and dimensions of the teaching/learning experiences. The Teaching Scholars Program provides support for mentoring in teaching and learning to younger teaching scholars, based on the research-proven concept that effective teaching is a learned skill, not an innate talent and that excellence in teaching is also an art which comes about through thoughtful and repeated practice. The goals of the President's Teaching Scholars Program are to honor and reward tenured faculty who excel in teaching, research, and scholarly work and to mentor assistant professors in the art and craft of teaching. Specific objectives include the following:

to reward and honor faculty who excel in teaching, research and scholarly/creative work;
to mentor an assistant professor in the art and craft of teaching;
to design and develop teaching projects aimed at the cultivation of good teaching that include working with
faculty colleagues;
to serve as advisors to the President in teaching and learning on the four campuses;
to develop a culture of teaching at a large research University; and
to enhance and develop the teacher-scholar role of the faculty member.

Through formal identification of a core of tenured faculty known as President's Teaching Scholars who are skilled in teaching, familiar with research on teaching, and interested in working with new faculty members, the University has established an important foundation for future faculty development specifically focused on teaching practice. Further, the Program provides an opportunity for the University of Colorado to recognize and reward faculty who have served the University community as outstanding teachers and scholars.
Introduction

Faculty success and satisfaction may be attributed correctly to a wide range of influences and factors, but the influence of departmental chairpersons is central. Can the initiatives and innovations characteristic of successful programs in higher education succeed in the long term without their continuing support? Probably not. As Allan Tucker, a nationally recognized specialist in departmental leadership, noted, "An institution can run for a long time with an inept president but not for long with inept chairpersons" [14]. Faculty development initiatives can originate at higher or lower levels, but realization of their full potential and the efficiency of that realization depends critically upon the chairperson's skill, knowledge and enthusiasm.

On the other hand, without the support of the higher levels, a favorable institutional context for faculty development is impossible. Without an environment conducive to growth, the most seminal and potentially fruitful ideas in faculty development will be limited by environmental factors such as financial support, policy-level sponsorship and advocacy, the availability of equipment and facilities, and other concrete factors. What can college deans and university presidents do to support university-wide faculty development programs? They can promote the
organization of committees, establish separate offices and organizations devoted to faculty development, and exploit the full panoply of institutional resources available to them, but in the final analysis the quality and amount of what they achieve will be determined at another level. Why is this true?

Faculty development may be defined usefully in generic terms only to a certain point of specificity. Thereafter, the melding of institutional purposes and goals with individual aspirations, which is the chief characteristic of successful faculty development, will inevitably be achieved in a disciplinary or professional context, at least insofar as it wins the support of the individual faculty member. At this point the role of the chairperson, or the position's equivalent, becomes central, because within higher education the challenges of faculty development vary enormously from profession to profession and discipline to discipline. The legal, medical and military professions face different problems in enhancement of their professional identity and development, especially within the context of higher education which is the concern of this volume. Similarly, scientists, engineers, and specialists in the social sciences and humanities vary enormously in the personal and professional problems they face within higher education today.

The challenges of "information literacy" and "computer and video teaching technologies," described in Chapter I, also require varying interpretation and implementation in different institutional and disciplinary contexts. For more than a decade
the U.S. Air Force Academy has worked to integrate computer technology into the educational process. Its successes have been based on departmental initiatives and innovations, with the departments of physics, chemistry, mathematics and foreign languages being leaders in the development of their own software, whereas the electrical engineering, civil engineering and history departments have relied mainly on commercially developed materials. To encourage faculty and departmental initiatives, micro-computers were made broadly available to the faculty before entering classes of cadets were required to purchase them. With each entering class buying individual microcomputers, beginning in the fall 1986, and a local area network tying the whole system together on a scale unprecedented in American higher education during academic year 1987-88, the challenge for faculty development in the different disciplines and departments is clearly evident [5].

In the final analysis, the argument for the departmental faculty development program is based on the pragmatism inherent in the question, "How does one get things done within the higher education community?" No doubt, presidents, deans, chairpersons and individual faculty members differ significantly in answering this question. However, if they share the assumption that faculty development is worthwhile, important enough to call for money, time, and results achieved efficiently, then the role of the chairperson will loom large in their considerations.

**Definition**

Faculty development is not a new subject or topic of concern.
It has existed as long as colleges and universities have been viable organizations and as long as responsible officials in colleges and universities have sought means to enhance the excellence of their institutions. For this reason it may safely be said that faculty development has travelled under various guises, but with all of them related to the fact that strong organizations within all bureaucracies evince certain shared characteristics. This means that effective leadership within higher education has always been concerned in varying ways with faculty development. Just as the growth of twentieth-century bureaucracies and organizations in general has brought into question centralized versus decentralized approaches to solving organizational problems effectively, so also the growth of universities and colleges in this century into large, complex organizations has posed similar questions about how best to achieve results. Recognition of this fact led to formation of the Higher Education Management Institute, under the auspices of the American Council of Education with funding by the Exxon Education Foundation. Exxon training manager, Frank Curran, stated: "there's not much difference between what a supervisor in a refinery must know about management processes and what the chairman of a college department must know" [10].*

In its essence, the departmental program is a decentralized approach to faculty development. Its focus is disciplinary and professional. The organizational parameters of the departmental

*After quoting Curran, Matthews wrote, "They [the supervisor in a refinery and the department chairperson] each require task-oriented and people-oriented skills. Mastery of both is necessary if productivity is to improve". 114
program may be defined differently by the varying institutional organization of these disciplines and professions. However, common to all of them will be the pragmatic posture of the chairperson in "getting things done" in any given organizational setting. The disciplinary and professional focus also provides a means of access to resources and support outside the institution, because both regional and national organizations in the professional and academic disciplines concern themselves with matters which fall under the rubric of "faculty development." Their support is also useful to the institution, not only to the card-carrying members of the discipline or profession, because often the institution's academic and professional status is determined by criteria arrived at by, or growing out of, national professional and disciplinary organizations.

Faculty chairpersons differ enormously in their authority and responsibility. They may be elected, appointed, or selected by default. The period of time they occupy the position varies, and

*The Fund for the Improvement of Post-Secondary Education (FIPSE) Project of the Organization of American Historians (OAH) has conducted such research under the direction of William H. A. Williams. It has promoted and sponsored workshops throughout the United States which "enable participants to explore and experience a wide variety of teaching and learning strategies that have been tested successfully in history classrooms." It has also addressed such matters as the employment problems faced by historians and prepared a "Careers Packet for History Departments" [15]. An especially valuable OAH/FIPSE product is History in Context: A Bibliography About the Teaching of History and Trends in Higher Education [16]. The indexed bibliography has separate sections on "Departments" (Concerns/problems facing academic departments and department heads) and "Faculty Development" (Includes discussion on all phases of faculty development in higher education and all types of problems facing faculty).
their effectiveness is dependent on a wide range of variables. Nonetheless, their role is central in the ideal departmental program.

What are the characteristics of an ideal departmental program? Useful generalizations in this regard are difficult to make because of the widely varying size, composition and purposes of academic departments. Departments may range in size from three to thirty or more. They may be almost all tenured, or temporary, as at the Air Force Academy. Effective teaching, nationally recognized research, or varying hybrids of the two may be differing departmental hallmarks. Such characteristics clearly affect the views and purposes of faculty development. However, some consensus exists in almost all departments that excellence in differing combinations of teaching, research and service contributes to professional recognition and progress. An ideal program of departmental faculty development would either address or consciously ignore these three elements, depending upon the composition and progress of the department in meeting its own, or institutional, goals:

Institutional purposes form the broad context within which degrees of emphasis should be determined. Certainly, enhancement of successful teaching will be a paramount consideration in the community college program, whereas elements of benign neglect concerning teaching effectiveness may be acceptable in a major university in return for nationally recognized research achievements. An ideal program of faculty development will probably mesh departmental goals with institutional purposes, so
that the department chairperson, dean and college president would have in mind a coherent and shared understanding of what contributes to the success and satisfaction of the individual department member.

The latter element, the satisfied and successful individual faculty member, is the key element in the ideal departmental program. If satisfaction and success can be achieved by the individual faculty member according to criteria that both the institution and the department agree are appropriate, then maximum performance should be achieved in terms acceptable to all parties. Therefore, whatever the departmental program does, it should focus on the needs of the individual faculty member. And, ideally, who should be better equipped than the department chairperson to assess those needs and to mobilize resources to meet them?

A Working Program

Faculty development at the Academy is a useful illustration of a decentralized, departmental program of faculty development because of the strong role played by its department chairpersons. Formally called "heads" of the nineteen different departments, they are appointed to indefinite terms of office under the United States Code, but not to exceed the age of sixty-four years. This normally provides for extraordinary continuity in departmental programs and is intended to compensate partially for the approximately twenty-five percent annual turnover in the six hundred-person, all-military faculty.

Deans at the Academy have typically given great latitude to the
heads of departments in organizing their programs of faculty
development, although from time to time they have centrally
reviewed and monitored the programs. In the spring of 1987, a
committee of tenure officers reviewed faculty development at the
Academy and reported the results to the department heads and to the
dean. The report noted that the Academy's need for a faculty
development program existed for several reasons: the short-term
tenure resulting in the faculty turnover cited above; the lack of
prior experience and education as educators;* and the requirement
to have new instructors become effective educators as soon as
possible. The report also noted that useful parallels exist
between leadership and effective teaching: "Teaching at the
Academy provides an unequalled opportunity for faculty members to
enhance communication skills, to practice and model life-long
learning, and to lead his or her classes in their intellectual
development." [9]. A wide range exists in departmental approaches
to faculty development at the Air Force Academy. However, existing
programs seem to fit within the following broad definition of
faculty development: "Faculty development is both a comprehensive
term that covers a wide range of activities ultimately designed to

*This problem is not uniquely the Academy's. In the fall
1987, Syracuse University began a mandatory orientation and
training program for all new graduate teaching assistants
(about 300 graduate students) to "improve the quality of
undergraduate education and enhance the graduate teaching
experience." Robert McClure, a professor of political science
at Syracuse University, stated, "The great tragedy in American
higher education is that all of us, whether teaching
assistants or full-time faculty, have traditionally been
thrown into classrooms to teach with no preparation or
support. This is an extraordinarily inefficient and painful
way to learn to teach" [6].
improve student learning and a less broad term that describes a purposeful attempt to help faculty members improve their competence as teachers and scholars" [8]. Some departmental programs are almost completely self-generated in terms of design and resources; others have relied heavily on outside expertise. The Department of History's program is of the first type, seeking to meet the particular needs of the discipline of history in the institutional context of a military academy which offers both a bachelor's degree accredited by the North Central Association of Colleges and Schools and a commission as a second lieutenant in the United States Air Force. Because the author is Head of the Department of History at the Air Force Academy, particular attention is given to that department's program.* The following description suggests some of the possibilities inherent in a departmental program.

The thirty-four members of the department offer more than thirty courses annually to over 3800 students. The bulk of the students are in two core courses required of all students, one-semester courses in world and military history, taken during their freshman and sophomore years respectively. The remaining history courses are taken either as electives by students in other majors or by the three hundred students typically majoring in history. Therefore, faculty development in the department focuses heavily on assisting new instructors to become effective teachers as soon as possible.

*A survey of the departments at the Academy showed a high degree of similarity among the various departmental programs. Many of the elements of the Department of History's program are found in those of the other 18 faculty departments [13].
The Department of History shares with other departments the needs noted in the faculty report cited above. Approximately one-fourth of its members leave each year; prior teaching experience is usually limited or non-existent;* and, as previously suggested, the department seeks to develop the novice into a professional educator as quickly as possible.

Concern with faculty development begins with identification of potential instructors. A rigorous screening process, first by the Air Force and then by the department, is required of everyone selected. A series of interviews by senior members of the department usually rule out the inarticulate, unenthusiastic and generally unsuited. No one is selected if the staff is convinced that the interviewee lacks the potential to become an effective teacher. If the individual does not possess the requisite graduate education to meet the Academy's minimum requirement of a master's degree in the subject being taught, and if no other officer with the appropriate qualifications can be identified to fill the position, then the department enters the individual into an appropriate graduate program.

When the new instructor arrives at the Academy for assignment to a department, it is likely that he or she will share with other junior faculty in American institutions the dual deficiency of a lack of experience in teaching and of no education or training in

*At the end of the spring semester, 1987, of the thirty-three members of the department surveyed, 73 percent had no teacher training or education prior to joining the department. If one counts graduate assistant teaching experience, 39 percent of the department had some college teaching experience before arriving at the Academy.
teaching itself; that is, they are primarily subject specialists. Once one passes by the general criteria for successful teaching, such as enthusiasm for the subject and sound graduate education in the discipline or profession, then the disciplinary requirements range widely from the laboratory-based course in engineering to the archival and library exploration leading to the sound historical essay. It is probably the case that each disciplinary department is best equipped by virtue of experience and knowledge of the state of the teaching art in its respective field to develop a program for instructional development of the junior faculty and for the senior members of the department.

The broad purposes and goals of the Department of History's instructor orientation and training program are outlined in Appendix I. This program was followed in the summer of 1985 with seven new instructors and a similar program was followed in the summers of 1987 and 1988. Nine full days (almost two five-day, forty-hour work-weeks) were devoted to the program before classes began. An additional four partial days were devoted to various briefings. Distinctive elements of the program included three practice lessons prepared and delivered by each instructor, with criticism by experienced instructors, and two presentations by faculty specialists from outside the department. A senior faculty member, nationally recognized as an outstanding teacher, presented a lecture on the essence of good teaching. In addition, a psychologist on the faculty who is a former student of William Perry, and who is conducting research and analysis of student
learning at West Point and Annapolis, discussed his research with the new instructors.

Following the intensive summer program, a series of thirteen presentations and discussions were held at different times during the fall semester. These were designed to provide more detailed information on the department's academic programs, information on the psychological and sociological profiles of the students they would be teaching, the status of computer applications in the department and at the Academy, aids available to students with learning problems, and professional development opportunities available to the faculty in research support (especially summer programs), flying, and possible additional graduate study.

A special effort is made to acquaint newly arrived faculty members with the Academy's library and its modest but significant archival holdings and special collections in Air Force and aeronautical history. Libraries are essential for the professional historian; indeed, the library may be considered the "historian's laboratory."* He cannot work without it. Also, any history course, at both the undergraduate and graduate levels that does not include some dimension of library or archival work is possibly deficient in both pedagogical and disciplinary terms. For this reason no department at the Air Force Academy works more closely with the library and special collections' staff than the Department of History,** and it is critical to the new faculty member's

*Not every historian accepts this point of view. When I made this point to Sir Michael Howard, Regius Professor of Modern History at Oxford University, at a departmental seminar on 8 April 1987, he demurred, and said, "A library is a library."
success as both historian and history teacher that he learn to exploit effectively these resources. Moreover, the challenges of "information literacy" and computer applications in the context of library resources mean that a history faculty has a special service to perform with regard to developing the skills and capability for the life-long learning which should be a major goal of undergraduate education. History is distinctive with regard to its knowledge base, in comparison with both the physical and social sciences, because its conclusions and sources are cumulative and derived from all fields of knowledge [11]. For the future citizen and professional military officer it is important that the traditional concept of the library, encompassing all knowledge in encyclopedic classification, be updated in the undergraduate mind to make it recognizable and familiar in its new garb of computerized services and technology. This cannot be achieved without some effort in the area of faculty development, because faculty members arrive from diverse graduate schools and at a minimum need to know first-hand the resources available to them at the Academy.

For newly-arrived officers in the department, two scheduled opportunities exist to learn about the Academy library's resources. The first is a general introduction to the library and its resources conducted by the library staff shortly after the

**For a more complete description of the department's efforts to integrate library and archival resources more fully into its teaching program, see the author's "Using the Library to Teach History at the United States Air Force Academy" [12].
officer's arrival. The second is a visit to the library's special collections, scheduled when the historical methods class required of all history majors is being introduced by the Academy's archivist to the resources and methods of archival research. In addition, upper-division history classes in specialized subject areas, such as Latin American or Russian history, will have special presentations and tours designed by the departmental specialist and appropriate members of the library staff. Other departments at the Academy make similar use of the library's resources, with the Departments of Management and of Political Science conducting specialized tours for upper-division classes. An example of a large core course using a tour conducted by the library staff was the course in technical writing formerly required of all majors in the engineering and basic sciences.

Other faculty development efforts within the department are both more individualized and generalized. In contrast to civilian institutions, where John B. Bennett says the "ambiguity of the position of chair is underscored" with regard to performance counseling [1], academic departments at the Academy have a supervisory structure requiring periodic evaluation, advice and counsel of individual junior instructors by senior members of the department. This results in both a military and an academic evaluation, each respectively leading to military and academic promotion possibilities. The supervisors carry significant responsibility in assisting in the professional development of their subordinates' future academic and military careers. In
three broad academic areas, American, military and world history, senior individuals conduct periodic professional colloquia throughout the academic year. These colloquia are primarily subject-oriented and usually devoted to discussion of new publications in the respective fields, but they also include the review and discussion of subjects such as student grading and evaluation.

Special efforts in faculty development are made in two subject areas, world history and military history, primarily because the largest teaching requirement exists in these courses required of all cadets at the Academy. The department has had a required course in world history since 1968. Over the years it called on a number of specialists in this subject from outside the Academy to conduct seminars and workshops for the instructors teaching those courses. Teaching in world history is also supported by department members who are subject specialists in major world regions. One or two-semester courses are offered by these specialists at least once every two years on the history of Africa, Western Europe, the Middle East, Russia, the Far East and Latin America. In 1979, following a decade of experience in teaching world history, the department conducted a detailed self-study of its efforts with the aid of a distinguished civilian visiting professor and published a report of its findings [3]. Then, beginning in 1982 it conducted a series of conferences on world history which contributed to formation of both regional and national organizations devoted to enhancing the teaching and study
of world history.* Apart from their subject emphasis, these conferences have the purpose of familiarizing instructors with scholars, and teachers of the subject, at both the college and high school level. The latter is important for two reasons: our first year students, the 600-700 cadets enrolled each semester in world history, are essentially high school students in their academic and psychological makeup, and high school teachers have much to offer in the way of insight and information on effective teaching of such students; also, within the discipline of history the department is committed to restoring the bond between teachers of history at all levels, a tie severely weakened by the increasing specialization and isolation of historians in higher education following World War II.

Military history is the subject area within the broad discipline of history most directly related to the professional identity of the faculty as scholars and warriors, and to the cadets as future military officers. As a result, more than any other broad subject area, it is most closely tied to the professional development of our instructors as both officers and teachers. For example, what could be more pertinent to the future military career of the junior officer who, as a pilot and specialist in military history, is given the opportunity to teach

*The results of these meetings (1982, 1983 and 1986) were published as USAF Academy research reports and were made publicly available. The 1986 report was entitled, "Africa in World History," ed. Bryant Shaw. The department is an active supporter of the regional Rocky Mountain World History Association, which hosted meetings at Denver University (1984), Aspen (1985 and 1989), Colorado State University (1987), University of Colorado, Boulder (1988).
annually a semester-long course on the history of air power? Senior military historians specializing in such subjects are available as consultants to junior instructors teaching military history for the first time in the military history core course required of all sophomore-level students.

Military history is not broadly taught, accepted or well defined as a sub-specialty within the discipline of history in the United States, or within undergraduate education in general. Therefore, communication and professional interchange with leading military historians from this country and abroad is valuable for the department's military historians. A special asset in this regard is the biennial Military History Symposium held at the Academy. An internationally recognized event, it attracts the best specialists in the field and provides most officers two opportunities during their normal four-year assignment to meet with leading scholars and teachers. Supplementing this opportunity is the annual visit of a leading military historian to give the Harmon Memorial Lecture in Military History, the foremost lecture series of its kind in the United States.

As valuable and important as these subject-oriented efforts are, they must support effective teaching, given the Academy's primary educational mission. Apart from classroom visits by senior members of the department, usually followed by private counseling sessions, the major internal instrument is a course critique system established first in the fall of 1966. The system experienced various early changes, all moving towards
standardization and a focus on a number of areas of concern in evaluating teaching: GPAs, midterm course grades, comparisons with previous history courses, evaluations of overall instruction, student preparation time, and evaluation of the lecture and discussion format commonly used in Academy classrooms. Additional questions focused on student perceptions of history, opinions of textbooks and term projects, and suggestions on how to improve the course. Major experimentation with the critiques occurred in 1979-80, and the streamlining which occurred then, including the introduction of a critique specifically oriented to student evaluation of instructor, resulted in the basic critique forms generally in use since then (see Appendix II). Since 1966, these critiques have been used in varying ways to improve teaching and to assess results, an extremely difficult thing to measure.

Results

How does one measure the results of a departmental faculty development program? Perhaps the question should first be answered by raising another question: from whose viewpoint? Pragmatically and legally, the public institution is ultimately responsible to the taxpayer and one might ask, "Is that consumer satisfied with the product for which state or federal taxes are paid?" Public institutions vary enormously in what the public expects, ranging most strikingly from athletic achievement, for which taxpayers are willing to pay a great deal, to academic performance, which certainly has less prestige if not less money available to it.
Taxpayers probably expect from the faculty of the Air Force Academy the development of a professional military officer who serves the national security interests of his country for at least twenty years and hopefully for thirty years. Although the author has no data to support this, he suspects that state taxpayers expect at a minimum a more productive member of the state community, someone who will return the tax investment by serving as a personal enhancement of economic development, the political process, and the social setting.

These rather grand goals are appropriate concerns for chief executive officers in every institution of higher learning. The first nine graduating classes of the Academy have been eligible to complete twenty years of service and approximately 50 percent have done so. This figure does not include early medical retirees, those who died in combat, or the small number of graduates who had enlisted service time and who retired with twenty years of active federal service but not twenty years of commissioned service. Programs cannot usefully be at striking variance with these larger goals; in the long term and in the final analysis, they must support them. It is not acceptable for the Department of History at the Air Force Academy to produce professional historians in place of professional military officers [3], whereas the Department of History at the University of Colorado at Boulder actively and appropriately seeks as one of its goals to develop professional historians, one of its purposes as a major research institution.*

At worst, departmental programs should be neutral and not at
variance with regard to institutional goals; at best, they will be enthusiastic and innovative supporters of these goals. Assuming an ideal setting in which institutional goals are articulated by institutional leaders in consonance with the wishes of their sponsoring constituencies, and that deans and chairpersons actively support their leaders, then the appropriate result of a departmental program will be individual faculty members who are satisfied and successful because they perform successfully according to criteria which support both their professional identity, usually arrived at in the departmental setting, and their institutional identity, which may vary considerably, depending upon institutional leadership.

Since 1979, the Academy has used an institutionally designed survey to assess broadly the satisfaction and views of its faculty. The organizational Climate Survey (see Appendix III) is conducted annually throughout the faculty by the Department of Behavioral Sciences and Leadership. The confidential results for each department are briefed privately to the respective department heads, and the dean reviews the results overall without delineation by departments. The department heads also see the faculty averages and are therefore able to make some comparative judgments. It seems a generally effective means of assessing areas of major satisfaction and dissatisfaction.

*Bruce R. Ekstrand, Dean of the Graduate School, described the university as "one of the nation's leading research-oriented universities" [17]. The Department of History includes among its degree programs, graduate degrees in Museology, Historic Preservation and Archival Procedures.
By itself, however, the Organizational Climate Survey is not adequate to measure the progress necessary to support the individual faculty member's aspirations. For this purpose an individualized activities and abilities inventory, such as that suggested by James Pence in Chapter 2, is necessary. To some degree, this need is met at the Academy by the regular military evaluation of officers. However, the focus on teaching a. the more refined analysis and evaluation of teaching effectiveness enabled by Pence's matrix is not achieved in the military evaluation per se and suggests that the Academy faculty might benefit from the use of such a tool.

A more explicit effort in this regard is the survey used by the Department of Behavioral Sciences in all of its courses (Appendix IV). This evaluation of both the instructors and the courses is conducted every semester for each course. One of the valued results of the critiques is the measurement of instructor success in the use of four different instructional tools—lectures, discussions, exercises and quizzes. The critique enables measurement of what the student believes has been gained in the three categories of enjoyment, thinking and knowledge. The names of the top two instructors in each category for each instructional tool are made public in the department, and instructors are encouraged to examine these successes and to learn from their colleagues.

Other measures of the effectiveness of faculty development fall into the traditional categories of achievement in teaching,
research accomplishments and service activities. A general, short-term measure of teaching effectiveness at the Academy may be the number of majors in a given discipline, given the fact that cadets in all majors are equally assured of employment, although their specific Air Force job may be unrelated to their major.* Research accomplishments faculty-wide are reviewed at least annually by the Dean, resulting in their public listing [7]. The individual faculty member's service to the communities of Colorado Springs, the Academy and the Air Force is reviewed as a part of the regular military evaluation and is considered significant. All three areas receive attention in the overall evaluation of faculty members because they are specifically assigned to the Academy to serve as professional role models for cadets. The major award given annually to the outstanding military instructor in each department is based on a composite of performance criteria which includes teaching, research and service activities.

Faculty members at the Academy have a wide range of generally available resources for faculty development.** For example, the Dean and his staff sponsor colloquia on teaching and a wide range of services in encouraging the faculty to use the Academy's computer resources in support of their teaching and research. Allied with these computer resources are numerous audio-visual support services and facilities. For the newly arrived junior

*Two-thirds of the Academy's graduates have achieved aeronautical ratings (58 percent as pilots and navigators, and 8.6 percent as navigators.) For most graduates this is an immediate, post graduate achievement, usually leading to a flying assignment.
instructor the instructional potential of these resources can be realized through experience, but given the normal four-year limitation on faculty tours for most officers it is important that familiarization with the resources be accelerated, a task partially accomplished by tours and briefings given shortly after the officer's assignment. More difficult to achieve is the careful orchestration of computer and audio-visual resources to achieve the goals of learning and intellectual development peculiar to a given subject and academic discipline. To assist in this process the Dean established a new staff position in instructional design. However, the focus, intensity and priorities for faculty development remain primarily a departmental responsibility. In the final analysis, the professional success and personal satisfaction of most faculty members remain rooted in the academic department.

**An example is the Faculty Development Workshop devoted to an examination of levels of learning and learning objectives conducted on 1 May 1987 for fifty members of the Academy faculty by two chemical engineering professors from the Colorado School of Mines. An innovation conducted during the fall semester, 1987 was New Faculty Day, a one-day voluntary retreat for new faculty members, based on a program of presentations and discussions in a faculty-wide context. Experienced faculty from all four academic divisions (Basic Sciences, Engineering Sciences, Social Sciences and Humanities) gave presentations and discussions were led by tenure officers. Conducted late in the first semester of teaching, new instructors could relate their experiences from the first several months of teaching at the Academy to the various presentations and discussions [13].
REFERENCES


Creating a centralized approach to faculty development frequently requires a major reallocation of existing resources or the infusion of new funds. A decentralized approach often works best where strong academic departments exist in an institution with a clear and unified sense of mission. At the University of Southern Colorado, fiscal constraints make difficulty the centralizing of services, and most academic departments are too small to make a feasible decentralized approach.

To solve the problem of increasing services to the faculty given these constraints, the University has created the Faculty Directors Program, identifying six full-time faculty members to serve in part-time administrative positions designed to provide faculty development services to their colleagues and to give them administrative experience.

The Faculty Directors are well respected faculty members appointed by the Provost and Vice President for Academic and Student Affairs to provide leadership in key areas related to faculty development needs and institutional priorities.

Directors receive a minimum of one-quarter release from teaching every semester and a stipend equal to that received by department chairs. They report directly to the Office of the Provost and maintain close ties to the Faculty Senate.
Directors have campus-wide, cross-disciplinary responsibilities, but each functions as the head of a "department" with a specialized mission.

The Director of Academic Advising maintains the primary responsibility for training faculty members in effective advising and assessing the health of the University's advising efforts. Serving as liaison between the academic faculty and those student affairs units providing advising to undeclared majors, the Director of Academic Advising helps individual faculty members improve their advising skills and assists departments in improving advising services to their majors.

The Director of Accountability and Faculty Development assists department chairs in the design and implementation of state-mandated accountability plans and state- and board-required program reviews. In addition, this director serves as coordinator of the University's involvement in the National Faculty Exchange and convener of the President's Fellows, recipients of special faculty development fellowships for a select number of faculty desiring to improve their abilities in teaching and research.

The Director of Instructional Development manages the student-operated Faculty Video Service, which allows faculty members to observe themselves on videotape. This director also plans and coordinates the Professional Development Institute, an annual one-day series of workshops presented by USC faculty for their colleagues on topics related to personal and professional
The Director of Scholarly and Creative Activities manages the selection and supervision of recipients of Scholarly Activities Grants, annual awards of up to $2500 for full-time faculty engaged in scholarly or creative activities directly related to their teaching fields. The Director assists faculty members in making application for these competitive grants and monitors their progress.

The Director of Special Academic Programs heads the University Honors Program and other academic support programs for special populations. This director also works directly with the Honors Advisory Council to identify faculty who wish to teach honors courses and assists those selected in the development of course syllabli, and materials.

The Director of Sponsored Programs and Research coordinates the submission of grant applications for external funding and promotes the interests of faculty involved with or desiring increased involvement in research. This director publishes the record of faculty research productivity and provides advisory assistance to faculty members submitting grant applications.

Each director has a small operating budget ($2000 per year) and part-time secretarial assistance. Funding for the operating budgets and stipends was reallocated from a position in central administration that was unfilled two years ago.

The benefits of the Faculty Directors Program are meaningfully measured in terms of the four categories of faculty development.
development defined in "Understanding Faculty Development" in Part I of this monograph:

1. **Professional Development**
   Directors are gaining valuable administrative experience, often having to put themselves in positions of resolving conflicts between and among their colleagues. If they decide to pursue administrative careers, their service as Faculty Directors may give them a competitive edge in securing administrative positions. If they choose to remain on the faculty, they are gaining significant insight into institutional governance and administrative processes.

2. **Instructional Development**
   As a result of the initiatives of the Faculty Directors, instruction is directly impacted. Faculty members who are better as advisors, scholars, and teachers are making a difference in the quality of instruction on the campus.

3. **Curriculum Change**
   Each director is in charge of a program that influences the curriculum in some way. Because they maintain very close contact with the department chairs, the directors serve as formal or informal advisors on curricular matters.

4. **Organizational Change**
   The major impact of the directors is in this category.
First, important faculty development activities are being done by faculty members with and for their colleagues. Second, institutional priorities are being met when otherwise, due to fiscal constraints, they might not be. Third, on a campus where departmental autonomy is revered, the faculty directors can offer many of the benefits of a centralized approach while maintaining the advantages of decentralization. Fourth, the fact that the directors report directly to the Office of the Provost and have virtually unlimited access to the central administration has helped reinforce the university's commitment to shared governance.

As part-time administrators, the directors are sometimes frustrated having only one-quarter time to perform important duties. If institutional priorities so dictate, increased amounts of released time can be available. Everyone on campus realizes, however, that the faculty directors are accomplishing important objectives without much time or many resources, and the result has been a high degree of support for them and what they do. We all recognize, too, that the institution is stronger and better as a result of The Faculty Directors Program, and we are willing to build on their individual successes and the program's strengths to provide important services to the faculty.