How do colleges and universities adapt programs of instruction to the changing times? In particular, do teachers receive appropriate recognition from their institutions for their leadership in these matters? The central aim of National Project III, a project of the Fund for the Improvement of Postsecondary Education, is to elevate the importance of teaching, and credit should be given to those teachers who spend their time, effort, and talents to bring about constructive changes in what and how well students learn. This report focuses on three areas where teachers are in the center of things as institutions adapt to the changing times: curricular expansion (especially the external degree and experiential education); adapting instruction to a diverse student body (adult and continuing education, students' greater career orientation, and the need for individual program planning); and new resources for teaching (technology, cluster colleges and living/learning programs, cross-disciplinary studies, individualized instruction, and competency-based education). (Author/HEA)
Teachers and New Arrangements for Learning

Sears-Roebuck stands pat on some things but changes others; the same is true of General Motors, the Cincinnati Reds and the Supreme Court. How about Harvard? How do colleges and universities adapt programs of instruction to the changing times? In particular, do teachers receive appropriate recognition from their institutions for their leadership in these matters? The central aim of National Project III is to elevate the importance of teaching, and credit should be given to those teachers who spend their time, effort and talents to bring about constructive changes in what and how well students learn.

Whatever the source of the new ideas, teachers are the ones to implement new methods, new programs and other educational rearrangements. But first they ask the basic question: are we simply changing things or actually strengthening the means by which students acquire worthwhile information, relevant skills and enduring attitudes and values? Experienced, teachers know that changing the process does not automatically improve the product and are wary, for example, of professional change agents. Faculties permanently engage issues of educational quality and academic standards and are self-critical advocates for constructive change—for themselves, their peers and the institution. Their analytical review is directed at a wide array of affairs and this Criteria report can only sample their contributions. We have selected three areas where teachers are in the center of things as institutions adapt to the changing times: curricular expansion, adapting instruction to a diverse student body, and making use of new resources for teaching.

Curricular Expansion

Curricular changes are the product of many pressures, but it can generally be assumed that, in their own classrooms, teachers are doing what needs to be done to keep course content up to date and on target. This priority attention to curricular substance shows the concern of teachers about the educational product—how will students change and what will they carry away from each course of study? In a period of educational evolution the Committee on the Curriculum is, indeed, one of the more active agencies through which the faculty guards academic standards. This emphasis on subject matter content by college teachers is an important dimension for evaluation within the reward structure of the institution. It is probably more significant than is the teacher's style of classroom presentation.

Two current developments in postsecondary education are forms of curricular expansion in which the faculty has an important role with respect to the quality of educational impact on students.

External Degree

One kind of curricular expansion is exemplified by the external degree program which stands in contrast to a residential college. The basic idea is to take the subject matter to the student; the Empire State College program in New York State is a good example. External degree programs require excellent administrative leadership; faculty members are also involved as course objectives are set, the sequence of topics in laid out in a form allowing students to pursue the subject alone and/or in small groups, and the mastery criteria (standards for testing and grading) are clearly marked out. It is neither easy nor comfortable for a teacher to blueprint a course of study and to certify satisfactory achievement by students when so many components of instruction must be worked out "in absentia."

Competence as a teacher in an external degree program requires special skills as a counselor, planner and evaluator. Students are given counseling assistance on how, for example, they may complete the requirements for a degree through course work at other colleges, credit by examination or individual assessment of off-campus experiences. The close and detailed review by a teacher allows students to consolidate their credits from various sources onto a single transcript as a cumulative record of educational achievement.

Experiential Education

The idea of students receiving credit for learning outside the classroom is not really new, but this arrangement is becoming formalized at a large number of schools under different labels, for example, non-traditional study, experiential learning, credit-by-examination, community service programs and cooperative education. Usually, faculty members participate as sponsors, coordinators, consultants, advisors and occasionally as teachers. These open-curricular courses consider problems of interest to a significant proportion of students. Since students are less territorial than the faculty with respect to curricular realignments, these programs frequently suggest extensions in the conventional pattern of departmental offerings.
January terms, winter sessions, intersessions, May plans and the like have served as "laboratories" in which faculty and students can undertake the study of new and different subject matter in non-classroom settings. At Bucknell University, the January Term is now in its sixth year and on the basis of this experience, faculty and students have devised semester-long programs for credit for studies abroad—London, Paris and Rome.

Perhaps the most popular single undergraduate course at The University of Michigan is Project OUTREACH, in which 700-800 students spend at least one afternoon per week in one of 40-45 different agencies in and around Ann Arbor. Students "bridge" textbook and lecture information with the realities they experience in off-campus sites such as the juvenile court, prisons, pre-schools, a senior citizens center, mental health clinics, student residence halls, hospitals and so on. A similar program at Ohio Wesleyan University allows students to design an "apprenticeship" program in social service agencies, businesses, government, unions and even in political campaigns.

The faculty must be intimately involved in establishing the educational value of experiential programs by monitoring (1) the quality of the supervision in the field, (2) prior preparation of students, (3) nature of the interactions among students, (4) grading criteria, (5) amount of credit and (6) adaptations for individual students. Further experience will demonstrate the extent to which a student can find a substitute for face-to-face contact with a teacher by interacting with other individuals whose professions, opinions and values are relevant to the student's educational objectives.

Meeting the Changing Needs of Students

With the exception of a few schools, the general academic attitude toward that learning population now identified as "the new student" has for years been a negative-passive one. The education of these students (the adults, over twenty-five, the slow learners, the under-prepared, the culturally and educationally deprived, the minorities, the handicapped, the high school dropouts, and the part-time adult learners) presents a somewhat disturbing challenge to teachers and institutions accustomed to selecting their students from the top. Their concept of academic aptitude has been rather narrowly defined since test-taking brightness is only one factor in student success; their interests, aspirations and values are equally important factors.

This section will illustrate three changes being made in postsecondary education in adapting to the wider range of aptitudes and interests that students bring to class.

Individual Attention

"Starting where the students are" requires individualized instruction: developmental work for some and accelerated work for others. Higher education is more familiar with the latter. Students, for example, are given the opportunity to "test out" of the introductory course and move into advanced work if they meet preset standards of proficiency. In contrast, many students lack entry skills for college work. Burlington County College has found "pre-college" or developmental courses in writing skills, basic mathematics, and reading to be a necessary addition to the curriculum. Through a comprehensive program of entry testing, student weaknesses are diagnosed and those needing help are assigned to the developmental courses. Faculty reimbursement and promotion for teaching these courses are considered on an equal basis with regular college offerings.

Ball State University's Academic Opportunity Program uses an approach which integrates institutional goals, student needs and faculty expertise. The program utilizes the existing academic programs and places responsibility for quality instruction in the established departments. The intensive preassessment program profiles the goals and the competencies of students and these are reassessed at the end of the first year. Close to 1,000 students participate under the direction of 42 full-time teachers in 21 departments across the University. Students also enroll in regular courses, thus permitting students and faculty to acquire University rather than "special program" identity.

Unfortunately, developmental work has not generally been a rewarding activity; furthermore, few teachers have personal educational memories corresponding to the experience of the confused student coming in for guidance or "extra help." Even so, at one time or another, most students appreciate a sympathetic ear, someone with whom they can talk about their frustrations, anxieties, or disappointments as well as their aspirations. They need to affirm what is first and what is second or third in their personal and educational scales of values. A student may seek out a particular teacher as one of the few adults in the campus environment whose judgment is respected and whose confidence is trusted. Thus, from time to time, nearly every teacher is cast in the counselor role—a responsibility not to be taken lightly. The teacher's success in helping the slower learner or the student with a problem is a revealing measure of competence as a member of the faculty and should be so counted in the merit evaluation.

Adult/Continuing Education

Professional schools such as medicine, dentistry, law, engineering and education have offered continuing education programs for some time but the "students" in these fields are only a tiny fraction of the larger population of adults who, for one reason or another, seek to continue the learning process. The faculty must assess the curricular modifications necessary to meet the educational goals of mature adults and provide a climate of instruction appropriate to these students. College teachers face an interesting and challenging opportunity to serve the educational purposes of "young folks" as well as "old folks." The following examples represent three levels of institutional adaptation to the needs of the adult learner.

The Office of Continuing Education and Public Service at the University of Illinois has established the
Inquiry Center and offers information to "all adults looking for ways to better themselves." More specifically, the Center provides information about educational, career and leisure-time planning; credit for experience gained outside the classroom; and occupational requirements—entry standards, licensing and salary ranges for a variety of careers.

Kansas State University has encouraged the faculty to promote classes for adults and to take these classes to adults by granting additional faculty positions in departments which have developed such programs. These positions are above and beyond the quotas earned with on-campus credit hours.

Burlington's population of part-time students attends college on a day and/or evening basis. A variety of courses are offered at the local military base (Ft. Dix) for men and women who are about to complete military service and who may want to pursue additional college work. Burlington has also taken its educational programs into area prisons, including the establishment of library and media facilities.

Career Orientation

The literature is loaded these days with think pieces on the status and future of liberal arts education. How do we teach our students to discriminate between trivial matters and important issues? How do we motivate and prepare them to do something about these problems after they leave the campus? In addition, students and their parents expect that the tremendous investment in a four-year liberal arts education might also serve the career advantage of students. Whether liberal arts teachers move cautiously or with vigor with respect to "career orientation." depends on how these adaptations are viewed by the home institution.

Earlham College is planning a series of senior-year seminars which will serve to integrate the students' liberal arts' education and point toward the use of this education after graduation. At Bucknell University, a program of Freshman Advisor Seminars introduces students to at least two of the disciplines and two modes of inquiry. Planning for the use of one's talents through choice of a major and eventually a career is one of the major goals of these seminars.

**New Resources for Teaching**

The two preceding sections illustrate the crucial role of the faculty in maintaining the control of quality in a period of curricular expansion and in adapting educational programs to a more diverse student body. The in-classroom procedures of teaching are also changing. Here, the teacher is the most important single component and five examples will illustrate how teachers elevate the importance of their craft by modifying and extending the resources for instruction.

**Technology**

We started with slates, blackboards and then added books, but an impressive array of new technological resources is now available to aid the teacher and the student. "Technology" in education may refer to both devices (e.g., cassettes) and procedures (e.g., aptitude tests, PSI), but in practice, most attention is given to the instructional use of mechanical and electronic equipment. Automation can place a vast world of knowledge at the fingertips of the student. Direction from the teacher is imperative and the job is a demanding one. The teacher must not default the educational uses of technology to those less able to define what students should learn and to decide the means of achieving these ends.

The on-line computer system at Bucknell is available to undergraduates 20 hours a day for six days a week. Students use the system by the hundreds in conjunction with courses in all divisions of the University. Computer literacy is expected by the faculty for about half the total student body. This trend is undoubtedly becoming stronger by the year throughout higher education but faculty participation is a necessary precondition.

The insatiable appetite of technological aids for worthwhile content material cannot often be satisfied by purchases from commercial sources. To use this resource fully, college teachers must expand their usual contribution of reference books, textbooks and syllabi to include the production of instructional material for slides, films, videotapes and computer programs. So far, unfortunately, authorship of content material by faculty has been limited, even meager. Teachers quite justifiably feel that they cannot afford the time and energy needed to make intelligent use of technological devices in their classrooms until academia responds to these efforts with the same promotions, salary increases and esteem that go to research, publication and charismatic classroom performance.

**The Residence Hall/Classroom Interaction**

The college dormitory used to be a large hotel with small rooms guarded by deans of men and deans of women and supervised by counselors serving "in loco parentis." Today, however, students live in an environment more compatible with the values of personal freedom and responsibility. Some of these changes are educationally quite significant: classrooms and living areas, traditionally separate, are being integrated by bringing academic inquiry and study closer to the realm of the students' social, personal lives.

A number of universities have established residential cluster colleges to reduce the impersonality of large classes and to make programs more adaptable. Residential programs seek to retain the advantages of the two academic worlds—the multitude of resources of a large university and the close accord among teachers and students of a cohesive community. The 14-year old Pilot Program at The University of Michigan (Hatch, 1972) and Ball State's Carmichael Resident Instruction Program are good examples of relatively low-cost arrangements for providing a curricular common ground for first-year students within the larger residence halls.

As a small residential college, Earlham also offers Living-Learning courses. The classes are held in the residence hall and the teacher doubles as the students' academic advisor. Similarly, Bucknell and Ohio Wesleyan have dormitory-based "centers" where students can explore, for example, intercultural themes. The success of these living-learning programs—large schools or small—illustrate the extended contribution of the faculty beyond the traditional classroom.
Cross-Disciplinary Studies

Overly rigid departmental boundaries are deterrents to educational reform. College faculties give lip service to interdisciplinary studies, but teachers of survey courses, joint program offerings or problem-oriented studies run the risk of losing the support of their home department or the recognition of the national professional organization. Special curricular areas such as black studies, women's studies and "future worlds" may become weakened if teachers in these fields are, in fact, penalized in the institutional competition with colleagues who remain comfortably fixed within the tradition of discipline-oriented department. Each of the NP-II schools can offer interesting examples of cross-disciplinary studies. Some of these are token offerings. Others elicit deep involvement by the faculty as they analyze the values within and between fields. They go much farther than simply presenting a sequence of attractive academic headlines.

Individualized Instruction

At least one teacher in ancient Athens enjoyed small classes and developed the prototype of individualized instruction. Although Socrates was denied tenure, the primary task of the teacher, in that day and this, is to set the stage for individual thinking and to support its direction and redirection. Since the small-group discussion serves this purpose well, it is undoubtedly a teaching method with a long-term future. Teachers who can foster a productive group discussion deserve special recognition from peers and the institution.

The most widely known new development in individualized instruction is the Keller Plan or Person alized System of Instruction (PSI). Similar patterns are in operation at different schools: contract teaching, mastery learning, competency-oriented instruction, audio-tutorial instruction and modular instruction. Paradoxically, "self-paced supervised study" is, in some respects, a strongly teacher-centered arrangement, since the teacher defines the objectives, prepares the study guide and establishes the criteria for mastery. It demands a heavy commitment from the teacher to update and improve the study guides, prepare valid mastery tests, enhance the contributions of proctors, and procure supplemental instructional resources.

Burlington has developed a number of self-paced instructional arrangements and it is interesting to note that the College, which serves over 4,000 full-time equivalent students, has only six classrooms and two large-group facilities on its main campus. This is possible because of its significant commitment to the self- instructional arrangement. All faculty members develop behavioral objectives and appropriate mastery tests for their courses. The objectives, an outline of learning activities and assignments, and other information are compiled into a "learning packet," which is provided to each student at the start of the semester. Faculty adherence to the mastery learning model is made clear in the hiring process and is emphasized in annual evaluations and promotions.

Grading

The transcript of course credits and grades is the accepted currency for the exchange of information about levels of performance achieved by students. It is the collective mechanism by which the faculty defines the quality dimensions of an educational program. Thus, the standards of the teacher as to what signifies "excellent" performance are, perhaps, the most significant means by which a teacher shapes the academic values of a college. How a teacher evaluates students is an especially valid measure of professional competence.

Since grades are so important to students (and to the academic system in general), changes in grading practices influence the preceding process of studying and teaching. Note, for example, the dramatic changes that occur when a course, a department or a college as a whole shifts to a "competency-based" system of evaluation. In a less comprehensive mode, many teachers are simply grading by "contract."

In contract grading specified levels of final achievement are set forth at the start of the term; the course is completed and the grade is set when a given standard is met. Grading by contract requires considerable planning on the part of the teacher. The specific goals and the sequence of topics for the course must be clearly stated. Another major task is preparing the mastery criteria. By what manner of testing, questioning, problem solving, project planning, paper writing and reference citing, etc., might a student demonstrate the knowledge and skills that make educational good sense? The difficult task of evaluation that teachers experience generally is brought into sharp relief when grading by contract.

Credit Where Credit is Due

Most schools have better mechanisms for vetoing proposals for educational change than for implementing these reforms. Resistance to change is understandable when one sees "innovative" fads and fancies that do little more than jazz up the educational package. Nevertheless, a college cannot always stand pat; it must constantly assess the long-term value of curricular substance and the conditions within which students learn and develop as persons.

What changes are worthwhile? Each school must give its own answer and the report has summarized some of the changes that seem to be working out quite well at various institutions. Teachers are important for implementing these improvements. As this report has tried to show, teaching involves much more than lecturing, discussing and testing. While these activities dominate classroom affairs, teachers spend considerably more time planning, preparing, and making improvements behind the classroom scene. Walter Cronkite communicates well, but not without considerable support from other reporters, researchers and writers. Teachers, however, do most of the background work themselves; one measure of good teaching is the quality of this "homework."

College professors are intellectual leaders. They exercise this function in the classroom as they foster understanding of complex events, contribute to the solution of problems and speak out regarding the values important for school and society. This leadership requires that they keep abreast of new developments in their fields and relate the knowledge to the problems and
issues of the complex society into which their students will enter.

Thus, teachers spend many hours planning and preparing new curricular arrangements, modifying the patterns of instruction in line with the changing interests of their students, and finding ways to use new resources for teaching. The institutional system must recognize and reward faculty members who improve the conditions for learning. Credit must be given to teachers whose critical analyses, constructive thinking, and implementation improve the context within which instruction occurs.

Resources and related items:
Free University Network (FUN), 615 Fairchild Terrace, Manhattan, KS 66502.

I prepared the original draft which was then reviewed by the Fund Associates. This final statement could not, however, reflect all of the comments and criticisms I and must, personally, assume responsibility for the omissions and the views herein presented.

Stanford C. Ericksen

Activity which is the subject of this report was supported in whole or in part by the Fund for the Improvement of Postsecondary Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the Fund and no official endorsement by that agency should be inferred.

For further information about local activities in National Project III, write to:
Ball State University, 2000 University Ave., IN 47306—Project Director: Jerry J. Nisbet, Coordinator of University Evaluations
Bucknell University, Lewisburg, PA 17837—Project Director: Wendell I. Smith, Provost
Burlington County College, Pemberton-Brown Mills Road, Pemberton, NJ 08068—Project Director: Lee L. Schroeder, Director of Measurement and Evaluation
Earlham College, National Road West, Richmond, IN 47374—Project Director: Gerald R. Bakker, Department of Chemistry
University of Illinois, 205 S. Goodwin, Urbana, IL 61801—Project Director: Charles J. McIntyre, Director, Office of Instructional Resources
The University of Michigan, 109 E. Madison, Ann Arbor, MI 48109—Project Director: Stanford C. Ericksen, Center for Research on Learning and Teaching
Ohio Wesleyan University, Delaware, OH 43015—Project Director: Stephen C. Scholl, Dean of Educational Services
Purdue University, ENAD, Room 402, West Lafayette, IN 47907—Project Director: Warren Seibert, Director, Office of Instructional Services, Measurement and Research Center
State University of New York; Central Administration, 99 Washington Ave., Albany, NY 12210—Project Director: Charles B. Neff, Assistant Chancellor for Special Projects
State University of New York, Oswego, Oswego, NY 13126—Project Director: David J. King, Department of Psychology

For information about back file copies or multiple copies of the Criteria series, please write to Janet Lawrence, Assistant Director, National Project II, Center for Research on Learning and Teaching, The University of Michigan, 109 E. Madison, Ann Arbor, MI 48109.