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JE Clifton F. Conrad
Anne M. Pratt

Designing for Quality

Mention "quality" in higher education today and someone immediately steps forward with an opinion on the subject. Much has been said about examining, assessing, and supporting quality in our colleges and universities. Most composers on the theme of quality begin on discordant notes like "fewer students, less money, fewer satisfied faculty and administrators, less public support," proceed to variations on the theme with chords of "stress and strain, restraint and constraint," and attempt to end with a chorus of "quality, quality, quality." Although some valuable information has come out of the swelling chorus, a problem remains amid these blending tones: if extreme care for quality is not present, all of the creative efforts that have gone before that could aid in interpreting it anew will dissolve into little more than noise. Concepts of quality, like all enduring works, need an organizing design. The proof of the design resides in the vitality of the original theme—its fit amid successive reconceptualizations and replayings.

This article presents a framework for reflecting on, assessing, and improving institutional quality in American higher education. Although drawing on the current literature, we go beyond extant writings to suggest a dynamic approach to people designing for quality in colleges and universities. To this end, our discussion unfolds in five parts: the first offers a perspective for design; the second examines extra-institutional approaches to quality and their relevance to designing for quality; the third explores the need for continuous quality assessment; and the remaining two sections elaborate a design framework.

Clifton F. Conrad is professor of higher education at the University of Arizona. Anne M. Pratt is assistant to the vice-president for university advancement at the College of William and Mary.

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As a point of departure, we assume that *the concern about quality in higher education today was born of past indifferences.* Highly visible factors such as fewer students, less money, fewer satisfied faculty and administrators, and less public support only have illuminated a chasm of collective apathies; they did not carve out the void. Indifference, of course, comes in many forms and sometimes is no less difficult to recognize than quality. On the one hand, indifference can appear as the blind maintenance of a comfortable status quo. Times of plenty seem to encourage this kind of indifference. As long as most people remain reasonably satisfied, questions of quality rarely get posed. On the other hand, indifference can look like the immoderation and excess of blind, overzealous reform movements [37] that completely ignore "what is." In either case, the face reflected in the mirror shows an indifference to energetic questioning about what quality is where learning takes place.

It is not unusual for concerns about quality to surface in times of diminishing resources of all kinds—human, economic, environmental [51]. But in order to keep the current decade from being marked by one more face of indifference—the one belonging to short-term survival techniques—the momentum of the growing concern must be used to effect something of quality, something durable upon which to build toward the twenty-first century.

A Perspective for Design

The realization that quality is elusive must condition the beginnings of design. If it is acknowledged, however, that when something of quality surfaces, it probably emerges at or just beyond the cutting edge of change where past, present, and future meet [59], then a process of active, self-conscious inquiry retains a critical place in the evolving design. Indeed, the initial design consideration regarding quality is recognizing the perpetual and individual nature of the process. Given these assumptions, then, what kinds of considerations can help to inform the design process? At the risk of stating the obvious, one must first ask what colleges and universities do, for much of what quality in higher education is flows from such a defined understanding. Through sharp definitions of purpose, boundaries for design can be established that, in turn, delimit the design without detracting from its integrity.

The questioning of individual and institutional purposes can go a long way toward enhancing quality. Too often in the past, however, issues of purpose have been left to philosophers who often deal in ques-

tions rather than purposive answers. Significantly, the landscape of higher education provides a habitat for a sizeable population of Ph.D.s who should be able to ask rather pointed philosophical questions about purposes, both individual and collective. Yet such questions seem to be posed only infrequently. The business of the academy traditionally has involved acquiring, transmitting, and applying knowledge. Knowledge can be called the self-conscious making of relevant distinctions. Knowledge can also precede or accompany learning or change [5]. It seems fitting to assume, then, that learning has better chances of taking place when more people actively attempt to make relevant, self-conscious distinctions. Leaving questions of purpose unasked threatens quality because the self-knowledge that must contribute to designing for learning remains unsought.

In comparison with purposes, goals represent more short-term, mutable directives [56]. The goals of individuals and institutions often fluctuate. Establishing a good fit out of that variance involves continual inquiry for the individual as well as the organization, with the choices made (or not made) signaling both the form and substance of the enterprise. Although goals, by definition, can be more readily changed than purposes, they nevertheless need to be synchronized with purposes, either individual or institutional.

Purposes and goals retain critical importance in designing for quality because they have to do with deciding what the products of the organized higher education effort are, as well as what possible residual effects of the process would better be described as wastes. "Universities exist to produce educated persons and scholars, not retired professors or academic failures" [56, p. 608]. Herein lies a sticky trap, however: neither graduates nor scholars can be called products even though an institution's aim may be "to produce educated persons and scholars." Rather, if one proceeds on the assumption that one cannot engender enduring change in another person but that one can only change self, then students, graduates, and scholars become producers. In short, the art and science of producing becomes the primary qualitative consideration, and products look more like the memories (books, articles, symphonies, sculptures, administrative structures) of a highly complex, integrative exchange [16]. Everyone knows about double messages and how confusing they can be to sort out. This design consideration involves making the medium and the message the same.

Making the medium and the message the same is not easy. There is literature suggesting that the discrepancies between the two derive from a basic organizational problem found in businesses, churches,

schools, and hospitals [2, 3, 4]. As decisions become more and more important and thus more threatening to participants in decision-making processes, it becomes increasingly difficult to get information which is valid and pertinent to the decision. As Argyris [5, p. 367] puts it: "One might say that participants in organizations are encouraged to learn as long as the learning does not question the fundamental design, goals, and activities of their organizations."

Research in this area suggests that human beings are acculturated to stay within established rules, routines, procedures, norms, or designs in dealing with other people or with controversial issues [6]. These established routines or procedures also constitute peoples' "theories-in-use," as evidenced by their readily observable behaviors. Theories-in-use differ from espoused theories, however, and people can usually discern the difference between the two in other people if not in themselves. When people do recognize these discrepancies, they nevertheless are encouraged (by the theories-in-use) to say: "If you observe others behaving incongruently with what they espouse, in the name of effectiveness, concern, diplomacy, do not tell them" [5, p. 367].

To repeat, bringing medium and message into the same place is a significant design consideration. For colleges and universities, where the higher learning or producing is the espoused course, going beyond the various rituals, routines, and procedures of the theories-in-use may be a most important task. It is, moreover, an uncertain task that goes beyond a focus on the products of higher education. The task begins with the self-conscious making of distinctions whose relevance can reshape premises and alter norms and values. The task resides in human action, in human relationships, and in the nature of human interaction. With this perspective in mind, we turn first to a review of the most widely used extra-institutional approaches to examining quality in higher education.

Design Precedents

Most questions about quality in higher education have concentrated on its assessment, and the most visible approaches to assessment have been from extra-institutional perspectives. In particular, reputational studies have long dominated inquiry into program quality in higher education, placing major emphasis on evaluating faculty quality as perceived by faculty peers. The precedent for this approach dates from two widely publicized studies by Raymond Hughes in 1925 and 1934 [42, 43]. These studies not only established faculty quality as a major

criterion in the assessment of program quality but also fixed the research aperture on the evaluation of graduate programs. In the Hughes study as well as those that followed [24, 42, 43, 45, 46, 61, 62], the main emphasis has been on institutions with high national visibility. Reputational studies also have been conducted of professional program quality [15, 23, 25, 29, 36, 60, 70]. Two noteworthy observations can be made about these studies. Although most of them have followed the path set forth by earlier reputational studies in the arts and sciences at the graduate level, they have used more diverse groups of raters and rating criteria [30]. Further, despite some variance in the rankings of institutions across studies, most of the rankings have consistently identified the same professional schools at the top of their lists [52].

Several of the more recent efforts to look at program quality have shifted somewhat the emphasis of reputational studies by asking about undergraduate program quality [44, 66]. As in most studies at the graduate level, the study by Solmon and Astin employed faculty to rate faculty, and institutions that ultimately ranked at the top of their listings included most of those institutions that had surfaced at the head of graduate reputational rankings of quality. In this particular study of undergraduate programs, however, one significant difference emerged when several institutions were identified that had never before appeared in reputational rankings. Broadening rating criteria—a critical aspect of design—to include such factors as "faculty commitment to undergraduate teaching" apparently educed this difference in findings.

Significantly, reputational studies have emphasized products (notably, faculty scholarly achievement) rather than the quality of the process, thus diverting critical attention. To be sure, products can represent indicators of what quality looks like. But such an exclusive reliance on products also can induce a complacency about more subtle, yet equally vital, questions of quality. Questions about the process (What is the fit of teaching, research, and service in the university? What does a commitment to that end look like?) also should form the basis of any design for quality.

Many criticisms concerning the methodological limitations of reputational studies pointedly refer to the possibility of a comfortable self-satisfaction on questions of quality. This particular face of unconcern can look like rater bias stemming from the influence of "halo effects" [66]; of "lags" in information [31, 42]; of an over-representation of raters from high-ranking institutions [73, p. 21]; of "alumni effects" where raters tend to rate highly their own alma maters; and of institu-

tional size and age on perceptions of quality [52, p. 10]. Although faculty probably do remain the most competent judges of the work of their peers [14, p. 24], the tendency of everyone—faculty, administration, even students—toward selective awareness can blunt sharp questions of quality.

Do quality programs exist only at highly visible institutions? Common sense says certainly not. Visibility may have nothing to do with that part of quality that speaks to human regeneration—that slow process of developing human histories that involves combining the layers of relevant distinctions made, one after the other, to yield enriching guidelines. Ironically, in times of disenchantment and exacting accountability, high visibility may even get in the way of people working toward quality by either being mistaken as quality or the reverse, being singled out for undue scrutiny. Either a comfortable acceptance of appearances or an over-zealous scrutiny will result in designs of indifference rather than ones of quality.

In summary, reputational studies report what a professional group of peers think about what quality academic programs are, relative to some rather visible comparisons. Reputational studies also identify where scholars think valued research is being done. This aspect of the study alone can represent a point of shifting illusion and allusion, because evaluations of research can fluctuate depending on the rater's perception and the methods used [73]. For instance, one can evaluate research quality based on criteria reflecting durability—that is, research that shows up repeatedly in the citations and the effects of other research—or one can make judgments based on the quantity of research —that is, pure volume of research being published. Unfortunately, these findings "say little or nothing about the quality of instruction, the degree of civility or humaneness, the degree to which scholarly excitement is nurtured by student-faculty interactions" [40, p. 1314], all of which come together where something of quality evolves.

In addition to reputational studies, there have been efforts to use objective indicators to assess program quality. These studies identify additional indicators to consider in a design for quality. However, one caveat emerges: a close correspondence exists between these objective assessments and reputational assessments [30], and many of the limitations of reputational studies apply to these quantitative assessments as well. Nevertheless, from these "objective" studies [1, 19, 22, 34, 38, 49, 50, 54, 63, 67], a host of objective factors have been used to assess program quality.

In studies of undergraduate colleges, for example, the indicators

used in assessments have evolved from criteria designed to measure such effects of student achievement as how many baccalaureates of an institution received fellowships [19], earned doctorates [19, 69], contributed scholarly articles to a scholarly journal [50], or entered medical school [33]. One study ranked institutions using a selectivity index based on an estimate of entering students' average academic ability [10]. Still others grouped institutions around indicators such as the proportion of faculty with a doctorate, average faculty compensation, proportion of students going to graduate school, proportion of graduate students, number of library volumes per full-time student, number of full-time faculty, student-faculty ratio, and current income per student [20].

At the risk of repetition, these indicators retain values as just that—indications of what people think goes into making something of quality. They speak to the shape, size, number, and kind of people and other resources that come and go across the boundaries of a college or university. Certainly, what comes and goes from the academic enterprise for which one is designing remains an important design consideration, and the lists of indicators suggest considerable agreement in this regard. Unfortunately, without equivalent attempts to decide what goes on inside of the design, anything can conceivably go on. Indeed, in drawing up a design from these lists, one could conceivably establish structures that had no relation to the learning processes desired in the academy and thus miss entirely a rendering of quality. Here again, notions of what the higher learning actually is need to become an active design consideration.

Although there are benefits to expanding one's list of design options, if the list has no organizing principle, it will be of little use in a dynamic design effort. At many points of decision making, one's options are often limited and not clear-cut. What can be more encompassing and clear-cut, however, are one's own organized ideas about what makes for good designs and what does not. In this regard, criticisms of objective assessments of quality speak to just such a lack of organization when citing as limitations of these studies their reliance on criteria lacking in sufficient complexity, on research-oriented indicators, and on consideration of only top-ranking institutions [30]. These limitations speak also to a narrowness of organizing principles. If designs for quality are to be well informed, then one's organizing principles must enlarge perspectives rather than reduce them.

One also must move beyond thinking only of program quality and consider the institution as a whole. This emphasis on fuller, more unified designs for quality increasingly finds expression in arguments

supporting a "value-added" concept in higher education [8, 14, 17, 28, 52]. Both at the graduate level and the undergraduate level, the hidden curriculum [64] (the extracurriculum, support services, and such) likely will influence the quality of any effort because all of these things show people committing themselves to undertake certain means in the accomplishment of certain ends. Quality, then, exists as a property of an entire institution [57, p. 59].

In recent years, as the public clamor for accountability as well as accessibility to higher education has risen, quality assessment has also become a major concern of state government. As early as 1963, warnings to the states were issued by academic leaders concerning the difficulty of expanding academic programs to meet the burgeoning numbers of traditional and nontraditional students while at the same time maintaining traditional standards of academic quality [47]. This admonition notwithstanding, a majority of the states with governing or coordinating boards for higher education have since established varying degrees of authority for program approval and review [13].

To be sure, there are some potential advantages of state-level program approval and review for institutional quality. These fall into the categories of improved instructional programs, improved faculty morale and self-esteem, enhanced educational experiences for students, more effective use of resources, and the like, owing to better integrated academic planning, evaluation, and budgeting [12]. On the other hand, some disadvantages exist due to the emotionally charged atmosphere born of retrenchment and related threats. Evaluation can result in program termination; in faculty, student, and administrator displacement; and, in some extreme cases, external community disquiet. Despite the possible consequences of state-level actions on institutional quality, it must be noted that quality is but one factor in statewide program approval and review. No less important, most of the criteria aimed at assessing quality appear as adaptations of traditional quality indicators as established in educational research and by accrediting agencies [52]. In turn, state-level quality assessments remain anchored to the limitations of traditional approaches.

In addition, the accreditation process of both regional and professional associations increasingly are emphasizing quality as a central concern. Proceeding on the assumption that accredited programs or institutions are of higher quality than nonaccredited ones, these evaluations resemble a "pass-fail" system [65, p. 7]. In general, accrediting agencies examine institutional or program goals for a fit between stated goals and the institution's ability to achieve them [71]. Like program

evaluation at the state level, criteria for accreditation tend to emphasize comparing available data on faculty credentials, on student-faculty ratios, on the number of volumes in the library—in short, more indicators of what people think quality resembles. "Perhaps the most indictable aspect of the accreditation approach to quality is the generally uncritical acceptance of the stated goals, that is, the failure to determine whether institutional or program objectives warrant support—regardless of whether the goals are achieved" [65, p. 7]. Put another way, the process that a design outlines in a somewhat static form lacks the same careful review being given to maintaining the design's boundaries and assessing the effects of the design's existence.

Maintenance of boundaries, evaluation of effects, management of resources of the institution—all remain essential to designing for quality. But the design must extend beyond a three-dimensional plan to include a perpetual assessment of what is actually taking place between people in a college or university. All of these extra-institutional assessments, moreover, remain for the most part summative, owing to a decided emphasis on system maintenance rather than on regeneration. If, in contrast, one could see quality happening, one probably would see as much a formative process as a summative one.

Need for Assessment by Design

Despite all the voiced concern about quality in higher education, a compelling case can be made for the dearth and shortcomings of quality assessment in colleges and universities today. To be sure, existing alongside extra-institutional review efforts are voluntary processes taking place within institutions [7, 27, 32]. Especially within the last decade, institutional program reviews have been conducted in many colleges and universities. Yet in most institutions, program reviews are conducted more for resource reallocation than program improvement. As a result, quality assessment takes place largely for financial reasons—to reward strong programs and to squeeze or eliminate weak programs. In short, evaluation is oriented less toward the improvement of programs than toward arriving at what ultimately are summative decisions about the future of programs. Whether programs should be continued remains a primary consideration, as does the level of support. Accordingly, in most institutions quality is only one of a number of factors examined in program reviews. Demand and cost, along with such criteria as centrality of programs to institutional mission, are often just as important as quality considerations. Even in

those institutions where review for program improvement is a driving consideration, there are numerous obstacles [7] to the comprehensive assessment of quality such that most internal quality assessments suffer from the same limitations as extra-institutional approaches.

In light of academe's concerns about quality, then, why has self-evaluation of quality not come to the fore as an important component of an encompassing evaluation effort? First, encompassing quality assessment does not seem to represent a central issue for many decision makers. Apparently concerned with more immediate institutional survival, many decision makers have concentrated on efficiency rather than effectiveness with a concomitant emphasis on planning in all its various guises: planning for program cutting, for better use of staff and faculty resources, for retaining students—any kind of planning that may enhance institutional efficiency. Furthermore, these people have limited time and competing demands on their attention [55]. Such an environment intrudes on self-conscious evaluations of effectiveness.

Second, assessment wins few popularity contests among administrators, faculty, or staff because it can look threatening. During a period of retrenchment, fears abound that evaluation may lead to the termination or dismemberment of programs, the displacement of faculty and staff, the erosion of program quality and reputation. Third, many academics whisper that evaluating quality suggests declining quality. Quality assessment is taken as a sign of weakness, signifying a lack of faith rather than a symbol of strength. Fourth, just as many people believe that quality of faculty teaching, for example, cannot be measured through student evaluations or other approaches, so also do many people believe that quality remains an elusive concept that, even if it could be defined, would remain impossible to assess.

Although academics seem reluctant to assess quality, there are compelling reasons why people in all institutions—even those reputed to be of high quality—should perpetually engage in direct self-evaluation. Perhaps most important, public confidence represents the most precious asset of all institutions, and that confidence largely rests on perceptions of institutional quality. If the public believes that quality is eroding and nothing is being done to improve it, public support of higher education will decline. On the other hand, if the public is convinced that quality control is being maintained, then support of all kinds is more likely to be forthcoming. For some institutions, assessing and promoting institutional quality may mean the difference between survival and extinction. For many institutions, such an endeavor may

do more to arrest the anticipated decline in financial support during the next decade than all survivalist strategies combined.

Public confidence in colleges and universities tends to walk hand-in-hand with the images that institutions project of themselves. For institutions, the challenge is to help ensure that the various publics they serve recognize their image and attach appropriate associations to it. The publics that institutions serve run the gamut from prospective students and their families to governmental supporters of research and teaching to private supporters of research, teaching, bricks and mortar, even institutional heritage. Because institutions function best when they perform in some sort of regenerative synchronization with the needs of the publics they serve, it behooves them to pay attention to their images and the confidence invoked by their image.

Where quality in education is concerned, however, the image and the substance of an enterprise need to complement each other. What an institution does and what it says it does to its various publics need to follow each other closely. When image and substance remain separate or "out-of-sync," the various stakeholders in higher education receive mixed messages and sometimes double messages about important philosophical, social, and cultural connections. These are significant connections where quality is concerned. When these links are not attempted in academe, academic stakeholders become as mixed in the duplicity as institutions are. Some say that form or image and substance cannot be separated [59]. In that context, the image an institution projects, particularly if the image focuses solely on products and effects, may say a great deal about the substance of the educational process. In contrast, if learning or producing is what higher education is all about, it seems obvious that the many faces of producing need projecting more than do the products of the learning exchange. Indeed, the products will come and go (whether they are material or human products). It is the producing which sustains. This truth, in turn, is higher education's message and medium for its stakeholders who are concerned with quality.

External constituencies in business and industry can be and frequently are articulate about their needs for educated personnel. One has only to read classified advertisements to find specific listings of characteristics desired by prospective employers. Similarly, one has only to peruse the admissions literature for graduate and undergraduate schools to find listings of characteristics needed to study in a program. In between those lists are the students who prepare themselves and make

choices. Their choices are made amid anxieties about what to do to insure employment in a job market that is likely to shift unpredictably. Likewise, the investment of business, industry, government, and interested others in higher education tends to be based on some notion of specific returns, both in the short- and long-run. Anxieties are lessened all around when image, substance, and specific returns are complementary and mutually reinforcing.

For higher education, that ideal can be reached by an attentiveness to producing. Given the uncertainty of all the futures involved—for students, institutions, business, and industry—paying more attention to processes of exchange is the primary quality consideration. Such a shift in attention may go a long way toward arresting the anxieties resulting from the lack of specific answers. In fact, some would say that higher education has always been in the business of questions rather than answers. The quality of asking questions, in turn, determines the quality of any future course.

What does that mean that an institution should do to instill public confidence in producing, inquiring, learning? To undergraduate students, institutions can say: "If you are not confused at least every six months, then you have not received a good return on your investment in higher education." To graduate students, businesses, and industry, institutions can say: "If you have not learned as much about what you do not know (in relation to research, jobs, or projects), then you have not received a good return on your investment." All this is not to suggest that meaningful, regenerative products or answers will no longer be a part of higher education's exchange. Rather it means that the stakeholders and the participants in the enterprise will have shifted their attention to the heart of the exchange—to learning, to producing. If higher education is comfortable and confident with the shift, the chances seem good that others will find comfort and confidence there as well.

In concert with the challenge of restoring public confidence, the challenge to maintain and enhance quality should remain constantly before everyone. Although no panacea, quality assessment can prod a college community into a searching reexamination of individual and institutional purpose and provide a durable foundation for maintaining or even enhancing individual and institutional quality as an ongoing, regular endeavor. Current threats, from budget reductions that endanger faculty morale to maintaining enrollment by lowering admissions standards, only underscore the urgent need to embrace quality

assessment and improvement as a major institutional priority now. The future will require the same effort.

A third argument for assessing quality may be no less compelling. Because most institutions are increasingly facing financial constraints, some kind of quality assessment is going to occur. Hence the question arises: what approaches to quality assessment are most preferable? As noted earlier, quality, along with other program characteristics, is evaluated in many institutions through academic program review. Yet program review can threaten more than individual programs. It threatens to tear the delicate tapestry of trust and loyalty that is the *sine qua non* of any self-respecting academic institution. Because quality assessments of some kind are going to occur anyway, it seems preferable to separate quality assessment from immediate financial exigency, to begin assessing quality before retrenchment makes it essential to conduct program reviews in which quality is only one consideration and everyone is seriously threatened. Such an approach can help insure that quality commands major, thorough, and systematic attention, free from immediate financial considerations; it can provide a basis for making decisions that may help avoid the negative effects of program review; and it can encourage faculty, administrators, and staff to become personally involved in improving the quality of their institution.

For these reasons, everyone in every institution needs to embrace self-assessment of institutional quality as an issue of critical importance. It becomes essential that the people in each institution reach an understanding of what quality connotes, engage in persistent and perpetual evaluations of quality, and translate the results of assessment into action aimed at maintaining and enhancing program and overall institutional excellence. In short, those who participate in a college or university need to lay out self-consciously the formative groundwork for their designs for the higher learning.

A Design for Assessment

Despite its shortcomings to date, assessment, done properly, can function as a pivotal component of any formative design for quality. If extra-institutional approaches put one in touch with what others in higher education think, then a necessary next step involves putting the participants of each institution in touch with what they themselves think, individually and collectively. Self-assessment can provide for

this. When people feel ready to assume the responsibility and opportunity of self-assessment, a first step might be to establish a college-wide committee on academic quality to examine all components of an institution's program and services and to make serious, periodic recommendations to the administration, faculty, staff, and students. To reduce uncertainty and to help insure that quality assessment functions as a positive, nonthreatening process, it seems especially important to include on any such committee, in an active capacity, all major segments of the college community: trustees, administrators, faculty, staff, students, and alumni.

The principal charge of a college-wide committee would be to outline a dynamic design for institutional quality. Not only should the design be context-specific, but it should also return an image of high context. An analogy may help to illuminate this paradox. An acknowledged work of art, like Michelangelo's "David," represents a lasting effect of a high quality effort. Further, "[g]ood art is always high context; bad art, low-context. This is one reason why good art persists and art that releases its message all at once does not" [39, p. 80]. The effort to establish what that high context is aids in stabilizing a dynamic design process. Without such a stabilizing effort, one inevitably forsakes all that enables people to be planning beings for a lack of faith in the past [35].

At the same time, any design effort must energetically move ahead through constant inquiry about what quality means in the context of the present and future as well as the past. Making such distinctions about quality involves blending new information with old for a good fit. That fit will vary from institution to institution, not only because each college or university has certain unique characteristics but also because it remains difficult, if not impossible, to separate the people in each setting from the environment in which they function [39]. The challenge, then, remains one of drawing up context-related definitions of what one thinks a quality effort looks like that also reflect appropriately the range and level of programs and services offered in the past, the present, and hoped for in the future. Definitions that seek such a fit provide an anchor for assessment for quality by suggesting multiple viewpoints and multiple criteria to guide the assessment process. Such definitions also keep the uncertainties of the past and present in plain view even as a course is charted toward an unknown future.

Most assessments of quality in higher education have been based on a unidimensional conception of quality, frequently making quality

synonymous with faculty quality or student quality. Such a narrow view, however, fails to recognize that quality has multiple dimensions that remain in constant motion. Even if the cutting edge that a design for quality addresses will always remain elusive, that assumption, in itself, does not provide a reason to avoid approaching it. To the contrary, such an elusive edge makes all the more imperative the need to draw up questions about quality that attempt to keep in motion those traits that people think describe a quality effort.

Any design for assessment also must ultimately address methodological approaches to assessing quality. Difficulties arise, however, in taking all of the various sources of data, findings, and hypotheses about quality and applying them to a design effort. The approach most frequently used to glean information about quality in higher education has involved employing quantitative techniques that depend on objective criteria [11] that can be operationally defined [9]. In contrast, less frequently used qualitative approaches to inquiry have surfaced with the rise of naturalistic strategies [72]. Quantitative assessments tend to emphasize unidimensional perspectives (despite some multivariate procedures); qualitative assessments emphasize multidimensional perspectives [51]. Each has a place on a continuum of gathering information, even though the two have often been placed in opposition to one another.

The heat of the argument between quantitative and qualitative methods often boils down to the conclusion that the former retains more objectivity than the latter and thus yields more scientific information. In interesting contrast and explanation from "the new physics," a quantitative approach to inquiry looks more like a different kind of subjectivity than some higher plane of objectivity. Those who carry the attitude that quantitative approaches are more objective harbor a prejudice—the prejudice "to be 'objective', that is to be without a preformed opinion. In fact, it is impossible to be without an opinion. An opinion is a point of view. The decision to study one segment of reality instead of another is a subjective expression of the researcher who makes it" [74, p. 56]. Each methodological medium has subjective limitations, then, as each reflects the investigator's perception of reality.

In further support of viewing quantitative and qualitative methodologies as the proverbial opposite sides of the coin is the very issue under consideration. If quality indeed is multifaceted, a moving target, then every dimension that converges on the cutting edge of the designing needs recognition in the effort to describe the properties of the process.

"The right facts, the ones we really need . . . are damned *elusive*, and we're not going to sit back and 'observe' them. We're going to have to be in there looking for them. . . . [Further, by] returning our attention to Quality, it is hoped that we can get technological work out of the noncaring subject-object dualism and back into craftsmanlike self-involved reality again, which will reveal to us the facts we need when we are stuck" [59, p. 253].

In a design for quality, then, a range of quantitative and qualitative indicators can be used to assess quality. A good deal of literature exists on the subject, and literally scores of indicators have been identified [30, 51, 52]. For example, one might use quantitative indicators of quality such as SAT scores, costs per student, library expenditures, number of earned doctorates among faculty and administrators, number of scholarships and fellowships, student-faculty ratios, faculty-administration ratios, student-support staff ratios, and alumni contributions. One might also use qualitative assessments such as student evaluations of faculty performance, faculty evaluations of student performance, observations of student behavior in and out of class or of faculty behavior in committees, observations of administrative behavior, evaluations of alumni performance, and community opinion. All could be relevant, all could be germane if presented in an illuminating light. In order to benefit from an illuminating light, though, one must adhere to all its properties or be content with darkness: an encompassing approach to quality assessment must systematically recognize the validities and reliabilities, the limitations and strengths, the similarities and differences, the weight and significance of contrasting methods of inquiry and kinds and sources of information represented by the two methodological approaches [68]. By carefully combining and organizing the available information, while actively seeking new ways to design and new sources to use in a design, those who choose to design have better chances of embracing the many dimensions of quality.

Design Questions

Designing with quality in mind is at once an individual and collective effort in organizations; that being the case, one needs broadly stated questions to guide that effort. The quality of the inquiry, in turn, will foreshadow the quality of learning. What follows, then, are some modest questions which may prove to be useful points of departure for the design conscious.

1. What relationship does institutional purpose have to quality? Clarity of institutional purpose finds repeated reference in relation to institutional quality [26, 41, 51, 53]. Different types of institutions, moreover, from research universities to doctorate-granting institutions to liberal arts colleges, are just that—different types. The effects of size, environment (living and learning), formal and informal organization, and the like will differ from person to person, institution to institution. Succinct institutional statements of purpose ultimately can aid people in finding a "goodness of fit" between their own needs and desires and certain environments, organizations, programs, people, and so forth. Establishing a context where a collective understanding exists about what is occurring, an understanding that implies shared values as well, can come from beginning the designing with statements of purpose. People, in turn, can choose to participate or not to participate after careful juxtaposition of personal preferences with what they see, hear, and feel about an institution. The design assumption here is that the clearer the choices are, the better chances one and all have of designing for quality.

2. What relationship does selectivity (to include choosing faculty, staff, administrators, trustees, and students) have to quality? "Extremely selective schools may offer students poor programs and some open-admissions institutions provide first rate curricula" [53, p. 17]. Whether faculty, students, trustees, staff, or administrators use their abilities to good advantage stands out as the central quality question. Achievement indices sometimes end up as selectivity quotients that people employ to compare themselves in a rather static fashion. The process—perpetually realizing human learning potential—should remain the chief design consideration rather than any fixed notions people have about a few kinds of human potential. Existing notions serve only as tentative comparisons of the probability of some rather familiar things happening.

3. What relationship does money have to quality? Although any design for quality requires constant attention to costs and revenues, affluence does not insure quality. Howard Bowen [18, pp. 166–167] has noted that "affluent institutions could perform as well, or nearly as well, with less money or that many institutions could achieve greater results with the same money." In short, there still remain some things that money cannot buy: an active commitment to quality is one of those priceless things. The making of something of quality, at bottom, remains a process of people laboring toward that elusive end. Still, money can and does provide certain things and remains an important

consideration. Attending to financial support, while seeking always the best ways and means of expending limited resources, seems a sensible approach to designing for quality.

4. What relationship does human communication have to quality? Because people learn from experience, the problem of passing on the essence of what one generation knows to another generation remains perpetually urgent. "It is not merely a poetic insight that proclaims 'the child is father of the man.' The processes of transmitting the knowledge stock within the family, in the peer group, through formal education, and through written records and other records is the real heart of the historical process" [16, p. 33]. The way that transmission seems to occur is through active communication and communion with one another. Actively and appropriately engaging in the many aspects of a curriculum and an extracurriculum, in the many aspects of instructional strategies and techniques, in the many aspects of organizational efficiency and effectiveness at once belongs to the one and the many in an institution. To be sure, everyone cannot do everything. But when people can mingle freely with each other in mutual respect—actively pursuing some common ideas or values or principles [48, 58]—a community can evolve where people can share their experiences and commitment to the common learning [21]. A college is not just a community of scholars, although there may be many scholars whose persistence defines and encourages a good part of the experience. There also exist other persisters in this community, whose continuity of active participation in, support of, and commitment to the purposes of the gathering at once describe the existence and essence of the commonwealth. The drawing of community establishes a regenerative part of one's design in hopes of perpetuating future designing.

Conclusion

Classical approaches to the arts and the sciences assume that there exist separate parts of things which, when put together properly, will constitute a whole. In contrast, some contemporary approaches to the arts and sciences view the physical things we see around us as "enmeshed in our own perceptions not only psychologically, but ontologically as well" [74, p. 323]. It seems, then, that one may be intimately connected to the whole. Yet most designs for quality lack precisely this immediate sense of connectedness. By concentrating almost exclusively on the assessment of effects and the maintenance of boundaries, inquiries about quality in higher education have yielded narrow,

often unidimensional, perspectives. Moreover, most of the inquiries have been conducted by groups and individuals external to colleges and universities: accrediting associations, state higher education agencies, and scholars who have conducted studies ranking programs in highly visible institutions.

For those who care deeply about quality in higher education, the time seems especially propitious for some searching internal designing. Although recognizing the elusive and complex nature of quality, such designers might begin with drawing up context-related definitions of quality in learning, coupled with probing inquiry about current efforts. By recognizing the multidimensional character of quality, the need for ongoing assessment that includes both qualitative and quantitative approaches, and the reality that any conclusions are only temporary, designers can lay the groundwork for worthy individual and institutional design initiatives. Such designing looks like a difficult and high-risk endeavor for those who choose to undertake it, yet it is clearly a risk better taken than not.

References

1. Adams, A. V., and J. Krislov. "Evaluating the Quality of American Universities: A New Approach." *Research in Higher Education,* 8 (1978), 97–109.
2. Argyris, C. "Alternative Schools: A Behavioral Analysis." *Teachers College Record,* 75 (1974), 429–52.
3. ———. *Intervention Theory and Method.* Reading: Addison-Wesley, 1970.
4. ———. "Do Personal Growth Laboratories Represent an Alternative Culture?" *Journal of Applied Behavioral Science,* 8 (1972), 7–28.
5. ———. "Single-loop and Double-loop Models in Research on Decision-Making." *Administrative Science Quarterly,* 21 (1976), 363–75.
6. Argyris, C., and D. Schön. *Theory and Practice: Increasing Professional Effectiveness.* San Francisco: Jossey-Bass, 1974.
7. Arns, R. G., and W. Poland. "Changing the University Through Program Review." *Journal of Higher Education,* 51 (May/June 1980), 268–84.
8. Astin, A. W. *Four Critical Years.* San Francisco: Jossey-Bass, 1977.
9. ———. "Reply to 'Academic Quality: An Alternative View'." *Change,* 12 (1980), 48.
10. Astin, A. W., and J. W. Henson. "New Measures of College Selectivity." *Research in Higher Education,* 6 (1977), 1–8.
11. Astin, A. W., and L. C. Solmon. "Measuring Academic Quality: An Interim Report." *Change,* 11 (1979), 48–51.
12. Barak, R. J. "Program Evaluation as a Tool for Retrenchment." In *Challenges of Retrenchment,* edited by J. R. Mingle. San Francisco: Jossey-Bass, 1981.

13. Barak, R. J., and R. O. Berdahl. *State-Level Academic Program Review in Higher Education.* Denver: Education Commission of the States, 1978.
14. Blackburn, R. T., and P. E. Lingenfelter. *Assessing Quality in Doctoral Programs: Criteria and Correlates of Excellence.* Ann Arbor: Center for the Study of Higher Education, University of Michigan, 1973.
15. Blau, P. M., and R. Z. Margulies. "The Reputations of American Professional Schools." *Change,* 6 (1974–75), 42–47.
16. Boulding, K. *A Primer on Social Dynamics.* New York: The Free Press, 1970.
17. Bowen, H. R. *Investment in Learning.* San Francisco: Jossey-Bass, 1977.
18. ———. *The Costs of Higher Education.* San Francisco: Jossey-Bass, 1980.
19. Bowker, A. H. "Quality and Quantity in Higher Education." *Journal of the American Statistical Association,* 60 (1964), 1–15.
20. Brown, D. G. *The Mobile Professors.* Washington, D.C.: American Council on Education, 1967.
21. Browning, D. S. *Generative Man.* New York: Dell, 1973.
22. Calvert, J. G., J. N. Pitts, Jr., and G. H. Dorion. *Graduate School in the Sciences: Entrance, Survival and Careers.* New York: Wiley-Interscience, 1971.
23. Carpenter, R. L., and P. A. Carpenter. "The Doctorate in Librarianship and an Assessment of Graduate Library Education." *Journal of Education for Librarianship,* 11 (1970), 3–45.
24. Cartter. A. M. *An Assessment of Quality in Graduate Education.* Washington, D.C.: American Council on Education, 1966.
25. Cartter, A. M., and L. C. Solmon. "The Cartter Report on the Leading Schools of Education, Law, and Business." *Change,* 9 (1977), 44–48.
26. Chickering, A. W., and R. J. Havighurst. "The Life Cycle." In *The Modern American College,* edited by A. W. Chickering. San Francisco: Jossey-Bass, 1981.
27. Clark, M. J. *Program Review Practices of University Departments.* G.R.E. Board Research Report No. 75-5aR. Princeton: Educational Testing Service, 1977.
28. Clark, M. J., R. T. Hartnett, and L. L. Baird. *Assessing Dimensions of Quality in Doctoral Education: A Technical Report of a National Study in Three Fields.* Princeton: Educational Testing Service, 1976.
29. Cole, J. R., and J. A. Lipton. "The Reputation of American Medical Schools." *Social Forces,* 55 (1977), 662–84.
30. Conrad, C. F., and R. T. Blackburn. "Correlates of Departmental Quality in Regional Colleges and Universities." *American Education Research Journal,* 22 (Summer 1985), 279–95.
31. Cox, W. M., and V. Catt. "Productivity Ratings of Graduate Programs in Psychology Based on Publication in the Journals of the American Psychological Association." *American Psychologist,* 32 (1977), 793–813.
32. Cranton, P. A., and L. H. Legge: "Program Evaluation in Higher Education." *Journal of Higher Education,* 49 (September/October 1978), 464–71.
33. Dubé, W. F. "Undergraduate Origins of U.S. Medical Students." *Journal of Medical Education,* 49 (1974), 1005–10.

34. Eells, W. C. "Leading American Graduate Schools, 1948-1958." *Liberal Education,* 46 (1960), 16-20.
35. Eiseley, L. "Activism and the Rejection of History." *Science,* 165 (1969), 129.
36. "The 15 Top-Ranked Business Schools in the United States." *MBA,* 8 (1974), 21-25.
37. Finn, C. E., Jr. "Toward a New Consensus." *Change,* 13 (1981), 17-21, 60-63.
38. Glenn, N. D., and W. Villemez. "The Productivity of Sociologists at 45 American Universities." *American Sociologist,* 5 (1970), 224-52.
39. Hall, E. T. *Beyond Culture.* New York: Anchor Press/Doubleday, 1976.
40. Hartnett, R. T., M. J. Clark, and L. L. Baird. "Reputational Ratings of Doctoral Programs." *Science,* 199 (1978), 1310-14.
41. Heath, D. H. *Growing Up in College.* San Francisco: Jossey-Bass, 1968.
42. Hughes, R. M. *A Study of the Graduate Schools in America.* Oxford: Miami University Press, 1925.
43. ———. "Report of the Committee on Graduate Instruction." *Educational Record,* 15 (1934), 192-234.
44. Johnson, R. R. "Leadership Among American Colleges." *Change,* 10 (1978), 50-51.
45. Jones, L. V., G. Lindzey, and P. E. Coggeshall (eds.). *An Assessment of Research-Doctorate Programs in the United States.* Washington, D.C.: National Academy Press, 1982.
46. Keniston, H. *Graduate Study and Research in the Arts and Sciences at the University of Pennsylvania.* Philadelphia: University of Pennsylvania Press, 1959.
47. Kerr, C. *The Uses of the University.* Cambridge: Harvard University Press, 1963.
48. Knefelkamp, L. L. "Faculty and Student Development in the 80's: Renewing the Community of Scholars." In *Current Issues in Higher Education: Improving Teaching and Institutional Quality,* No. 1. Washington, D. C.: American Association for Higher Education, 1980.
49. Knudsen, D. D., and T. R. Vaughan. "Quality in Graduate Education: A Re-evaluation of the Rankings of Sociology Departments in the Cartter Report." *American Sociologist,* 4 (1969), 12-19.
50. Krause, E. D., and L. Krause. "The Colleges that Produce Our Best Scientists: A Study of the Academic Training Grounds of a Large Group of Distinguished American Scientists." *Science Education,* 54 (1970), 133-40.
51. Kuh, G. D. *Indices of Quality in the Undergraduate Experience.* AAHE-ERIC/Higher Education Report No. 4. Washington, D.C.: American Association for Higher Education, 1981.
52. Lawrence, J. K., and K. C. Green. *A Question of Quality: The Higher Education Ratings Game.* AAHE-ERIC/Higher Education Report No. 5. Washington, D.C.: American Association for Higher Education, 1980.
53. Levine, A. E. "Quality in Baccalaureate Programs: What to Look for When David Riesman Can't Visit." *Educational Record,* 63 (1982), 13-18.
54. Lewis, L. S. "On Subjective and Objective Rankings of Sociology Departments." *American Sociologist,* 3 (1968), 129-31.

55. March, J. G., and H. A. Simon. *Organizations.* New York: Wiley and Sons, 1958.
56. Miller, J. G. *Living Systems.* New York: McGraw-Hill, 1978.
57. National Science Board. *Graduate Education: Parameters for Public Policy.* Washington, D.C.: National Science Foundation, 1969.
58. Newman, J. H. *The Idea of a University.* New York: Longmans, Green, and Co., 1893.
59. Pirsig, R. M. *Zen and the Art of Motorcycle Maintenance.* New York: Bantam, 1974.
60. "The Popular Vote: Rankings of Top Schools." *Juris Doctor,* 6 (1976), 17–18, 21.
61. Roose, K. D., and C. J. Anderson. *A Rating of Graduate Programs.* Washington, D.C.: American Council on Education, 1970.
62. Scully, M. G. "The Well-Known Universities Lead in Ratings of Faculties' Reputations." *Chronicle of Higher Education,* January 15, 1979, 6–7.
63. Siebring, B. R. "The American Council on Education Rankings of Quality in Graduate Education and Membership in the National Academy of Science." *Science Education,* 53 (1969), 73–7.
64. Snyder, B. *The Hidden Curriculum.* Cambridge: MIT Press, 1971.
65. Solmon, L. C. "A Multidimensional Approach to Quality." In *Quality—Higher Education's Principal Challenge,* edited by T. M. Stauffer. Washington, D.C.: American Council on Education, 1981.
66. Solmon, L. C., and A. W. Astin. "Departments Without Distinguished Graduate Programs." *Change,* 13 (1981), 23–28.
67. Somit, A., and J. Tanenhaus. *American Political Science: A Profile of a Discipline.* New York: Atherton, 1964.
68. Stark, J. S., and M. Lowther. "Measuring Higher Education Quality." *Research in Higher Education,* 13 (1980), 283–87.
69. Tidball, M. E., and V. Kistiakowski. "Baccalaureate Origins of American Scientists and Scholars." *Science,* 193 (1976), 646–52.
70. "The Top 15: The MBA Survey of Graduate Business Schools." *MBA,* 9 (1975), 33–35.
71. Troutt, W. E. "Regional Accreditation Evaluative Criteria and Quality Assurance." *Journal of Higher Education,* 50 (March/April 1979), 199–210.
72. Webb, E. J., and others. *Nonreactive Measures in the Social Sciences.* 2nd ed. Boston: Houghton-Mifflin, 1981.
73. Webster, D. S. "Advantages and Disadvantages of Methods of Assessing Quality." *Change,* 13 (1981), 20–24.
74. Zukav, G. *The Dancing Wu Li Masters: An Overview of the New Physics.* New York: Morrow, 1979.