SPECIAL FEATURE/CONTRIBUTION SPECIALE

Quality Assurance: A Framework for Canadian Universities[1]

WILLIAM G. WEBSTER*

ABSTRACT

Quality assurance programs have become an integral part of the health delivery professions during the past quarter century. They generally focus on the appropriateness and adequacy of services provided, with the objective of identifying and correcting deficiencies of service. Appropriateness and adequacy are assessed by the degree of adherence of practices to explicit standards, and these in turn relate to criteria of structure, process, outcome, and efficiency. The key concepts and methodologies of quality assurance programs are reviewed, and it is suggested that they can be readily applied to Canadian universities. A quality assurance program within a university could be a powerful administrative and curricular development tool that would serve to define and enhance the quality of educational experiences of students.

RÉSUMÉ

Depuis vingt-cinq ans environ les programmes de garantie font partie intégrante des responsabilités qui incombent aux associations professionnelles médicales. En général ces programmes visent à évaluer si les services rendus se sont révélés adéquats et appropriés, et à faire apparaître toute carence éventuelle dans le but d'y remédier. Ces critères d'adéquation sont évalués en fonction d'un principe de concordance entre certaines pratiques et certaines normes clairement établies, lesquelles correspondent à des critères choisis en fonction de la structure du programme lui-même, des moyens d'action utilisés, de leurs conséquences et de leur efficacité. Dans cet article, on passe en revue les méthodes employées dans le cadre de ces programmes et les concepts clés qui les sous-tendent. On y suggère de plus que ces programmes pourraient facilement s'appliquer aux universités canadiennes. En effet, un programme de garantie au sein de l'université pourrait être un outil puissant de perfectionnement tant des structures administratives que des programmes eux-mêmes et il servirait aussi à définir ce que l'on entend par le concept de qualité dans le domaine de l'enseignement vécu par les étudiants universitaires et à se rapprocher toujours davantage de cet idéal.

criterion there is a *standard* against which practices are judged, and this is a numerical statement of what constitutes goodness. Standards can be statements concerning goodness of optimal care, adequate care, or minimal care; there is no agreement as to which type of standard is most appropriate. The use of optimal standards leaves room for improvement, but it has the potential of conveying inadequacies to those outside the process. On the other hand, use of minimal or adequate standards can have the effect of preserving the status quo and militating against change and improvement. In summary, *quality* of service delivery is a quantitative statement (e.g., percentage of cases, amount of change, etc.) of the extent to which the standard for each criterion is met.

The key to the development and implementation of a quality assurance program is how the criteria for quality are decided upon and how the standards are formulated. This has been discussed in detail by Donabedian (1980), Demlo (1983), and Williamson (1978). Following a review of the literature, criteria and standards are derived normatively through expert opinion solicited, collated, and synthesized by panels. For a panel to have the necessary credibility, it must be constituted so that the members are knowledgeable of the science and technology of medicine, have relevant clinical experience in community and academic settings, have an interest in quality and its assessment, and have certain personal characteristics that facilitate effective panel participation. In addition, the panels must be representative and balanced with respect to various interest groups. Attention has been paid to the appropriate size and, especially, the organization of panels. One method used with some success is the Delphi technique (Dalkey et al., 1972). There are many variations on how the method is actually used but, in general terms, its distinctive features are that panel members prepare their answers to questions individually, the answers are collated into statistical group responses, and members then reconsider their responses in light of the group responses. This approach appears to overcome many of the difficulties encountered with congregate groups unless those groups operate according to structured procedures such as the Nominal Group Technique (Delbecq & Van de Ven, 1971; O'Neil, 1981). Although there are critics of the Delphi technique (Sackman, 1975), Donabedian (1980) suggests that it is most useful when "there is considerable uncertainty about the correct answer because arriving at it requires a combination of factual knowledge with personal judgment and values" (p. 658), and he presents a convincing argument for its success.

Implementation of quality assurance is carried out on an on-going basis through either retrospective review of records or a concurrent review of all patients at a given time. Although often there will be an institutional coordinator, the actual process of quality assessment is carried out by the practitioners themselves exercising whatever judgment is required as to whether process or outcome standards have been met. Assessments often are carried out with just one or two criteria at a time so that the process does not become overwhelming and excessively time consuming. Such a procedure also means that the modification of practices remains within manageable proportions when deficiencies are encountered.

Social scientists will see readily the conceptual and methodological linkages that exist between quality assurance in the health domain and program evaluation in the public policy and social services domains. Based on a systematic comparison of the two, Green and Attkisson (1984) have argued that, despite an increasing convergence of the two in recent years, there are significant differences in emphasis along several key dimensions which reflect their different histories and substantive concerns. A detailed consideration of their analysis is beyond the scope of this paper.

The health delivery system is not dissimilar to that of universities in terms of organizational complexity, disciplinary/professional heterogeneity, professional autonomy and self-governance, institutional independence, and major public involvement in financing. As was previously discussed, health delivery quality assurance programs rely on criteria and standards that are developed by the individual professions themselves. To the extent that quality assurance programs in health delivery have, in fact, been effective in promoting quality in an economical manner (Beinecke, 1984), the parallels suggest that there could be value in universities adopting quality assurance concepts and methodologies for promoting the quality of their own activities. Programs that stress self- and peer-review and that have the objective of enhancing and optimizing the appropriateness and adequacy of service delivery to individuals are compatible in principle with university traditions and values. How the concepts and methodologies of quality assurance might be adopted will be considered specifically in the next section.

EVALUATION IN HIGHER EDUCATION

A substantial body of literature now exists concerned with the impact of higher education on students (Bowen, 1977; Pace, 1979; Halpern, 1987; Conrad & Wilson, 1985; Winter, McClelland & Stewart, 1981). Within the literature, the predominant focus of attention has been on outcome variables such as knowledge, skills, cognitive development, attitudes and values. For example, Winter et al. (1981) developed measures of cognitive, motivational and emotional outcomes to test their hypothesis that the effects of a liberal arts education are largely operant behaviours, specifically "processes for operating on and using information rather than mere knowledge of facts or information." Similarly in studies that have assessed the quality of individual programs of study or individual institutions (e.g., Krueger & Heisserer, 1987; Curry & Hagar, 1987; Ciereszko, 1987; Osigweh, 1988), measures have generally been derived from standardized tests of knowledge and academic achievement. This literature has been reviewed in some detail by Conrad & Wilson (1985) and, as a broad generalization, most studies of higher education have focused on outcome and have had the objective of demonstrating a positive effect of the college experience (often the liberal arts experience) on the individual student.

The approach to evaluation of higher education that appears to come closest conceptually to quality assurance, as developed in this paper, is what has been

referred to as "value-added" (Osigweh, 1986, 1988) or, as preferred by Astin (1987), "talent development." Astin makes the very useful distinction between *outcome* and *value-added*. Outcome refers to the level of developed competency or talent of graduates regardless of how it might have been acquired or developed. Clearly, it confounds student selection with experiential factors. Value-added, on the other hand, is a concept derived from economics and stresses the contribution made by the institution and the educational experience of the student in the development of the competency or talent. While a focus on change removes in part the influence of student selection factors, the basic problem with stressing global outcome still remains: In a quality assurance context many outcomes are beyond the *direct* control of the institution. Equally important, the origin of the particular outcome or change is difficult to identify and, hence, modify. This is exactly the same case as with the health delivery system, and it underlies the widespread use of process criteria even though their link to outcome may be only presumptive.

Although the actual relationship between process and outcome criteria is usually not known, this should not unduly delay implementation of a quality assurance program. In the context of course and curriculum planning, assumptions are already made about the relationship, and they can continue to be made but need to be systematically evaluated whenever possible. Clearly, an effective quality assurance program must include a component of continuing research to validate process criteria and presumed linkages of these criteria to specific outcomes. This cannot be overemphasized.

IMPLEMENTING QUALITY ASSURANCE IN A FACULTY OF SOCIAL SCIENCES[2]

Experience in the health delivery field suggests a number of principles that may be important for any effective system of quality assurance:

1. The develoment of criteria and standards must be carried out by those charged with service delivery, i.e., the faculty, with broad consultation among interested constituencies within both the university and broader community.

2. The evaluation of quality, i.e., the assessment of the extent to which standards are met in practice, must be carried out by faculty themselves. Establishment of a separate bureaucracy to provide coordination, guidance, and continuity may be desirable and necessary, but the role of the bureaucracy cannot be to establish standards by itself or to evaluate quality.

3. Whatever system is used must be simple to implement by those who are not specifically trained in evaluation activities and for whom evaluation activities may be of little inherent interest.

4. As emphasized by Madaus and Stufflebeam (1984), quality assurance entails *on-going study* of activities aimed at *improvement*. Accordingly, the effective development and implementation of a program requires understanding, commitment, and support from the most senior levels of the institution (Kirkwood, 1985). While necessary, this is not sufficient. Halpern (1987) has reminded us that

top-down pressure often meet skepticism and resistance within a university, and consequently faculty support for all aspects of a quality assurance program is critical for its success.

5. The focus of evaluation should not be the individual instructor nor the individual course; it is the degree program and the experiences of individual students in following their degree program. As ironic as it may seem, a quality assurance program may not intersect significantly with the processes of teaching evaluation or personnel appraisal, although it can have direct implications for course requirements and pedagogy.

A useful system of quality assurance that is consistent with these general principles could be developed and implemented within a Faculty of Social Sciences by addressing systematically three broad questions.

1. What are the objectives or desired outcomes of a social sciences under-graduate degree program? Can these objectives be expressed in terms of skills, talents, attributes, qualities, or competencies that graduates should have developed by virtue of following and completing the degree program?

Drawing upon health delivery, this question could be addressed through a panel with representatives from different disciplines within Social Sciences and operating according to principles of the Delphi or Nominal Group technique. The multitude of ideas in the literature as to what ought to constitute a liberal arts education (e.g., see reviews by Bloom, 1956; Donald, 1985; Ewell, 1987; Winter, McClelland and Stewart, 1981) can be drawn upon in the consideration and articulation of generic objectives.

Concurrently, other panels with representatives from *within* each different social science discipline would be attempting to develop discipline-specific objectives and criteria. These might include a list of ideas or concepts within the major about which a graduating student would be expected to have a certain level of familiarity and understanding. One might expect such ideas to be embodied implicitly in the curriculum already and, accordingly, their articulation would not require a major time commitment from panel members involved.

2. Once sets of generic and discipline-specific goals and outcomes are agreed to,[3] the second issue becomes the specification of the processes or the experiences thought to be sufficient and/or necessary for each outcome to become developed. Note that the emphasis is on *opportunity* rather than *achievement* because it is opportunity (process) rather than achievement (outcome) over which an institution principally has control. It is on this point of stressing process that this particular quality assurance approach to higher education departs significantly from others, including value-added.

By way of example of this second step, if confidence and competence in oral communication were a desired outcome, the next question becomes, "What experiences must the student have had at some point in the degree program in order to have had the opportunity to develop the skill to a desired level?" Presumably, one might include a requirement to make oral presentations in courses, and one could define and describe just what constitutes an oral presentation. In the

terminology of quality assurance, this would be a criterion. Then one must specify the number of such presentations that would constitute an ideal, adequate, or minimal standard. Hence, one might set as an adequate standard that the student is required "to have made in classes or seminars at least four oral presentations of at least 5 minutes each and of which at least one involved defending an idea or position." In the case of many specific skills, these criteria and standards may be relatively easy to develop in quantitative terms. In the case of intellectual skills like analytic thought, problem solving, or applications of information, greater reliance may have to be placed on indirect indicators and acceptance of multiple equivalent experiences will be required. Regardless of ease of definition and specification, it is important to remember as well that the process of discussing objectives and experiences raises sensitivity to quality and so by itself can be an important component of improving quality.

3. The third phase is to proceed to assess quality by determining the extent to which standards of particular criteria are met in the experiences of individual students. To reiterate, quality is a quantitative statement (e.g., percentage of cases, amount of change) of the congruence between standards and practices. We might, for example, have a standard of "having written at least 3 essays, at least one of which requires a library search of literature and the development of a hypothesis, and at least two of which are returned to students with specific comments on grammar and organization as well as substance." We can then ask, "In what proportion of graduating students in the degree program has this standard in fact been met?" To answer this might require determining individual course requirements over a period of years, developing a data base, and then tracking students through their programs. An alternative and complementary approach (of equally unknown reliability) would be to send questionnaires to a sample of graduating students asking about their courses and what was required in them with respect to certain specific criteria being examined.

A number of points are to be kept in mind when considering implementation. First, a program does not attempt to evaluate quality with respect to all criteria at one time. Instead, the focus of the exercise will be one subset of criteria at one time and another subset at another time. Some criteria may be judged to be of greater relative importance and they would be monitored regularly. This feature keeps the process within manageable proportions. It also permits experience to be gained with the process before requiring a major commitment to data collection.

Second, assessment of quality is not the end in itself. Instead, it leads to a consideration of means to improve quality. To the extent that standards are not being met within some realm, a department would be expected to review and modify the organization and pedagogy of its undergraduate program so that the standards are met for an increased proportion of students. This might entail an agreement as to which courses would have requirements that relate to specific standards, for example, which courses would have an essay assignment requirement. If the program exceeds the minimal or adequate standard with respect to one criterion, then the question becomes whether the program might be changed

so that support resources could be diverted to help the department meet the standard with respect to other criteria.

A third point is that the whole process of quality assurance approached from the perspective of the extent to which standards are met hinges on definitions of standards. This leads to a consideration of two issues. The first is that, in the development of criteria and standards, ideal, adequate, and minimal standards must be distinguished. We should not confuse these. We do not expect to meet the ideal; we expect, however, to consistently exceed the minimum. My assumption is that it would be far easier to achieve consensus with respect to what would constitute adequate or minimal standards than optimal standards, in part because it allows one to skirt around the argument that many of the ideals of higher education are in some sense ethereal and elude measurement. Of potential significance is the impression, based on discussions with individuals in the health delivery field, that adequate standards are easiest to wok with psychologically in that much of the time one would expect they would be met or exceeded but they still provide room for improvement. The second issue with respect to criteria and standards is that quality assurance is only as good as the criteria and standards used. Accordingly, some external review process may be beneficial. While external consultants cannot specify what the criteria and standards should be, they can usefully comment on what they might be in light of practices elsewhere. In this respect, the process is similar to reviews of graduate programs carried out by bodies such as the Ontario Council on Graduate Studies.

A CONCLUDING OBSERVATION

Some of the concepts and methods of quality assurance in the health delivery field have been reviewed and I have suggested that they can be applied to Canadian higher education. Although there are many obvious political and public relations reasons for universities to have in place an objective and documentable account-ability system concerned with quality and cost-effectiveness, the principal rationale for such a program remains the enhancement of the quality of the educational experience of individual students. Furthermore, the accountability process itself, when approached from a quality assurance perspective and imple-mented in an on-going manner, is one that raises consciousness about educational objectives and the means by which such objectives are met. This process also points to areas that require improvement, and supports departments and individual faculty members in implementing their resolve and dedication to provide the best possible educational experience for their students.

NOTES

1 This article is based on Report 1 of the Task Force on Quality Indicators, Faculty of Social Sciences, Carleton University.

2 Although this article is written from the perspective of the social sciences, the ideas are equally applicable to any segment of the university.

3 The author has recently conducted in-depth interviews with individual faculty members from a
variety of social science disciplines. The results indicate that, at least within the Faculty with which
the author is associated, there is remarkable concordance among faculty members across disciplines
in ideas on generic objectives. This provides some grounds for optimism that reaching agreement on
objectives or goals may not be as daunting a task as it may first appear. Although Tuckman and
Chang (1988) have pointed out that differences may be expected to emerge more when one begins to
operationalize what the goals actually mean, the interviews also indicate concordance in general
terms with respect to the kinds of experiences thought to be necessary for students to have an
opportunity to achieve generic objectives.

REFERENCES

American Medical Association Advisory Committee on PSRO, Task Force on Guidelines of Care.
(1974). PSROs and norms of care. *Journal of the American Medical Association*, 229,
166–171.
Astin, A. W. (1987). Assessment, value-added, and educational excellence. In D. F. Halpern (Ed.),
Student outcomes assessment: What institutions stand to gain. New Directions for Higher
Education, no. 59. San Francisco: Jossey-Bass, pp. 89–109.
Beinecke, R. H. (1984). The differential effectiveness of oversight mechanisms. *Evaluation and the
Health Professions*, 7(3), 341–363.
Bloom, B. S. (1956). *A taxonomy of educational objectives*. New York: David McKay.
Bowen, H. R. (1977). *Investment in learning: The individual and social value of American higher
education*. San Francisco: Jossey-Bass.
Canadian Council on Hospital Accreditation. (1985). *Standards for Accreditation of Canadian Health
Care Facilities*. Ottawa: Author.
Ciereszko, A. A. (1987). Mandated testing in Florida: A faculty perspective. In D. F. Halpern (Ed.),
Student outcomes assessment: What institutions stand to gain. New Directions for Higher
Education, no. 59. San Francisco: Jossey-Bass, pp. 67–73.
Conrad, C. F. & Wilson, R. F. (1985). *Academic program reviews: Institutional approaches,
expectations, and controversies*. ASHE-ERIC Higher Educational Report no. 5. Washington,
DC: Association for the Study of Higher Education.
Curry, W. & Hager, E. (1987). Assessing general education: Trenton State College. In D. F. Halpern
(Ed.), *Student outcomes assessment: What institutions stand to gain*. New Directions for
Higher Education, no. 59. San Francisco: Jossey-Bass, pp. 57–65.
Dalkey, N. C., Rourke, D. L., Lewis, R. & Snyder, D. (1972). *Studies in the quality of life: Delphi and
decision-making*. Lexington: Lexington Books, D. C. Heath and Company.
Delbecq, A. L. & Van de Ven, A. H. (1971). A group process model for problem identification and
program planning. *Journal of Applied Behavioral Science*, 7, 466–492.
Demlo, L. K. (1983). Assuring quality of health care: An overview. *Evaluation and the Health
Professions*, 6(2), 161–196.
Donabedian, A. (1966). Evaluating the quality of medical care. *Milbank Memorial Fund Quarterly*,
44, 166–206.
Donabedian, A. (1980). Methods for deriving criteria for assessing the quality of medical care.
Medical Care Review, 37(7), 653–698.
Donabedian, A. (1981). Criteria, norms and standards of quality: What do they mean? *American
Journal of Public Health*, 71(4), 409–412.
Donabedian, A. (1982). *The criteria and standards of quality*. Ann Arbor, Mich.: Health
Administration Press.
Donald, J. G. (1985). Intellectual skills in higher education. *The Canadian Journal of Higher
Education*, 15(1), 53–68.
Ewell, Peter T. (1987). Establishing a compus-based assessment program. In D. F. Halpern (Ed.),
Student outcomes assessment: What institutions stand to gain. New Directions for Higher
Education, no. 59. San Francisco: Jossey-Bass, pp. 9–24.

Goodman, J. T., Goodman, M. I., McGrath, P. J. & Goldsmith, L. J. (1987). Quality assurance in psychological services. *Canadian Psychology*, 28, 172–179.

Green, R. S. & Attkisson, C. C. (1984). Quality assurance and program evaluation. *American Behavioral Scientist*, 27(5), 552–582.

Halpern, D. F. (Ed.). (1987). *Student outcomes assessment: What institutions stand to gain*. New Directions for Higher Education, no. 59. San Francisco: Jossey-Bass.

Hegyvary, S. T. & Haussmann, R. K. D. (1975). Monitoring nursing care quality. *Journal of Nursing Administration*, 3(6), 17–26.

Kirkwood, R. (1985). The quest for quality in graduate education. *Educational Record*, 66(3), 4–8.

Krueger, D. W. & Heisserer, M. L. (1987). Assessment and involvement: Investments to enhance learning. In D. F. Halpern (Ed.), *Student outcomes assessment: What institutions stand to gain*. New Directions for Higher Education, no. 59. San Francisco: Jossey-Bass, pp. 45–56.

Madaus, G. F. & Stufflebeam, D. L. (1984). Educational evaluation and accountability. *American Behavioral Scientist*, 27(5), 649–672.

Mattson, M. R. (1984). Quality assurance: A literature review of a changing field. *Hospital and Community Psychiatry*, 35(6), 605–616.

O'Neil, M. J. (1981). Nominal group technique: An evaluation data collection process. *Evaluation Newsletter*, 5, 44–60.

Osigweh, C. A. B. (1986). An evaluation model of training outcomes for higher education. *Educational Evaluation and Policy Analysis*, 8, 167–178.

Osigweh, C. A. B. (1988). Evaluating performance in training-oriented human service organizations. *Group and Organizational Studies*, 13, 389–408.

Pace, C. R. (1979). *Measuring outcomes of college: Fifty years of findings and recommendations for the future*. San Francisco: Jossey-Bass.

Sackman, H. (1975). Summary evaluation of Delphi. *Policy Analysis*, 1, 693–718.

Sanazaro, P. J. (1980). Quality assessment and quality assurance in medical care. *Annual Review of Public Health*, 1, 37–68.

Slee, V. (1974). PSRO and the hospital's quality control. *Annals of Internal Medicine*, 81, 97–106.

Tuckman, H. P. & Chang, C. F. (1988). Conflict, congruence, and generic university goals. *Journal of Higher Education*, 59, 611–633.

Williamson, J. W. (1978). *Assessing and improving health care outcomes: The health accounting approach to quality assurance*. Cambridge, Mass.: Ballinger Publishing Co.

Winter, D. G., McClelland, D. C., & Stewart, A. J. (1981). *A new case for the liberal arts*. San Francisco: Jossey-Bass.