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# Background paper

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# The 'Catch 22' of Academic Quality: Implications for Universities and Public Policy\*

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#### Introduction

Over the last decade a new issue arose on the higher education policy agenda of most countries throughout the world. The traditional higher education policy issues of access and cost have been supplemented by a new concern with academic quality. First initiated in France in the early 1980s and more fully elaborated in the UK by the Thatcher government in the late 1980s, new forms of national quality regulation – more usually termed "quality assurance" – have spread rapidly around the world. One indirect measure of the diffusion of these new public policies is the development of an international association of public and independent entities engaged in academic quality assurance — The International Network of Quality Assurance Agencies in Higher Education (INQAAHE). In 1990 when it was first created INQAAHE had 25 members in 17 nations, primarily represented by the "Westminster" countries. By 2001 when the INQAAHE held its Sixth International Conference in Bangalore, India, it had attracted 300 participants from some 46 countries and regions.

As policy makers in most countries have debated issues regarding the regulation of academic quality there has often been extensive dispute about the meaning of the term. Many have suggested that "academic quality" is amorphous, non-measurable, or so ambiguous in meaning as to be not appropriate for public regulation. I would argue that academic quality is a fundamental and necessary concept in higher education and one without which our predominant concern with cost and access becomes increasingly futile. In the discussion to follow I will define academic quality as equivalent to academic standards, that is the level of academic achievement attained by higher education graduates. This definition of academic quality as academic standards is consistent with the emerging focus in higher education on student learning outcomes -- the specific levels of

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knowledge, skills, and abilities that students achieve as a consequence of their engagement in a particular college or university program (Pascarella, 2001).

The development of new quality assurance regulations and agencies raises substantial questions for the academic community as well as for the broader public. Is there a need for new policies on academic quality and if so what are the best means for addressing this issue both within universities and through public regulation? I have been examining the problem of academic quality over the last decade through research in the US, Europe and Asia and would like to report on my findings and observations. In the analysis to follow I will try to outline first the nature and possible causes of the problem in academic quality. In this discussion I will focus primarily on the evidence from the United States, because that is the system I know best. But the issues I will discuss are also visible in the countries of Europe and Asia and should therefore have more general relevance. I will then try to suggest some possible approaches to improving academic quality, first within universities and then briefly through public policy.

## Do We Have a Problem of Academic Quality?

In a recent paper analyzing the quality of undergraduate education in the US over the last thirty years George Kuh (1999) a higher education scholar at Indiana University asked the question: "How Are We Doing?" After systematically assessing the available data across all types of colleges and universities on the nature of students' academic experiences, how they spend their time, and the amount of effort they devote to academic activities known to be related to learning Kuh comes to the following conclusion:

Pundits are fond of using the familiar A through F grading scheme to evaluate the performance of the American educational system. Based on the results of this study, what grade accurately represents the quality of the undergraduate experience in the United States? .... With regard to effort, neither students nor institutions have earned anything better than a C. This level of effort falls well short of the collective commitment to excellence our students and nation need and deserve (Kuh, 1999, p. 117).

Kuh based his judgment in part on surveys of student activities conducted in a representative sample of US colleges and universities over the last two decades.<sup>1</sup> The surveys examine students' reports of their academic activities: for example, the amount of time students spent studying, the number of times that they spent five hours or more on writing a paper, the number of times that they read 10 or more assigned books. Through previous research, these particular academic activities have been identified as predictors of student learning. Kuh's analysis indicates that in all types of colleges and universities in the US students of the 1990s reported spending *less* time on learning-related activities such as attending class and studying than did their predecessors, but reported *higher* academic grades. Kuh also examined student experience in the 1990s with the three most recommended processes for promoting learning: faculty-student interaction, peer cooperation,



<sup>&</sup>lt;sup>1</sup> Kuh's research utilized the well-validated College Student Experiences Questionnaire developed by C. Robert Pace. This work subsequently led to the development of the National Survey of Student Engagement (NSSE) (Kuh, 2003).

and active learning. He discovered student reported gains only with regard to experience with student-faculty interaction, and only then in small colleges. At doctoral-granting universities the trends were in the opposite direction, toward less student-faculty interaction and less active learning.<sup>2</sup>

In fairness Kuh's analysis, based as it is on student self-report data, does not provide definitive evidence that current graduates of US colleges and universities are less able or less well educated than their predecessors. However, the general trends he notes are consistent with public perceptions that the quality of undergraduate education in the US has deteriorated. And this public concern has led to efforts over the last decade at both the state and federal level to increase the attention US colleges and universities give to the improvement of teaching and student learning (Dill, 1998). These efforts have included state initiatives to introduce greater attention to "student assessment" in the undergraduate education of public colleges and universities – "student assessment" in this context refers to more systematic means of evaluating the learning experiences of undergraduate students. These state initiatives have also included performance-based funding tied to measures of student performance as well as efforts to increase the amount of time that faculty spend on teaching. In my own state of North Carolina, for example, the state legislature has recently mandated a 10% increase in time spent teaching by faculty members in the state's research universities because of politicians' concern that university faculty are not placing a high enough priority on undergraduate instruction.

Similarly at the federal level there have been increased calls for reform of the US college and university accrediting system (Dill, 1997). In response to this federal pressure both regional and professional accrediting agencies have revised their standards and review processes to place more emphasis on academic quality and the improvement of teaching and learning (Dill, 2000a). As I noted in my introduction, these same public concerns about academic quality and consequent pressures for reform have emerged in countries as diverse as the UK, The Netherlands, Brazil, China, and Sweden.

Assuming for the moment that Kuh's analysis and the related public concern about undergraduate education have some validity, what might be the cause of the erosion of academic quality in US colleges and universities? Understanding the causes of this problem is critical, because if some new type of regulation is to be implemented, we would all prefer that it be clearly and effectively targeted at addressing the problem.



<sup>&</sup>lt;sup>2</sup> A report by the Boyer Commission, *Educating Undergraduates in the Research University* (1998) raised similar concerns.

#### The Causes of the Problem: Faculty Disengagement

Kuh himself (1999) suggests that a major reason for this apparent decline in the quality of the undergraduate learning experience in the US is what he terms "faculty disengagement." Faculty members in all types of universities have themselves become less involved in teaching and evaluating student learning. As a consequence, Kuh concludes that reversing the negative trends in student learning activities will require faculty members to invest more time in focused, collaborative efforts to improve academic quality.

What Kuh has described as "faculty disengagement" can be understood in two senses. The first and most obvious meaning of this disengagement is faculty members spending less time on teaching and more time on research and scholarship. This meaning of faculty disengagement raises interesting and troubling questions of professional responsibility and public policy. Let me briefly address these issues before turning to a second and less obvious meaning of faculty disengagement.

National surveys of faculty activity (Fairweather, 1997) in the US over the last several decades have discovered that the proportion of time faculty members reported spending on teaching had fallen and the proportion of time they reported spending on research had risen in all types of four-year institutions, including small liberal arts colleges. As Charles Clotfelter (1996) an economist at Duke University discovered in a detailed analysis of changes over time at representative departments at Chicago, Duke and Harvard Universities:

If the [three] institutions examined here are any indication, the period between 1977 and 1992 was one of gradual, but quite perceptive, change. Virtually without exception, average classroom teaching loads, measured in courses taught per year, decreased in the sample departments. Although these calculated loads by no means cover all aspects of teaching, they are suggestive of a significant movement away from teaching and toward research (p. 204).

It is important to stress that this reallocation of faculty time from teaching to research was the result of decisions made by university faculties themselves, both collectively through academic governance as well as by individual faculty members. Despite many efforts by government to influence teaching, research, and public service in the university sector, most day-to-day decisions concerning these activities are entirely in the hands of departments and faculty members themselves. This decision to lessen time devoted to teaching may of course affect the quality of teaching in an individual faculty member's classroom, but as I will suggest below, it can also negatively affect those collective faculty activities such as curriculum development, teaching evaluation, and student assessment upon which both effective student learning and the maintenance of academic standards are critically dependent.



Within the US system, this desire to limit time invested in teaching and maximize time invested in research and scholarship is certainly an economically rational decision. Research funds are awarded competitively in the US, so in many fields obtaining research and scholarly support requires investing significant amounts of time in grant submissions. Similarly faculty prestige is garnered through research and scholarship. We all know that professors are recruited from one university to another based upon their reputation in research not upon their reputation in undergraduate teaching. In short, faculty members can demonstrably raise their lifetime earnings by investing more time in their research and scholarship than in their instructional activities.

Furthermore, as recruiting for universities becomes more international and other nations adopt the US competitive grant system for the award of research funds, the problem of faculty members reallocating time traditionally devoted to instruction to research becomes more pervasive. Many countries that have expanded access to higher education over the last decade in order to provide greater economic opportunity for their citizens are becoming concerned about an observed "research drift" of their higher education systems (Dill, 1998). That is, they are discovering that *all* the faculties in their systems are adopting the norms and behaviors of the faculties in the traditional university sector. As a consequence some countries have initiated Research Assessment Schemes designed to evaluate the research quality of university departments and to limit public research subsidies to those departments that appear to be the most deserving (Dill, 1998).

Many faculty members may wish to quarrel with my presentation of these issues. After all, the current structure of academic incentives, particularly in the US, is in part a function of federal research policies. Furthermore, research also makes important independent contributions to the public interest. Therefore a faculty members' increased commitment of time to research is arguably an increased contribution to the public good. These are legitimate points, but as I have noted, at least in the US, the reallocation of faculty time from instruction to research is being carried out by faculty decisions that are sometimes invisible to the larger public and to policymakers. Since these decisions often involve the indirect reallocation of public funds, do we not have an ethical obligation to see that these policy choices are debated publicly and with full disclosure? And if we contend, as we so often do, that we are maintaining academic standards while reallocating faculty time from instruction to research, what is the evidence that supports this claim? What new internal safeguards have we implemented to assure that the quality of teaching and learning does not suffer in this process? Unfortunately the evidence from national studies of the US system by researchers in the field (Boyer Commission, 1998; Kuh, 1999) provides little support for these claims.

#### The Quality of Student Learning and Faculty Cooperative Behavior:

#### The Catch 22 Paradox

But I would like to explore a second meaning of Kuh's term "faculty disengagement," one that I believe has much more substantive implications for the organization of academic work and for public policy. Faculty disengagement is also reflective of what Bill Massy of Stanford University (Massy, Wilger, and Colbeck, 1994) calls "hollowed collegiality." By "hollowed collegiality" Massy means to suggest that while academic



departments appear to act collectively, they avoid those specific collaborative activities that might lead to real improvements in curricula and instruction.

In field research at the departmental level in US universities Massy and his colleagues (Massy, Wilger, and Colbeck, 1994) noted that faculty members readily reported participation in informal meetings to share research findings, in collective procedures for determining faculty promotion and tenure, and in consensus decision making on what particular courses should be offered each term and who should teach them. But:

Despite these trappings of collegiality, respondents told us they seldom led to the more substantial discussions necessary to improve undergraduate education, or to the sense of collective responsibility needed to make departmental efforts more effective. These vestiges of collegiality serve faculty convenience but dodge fundamental questions of task. This is especially the case, and is regrettable, with respect to student learning: collegiality remains thwarted with regard to faculty engagement with issues of curricular structure, pedagogical alternatives, and student assessment (Massy, Wilger, and Colbeck, 1994, p. 19).

A major contributor to this hollowed collegiality was a pattern of fragmented communication among faculty members within the observed departments. Not only do faculty members do much of their teaching alone, but also because disciplinary sub-fields are often defined quite narrowly, many faculty members find it almost impossible to discuss their teaching with other faculty members. The predominance of the values of individual autonomy and academic specialization appear to be leading to curricula atomization and professional isolation.

Surveys of faculty in the United States carried out by Professor Joan Stark and her colleagues at the University of Michigan (Lattuca, and Stark, 1994) have similarly revealed that disciplinary norms and standards, which used to provide a basis for cooperative curricula planning and faculty discussion of student learning, are of declining influence on faculty behavior. In many disciplines faculty members can no longer easily agree on definitions of curricula content, nor are they in agreement that specified sequences of learning content were appropriate for students. In several disciplines, faculty members expressed the belief that the field's diversity precluded achieving a consensus on what students should know.<sup>3</sup>

Here we encounter what I believe to be the central paradox of modern universities: the "Catch 22" of academic quality. The paradox is similar to that faced by Yossarian the protagonist in Joseph Heller's classic novel, *Catch 22*. Yossarian is a bombardier in the US Army Air Corps during World War II who has come to believe, with some justification I might add, that everyone is trying to kill him. Yossarian attempts to escape from combat by having himself declared insane. But the examining doctor introduces Yossarian to the "Catch 22" rule -- a man has to be declared crazy to be relieved from combat duty, but anyone who wants to get out of combat duty can't really be crazy.



<sup>&</sup>lt;sup>3</sup> A related problem is the rapid development of many new interdisciplinary programs, which by definition lack a clear tradition or shared agreement on the nature of curricula content.

The challenge of improving academic quality I believe poses a similar paradox. Collective action by faculty members to improve teaching and student learning requires evidence that an investment of an individual's time and energy in cooperative behavior with her or his colleagues is worthwhile (Dill, 1999a). But because the essential nature of academic organization and culture is highly individualized and faculty members have every incentive to pursue specialized teaching and research interests, members of academic departments have increasing difficulty agreeing on common measures of student learning. Therefore, academic units cannot accumulate evidence that cooperative action to "restructure" the curriculum and to improve student learning is beneficial.

Absent such evidence, any rational faculty member would believe that it is in her or his best interest to continue to invest precious time in private efforts at teaching or research. This is the "Catch 22" paradox of academic quality. How do we create incentives for cooperative behavior to improve student learning in an institution that is organized to encourage individual discretion in teaching and research?

#### **The Learning Organization**

I mentioned at the outset that universities in many countries are under increasing public pressure to improve the quality of teaching and student learning. If this is the case, how are these universities addressing the Catch 22 paradox? My own research (Dill, 1999b) based upon case studies in the UK, Europe, Australasia, and South America, suggests that universities are making adaptations in their academic structure, first by encouraging faculty members to engage in more active academic problem solving, second by improving accountability and communication within academic units, and third by creating new mechanisms for coordinating teaching and student learning across the university.

It is singularly ironic that a first and critical factor for improving the quality of teaching and student learning in a university is instilling a "culture of evidence" into academic problem solving. As Sir Eric Ashby so trenchantly observed almost forty years ago:

All over the country these groups of scholars, who would not make a decision about the shape of a leaf or the derivation of a word or the author of a manuscript without painstakingly assembling the evidence, make decisions about admission policy, size of universities, staff-student ratios, content of courses, and similar issues, based on dubious assumptions, scrappy data, and mere hunch (p.93).

Successful problem solving on improving teaching and student learning, particularly at the level of the basic academic unit, is highly dependent upon the quality of "social knowledge" among a relevant faculty. For members of an academic unit to develop knowledge about academic quality requires an evidence-based approach to problems and a common language of student performance. As research on the cultures of the disciplines has regularly revealed (Braxton and Hargens, 1996), the effectiveness of collective problem solving on academic issues *across* subject fields varies substantially. In faculties characterized by less structured subject fields and curricula, improvement of teaching and learning often suffers because of ideological debates about teaching and curricula, as well as from a belief that teaching is an "art" rather than a "science." Recognizing this limitation a number of universities are providing training to their academic units in the processes of evaluation and academic quality assurance. These universities have discovered that the



development of a shared norm of analytical problem solving and a university-wide language of academic performance has helped to prompt faculty members to collectively discuss and debate new knowledge for the improvement of teaching and student learning. These observations suggest that encouraging a culture of evidence-based problem solving within all academic units is a critical and often underestimated first step in addressing the Catch 22 paradox.

For academic problem solving to be successful, the structure of universities must permit faculty members to effectively coordinate the processes of teaching and student learning. Academic specialization and traditions of professional autonomy, however, often make it difficult for a faculty to work collaboratively to improve academic programs. A number of the universities that I studied had relied upon the traditional "faculty" form of academic organization. These universities are now creating new structures to better align faculty responsibility and control over instruction in subject fields. These structures include the appointment of curriculum coordinators within a faculty, the creation of faculty committees to coordinate the quality of teaching and learning within academic units, and in a number of cases, the formation of formal "schools" as a means of encouraging more cohesively designed and managed curricula.

A third organizational change is the development at the pan-university level of structures for providing more effective coordination, support, and accountability for the systematic improvement of teaching and learning. These changes include the development of university-wide faculty committees with a responsibility for auditing on an ongoing basis the quality of teaching and learning within academic units. These committees also often have responsibility for the allocation of funds supporting experiments and innovations in teaching and learning, as well as for coordinating the work of various technical units that provide support for the improvement of teaching and learning at the academic unit level. These units include teaching and learning centers, curricula and program evaluation groups, and units that provide assistance in assessing students and in surveying program graduates.

Each of these structural changes that I have mentioned – systematic problem solving, clearer linking of authority and accountability for academic curricula and student learning, and better coordination of core academic processes – can be understood as examples of a newly emerging form of organization termed "a learning organization" (Dill, 1999b). By a learning organization I mean an "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights" (Garvin, 1993, p. 80).

Current research (Dill, 1999b) on learning organizations suggests those characteristics that permit these types of organizations to survive and thrive in increasingly competitive circumstances. Of all the activities discovered to be critical to the successful development of a learning organization, the *least* in evidence in the universities I studied were processes or structures that encouraged the internal transfer of new knowledge on improving teaching and student learning. Here the deep set tradition of academic autonomy handicaps the university from making obvious improvements. This handicap is sometimes further exacerbated by a lassez faire administrative attitude toward the improvement of academic quality within colleges and universities (Dill, 2000b). Those countries such as the UK and Sweden that have systematically reviewed the mechanisms for maintaining academic standards in different academic subject fields have inevitably discovered substantial variance in the means for assuring academic quality employed across units within the same university. Some of the academic quality assurance methods used in the visited units were, in the view of the external reviewers, clearly superior to other approaches. But when these variations were revealed to deans or university administrators with authority over the relevant programs, the administrators often indicated that they were ignorant of these differences. This lack of knowledge, and in many cases lack of concern, with observed



variations in academic quality assurance processes within universities raises in my view serious questions about whether academic administrators have become so seduced by the pursuit of academic prestige that they have abdicated their responsibility to assure academic standards. But it also suggests that within most universities there are better performing units that have knowledge about improving teaching and learning from which other units could learn. This reality suggests the value to be gained by devoting managerial attention to identifying best practices in academic quality assurance within a university and assisting in the transfer of these practices to other academic units.

The actions that I have outlined above could be used as a guide to academic quality improvement at any level of a university, from a department, to a faculty, to the overall institution. But as I have suggested, the impetus for such changes has generally not come from inside academic institutions, but from external pressures for the improvement of quality assurance processes. All of the universities that I examined had been subject to such external pressures for reform. Therefore I would like to conclude with some brief observations on the design of such public policies.

## **Process-Oriented Policies on Academic Quality**

I have tried to suggest that a major cause of problems in academic quality are the incentives and values that foster individualized faculty behavior at the expense of the cooperative efforts needed to improve academic quality and maintain academic standards. If this is correct, then it is predictable that many of the public policies presently being advocated to assure academic quality are likely to be ineffective because they are aiming at the wrong problems. This is particularly likely to be the case with accreditation systems that focus on the quality of university inputs rather than on core processes and academic outcomes, efforts to regulate faculty workloads, rating and ranking systems that assess academic quality based upon faculty and university prestige, and performance funding systems tied to traditional measures of university productivity. Instead, I believe public policy on academic quality needs to be process-oriented -- focused on strengthening the processes within academic institutions whereby the faculty collectively and within academic units exercise their responsibility for maintaining academic standards.<sup>4</sup>

There are a number of countries that have implemented such process-oriented academic quality policies (Dill, 2000b). These process-oriented policies have different names, but have certain characteristics in common. First, these policies presume from the outset that the maintenance of academic standards is primarily the responsibility of university faculty, but that universities must be held publicly accountable for meeting this responsibility. Second, the policies feature external reviews by peer groups of the processes that universities have in place for assuring the quality of student learning and the standards of their degrees. Third, the reviews are not directly tied to funding, but evaluate and provide public reports on the quality assurance processes by which colleges and universities exercise their responsibility to ensure academic standards and improve the quality of their teaching and student learning.



<sup>&</sup>lt;sup>4</sup> For an extensive an informative analysis of process-oriented quality assurance approaches, see Massy, 2003).

Independent evaluations of these quality assurance policies (Dill, 2000b) in the UK, Sweden, Hong Kong, and New Zealand have revealed the following points:

- Process-oriented quality reviews made improving teaching and student learning an institutional priority. The public nature of the review process and the publication of the quality reviews placed improvement of the processes designed to assure and improve the quality of teaching and student learning firmly on the agenda of each institution, in many instances for the first time. Many of the reviewed institutions responded to their published reports by noting that the recommendations suggested by the reviewers were "already underway," but the evaluations indicated that many of the changes in institutional policies and structures would not have been implemented without the external pressure of the quality reviews.
- Process-oriented quality reviews facilitated active discussion and cooperation within academic units on means for improving teaching and student learning. All of the evaluations noted that faculty members at the departmental level reported increased collegial discussion and cooperative activity on improving academic quality as an outcome of the quality reviews. This was particularly the case in the Swedish and Hong Kong versions of the process-oriented reviews, which encouraged both institutional and departmental responses to the reviews.
- Process-oriented quality reviews helped to clarify responsibility for improving teaching and student learning at the academic unit, faculty, and institutional level. The reviews frequently clarified that departments, faculty bodies, and institutional leadership each have a responsibility for developing and implementing active quality assurance processes for monitoring and improving teaching and student learning.
- Process-oriented quality reviews provided information on best practices both within and across institutions. The review process revealed to administrators, often for the first time, that there were identifiable "best practices" of academic quality assurance within their own institutions that could be transferred across departments and faculties as a means of academic improvement. At the inter-institutional level the UK Quality Assurance Agency has developed a formal "quality enhancement" function designed to disseminate throughout the higher education system best practices uncovered through the academic quality reviews.

Thus I believe these process-oriented policies on academic quality assurance have a substantial potential for addressing the Catch 22 paradox of academic quality, because they are most likely to help restore the



internal web of academic accountability within universities by which academic standards and the quality of student learning are most likely to be assured.



#### References

- Ashby, E. (1963) Decision Making in the Academic World. In Halmos, P. (ed.), *Sociological Studies in British University Education*, pp. 93-100. Keele: University of Keele.
- Boyer Commission on Educating Undergraduates in the Research University (1998) *Reinventing Undergraduate Education: A Blueprint for America's Research Universities.* Stony Brook, New York:
  State University of New York at Stony Brook.
- Braxton, J. M. And Hargens, L. L. (1996) Variations Among Academic Disciplines: Analytical Frameworks and Research. In J. Smart (ed.) *Higher Education Handbook of Theory and Research*, vol. XI, pp. 1-46. New York: Agathon Press.
- Clotfelter, C. T. (1996) *Buying the Best: Cost Escalation in Elite Higher Education*. Princeton: University Press.
- Dill, D. D. (1997) Accreditation, Assessment, Anarchy?: The Evolution of Academic Quality Assurance Policies in the United States. In J. Brennan, P. De Vries, and R. Williams, (eds.) *Standards and Quality in Higher Education*, pp. 15-43. London: Jessica Kingsley.
- Dill, D. D. (1998) Evaluating the "Evaluative State:" Implications for Research in Higher Education. *European Journal of Education*, *33*(2) 361-377.
- Dill, D. D. (1999a) Student Learning and Academic Choice: The Rule of Coherence. In J. Brennan, J. Fedrowitz, M. Huber, and T. Shah (eds.) *What Kind of University? International Perspectives on Knowledge, Participation and Governance*, pp 56-70. Buckingham: Open University Press and Society for Research into Higher Education.
- Dill, D. D. (1999b) Academic Accountability and University Adaptation: The Architecture of an Academic Learning Organization. *Higher Education*, 38(2): 127-154.
- Dill, D. D. (2000a) Is There an Academic Audit in Your Future?: Reforming Quality Assurance in US Higher Education. *Change Magazine*, 32(4): 35-41.
- Dill, D. D. (2000b) Designing Academic Audit: Lessons Learned In Europe And Asia. *Quality in Higher Education*, 6(3): 187-207.
- Fairweather, J. (1996) Faculty Work and Public Trust: Restoring the Value of Teaching and Public Service in American Academic Life. Boston: Allyn & Bacon.
- Garvin, D. (1993) Building a Learning Organization. *Harvard Business Review*, 71(4): 78-84.
- Heller, J. (1961) Catch-22. New York, Dell Books.
- Kuh, G. D. (1999) How are We Doing? Tracking the Quality of the Undergraduate Experience, 1960s to the Present. *The Review of Higher Education*, 22(2): 99-119.
- Kuh, G. (2003) What We're Learning About Student Engagement from NSSE. Change, 35(2): 24-32.
- Lattuca, L. R. and Stark, J. S. (1994) Will Disciplinary Perspectives Impede Curricular Reform? *Journal of Higher Education*, 65(4): 401-426.
- Massy, W. F., Wilger, A. K., and Colbeck, C. (1994) Overcoming Hollowed Collegiality. *Change*, 26(4): 10-20.
- Massy, W. F. (2003) *Honoring the Trust: Quality and Cost Containment in Higher Education*. Bolton, MA: Anker Publishing.
- Pascarella, E. T. (2001) Identifying Excellence in Undergraduate Education: Are We Even Close? *Change*, 33(3): 19-23.

