METRICS FOR EFFICIENCY AND EFFECTIVENESS
IN HIGHER EDUCATION:
COMPLETING THE COMPLETION AGENDA

Session Four
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The efficiency and effectiveness of America’s colleges and universities has become a major issue for policymakers in this time of constrained resources. A penny saved through better efficiency and effectiveness is a penny that can be used to further another worthwhile objective, either within the higher education sector or for the taxpayers generally. This is consistent with the philosophical argument that efficiency in pursuit of worthy causes should be viewed as a moral goal because such efficiency is the antithesis of waste, which is “manifestly immoral.”  \(^1\)

NGA’s “Completion Agenda”\(^2\) proposes reliable and comparable Outcomes and Progress Metrics to enable better tracking of degree and certificate completion. NGA is now in the process of developing Efficiency and Effectiveness Metrics that include, among other things, cost and quality. It is expected that these metrics will complement the findings of Lumina Foundation’s Productivity Metrics Working Group and the National Research Council’s Panel on Improving Measurement of Productivity and Higher Education.\(^3\)

My purpose in this paper is to discuss efficiency and effectiveness metrics on certain key principles and issues. I’ll cover the following topics: (1) terminology; (2) design considerations; (3) quality matters; and (4) policy development.

**Terminology**

Policymakers and university leaders now recognize the importance of performance metrics. What is less well recognized are the important distinctions among productivity, effectiveness, cost per unit of output, and efficiency. These tend to be used interchangeably, but the resulting confusion has led to a proliferation of overlapping and sometimes-inconsistent proposals. The result is a defocused measurement agenda, more difficult benchmarking, unnecessary resistance on the part of institutions and professors, and more risk of unintended negative consequences.

The problem of terminology is particularly important when, as in the present case, some of the terms are heavily value-laden. More is always better when talking about productivity, effectiveness, and efficiency, but this is not necessarily true for many of the metrics being discussed under these rubrics. Compare productivity with time to degree, for example. Knowing that a university has low productivity automatically signals the need for improvement, whereas lengthy times to degree may or may not indicate a problem. The longer time to degree may be driven by student characteristics or part-time attendance, which stem from institution’s mission and student access goals, rather than any inadequacy in performance.

To avoid confusing the situation further, it’s important that NGA adopt clear terminology that is consistent with best professional practice. Furthermore, the organization’s effort
presents an opportunity to educate higher education institutions and stakeholders about performance measurement.

Productivity v. Effectiveness

Universities and their faculty believe they have high “productivity” when students learn what’s intended and research receives positive peer reviews – in other words, when they are effective in producing outputs desired by stakeholders.

Economists and those responsible for allocating public resources, on the other hand, use a different definition: the “ratio of outputs to inputs.” Institutions that waste resources may be very effective (though not as effective as they could be) but they are not productive by the economist’s definition.

The confusion may stem from the fact that dictionaries offer two definitions for “productivity.”

Productivity:

Productivity [special usage]:
“Effectiveness, especially in industry, as measured in terms of the rate of output per unit of input.” (New Oxford American Dictionary, Second Edition, 2005)

The special usage definition is the one used by economists.

It’s no wonder that universities and economists/resource allocators often talk past each other. The former seek more resources in order to become more “productive” by the first definition and the latter focus on the special usage definition as they try to get more “bang for the buck.” In all cases, of course, it’s necessary to add the caveat that the outputs being produced are the ones actually desired by stakeholders. From now on I’ll refer to the first dictionary definition as effectiveness and the special usage definition as productivity, and I urge the working group to do likewise.

Productivity v. Unit Cost

Common sense suggests that high productivity means the same as low unit cost but, once again, economists have adopted a more nuanced view. They define productivity as the ratio of physical quantities: i.e., units of output divided by units of input. In higher education we can use credit hours and/or degrees or certificates awarded as outputs, and faculty/staff FTEs plus physical capital usage and purchased products and services as inputs. Technology, know-how, and plant and equipment determine the productivity ratio’s maximum possible value at any given
time. An organization or industry is said to be “fully productive” if it achieves this maximum value.

In its pure form, the productivity ratio does not involve dollars in any way. It is a purely technical concept. Price changes have no bearing on productivity in the short run because they do not affect the technical relationships. Relative prices may be used as weights for aggregating multiple outputs and/or inputs, as in the aggregate dollar value of purchased products and services (discussed below), but the underlying model remains in the domain of engineering rather than cost accounting. Therefore, productivity metrics are designed so their weights change slowly if at all: e.g. by using smoothed rather than current input prices as the basis for aggregation.

Estimates of cost per degree or enrollment, on the other hand, are intended to change with each shift of input prices. We’ll see that unit cost provides a measure of efficiency, but this doesn’t allow one to judge productivity because constantly-changing prices mask the underlying technical relationship between inputs and outputs. The implication is that productivity measurement should not be regarded as an extension of cost accounting. For example, the Delta Project on Postsecondary Education Costs, Productivity, and Account-ability\(^5\) analyzes unit cost but does not measure productivity as such. We need both productivity and cost metrics but it’s important not to confuse the two.

**Productivity v. Efficiency**

I noted above that the productivity ratio combines inputs using constant or near-constant weights, whereas unit costs are calculated using current prices. Now suppose that input prices change, so one can substitute a lower-cost input for a higher-cost one with the same productive capacity. Failure to exploit the change will make unit costs larger than necessary, which will reduce “efficiency” even though the technical methods of production (and thus “productivity”) remain constant.

Such inefficiencies can be corrected by changing the labor mix, outsourcing some activities, smarter purchasing, and the like, whereas productivity improvement requires innovation of a more fundamental kind. Productivity improvement requires the identification and adoption of unfamiliar practices or, even more difficult, the invention of new practices. This is why unit costs usually change more frequently and rapidly than productivity statistics.

Why should policymakers care about the distinction between productivity and efficiency? The main reason is that measures like cost per credit hour and cost per degree mask the more fundamental relationships associated with productivity. One can’t know, for example, whether cost movements are caused by price changes, productivity changes, or a combination of the two. The distinction is crucial. State and federal policies should
encourage universities to make the innovations needed to become more productive, but progress can’t be tracked without a proper measure of productivity. It may be, for example, that productivity is in fact improving but this is obscured by price escalation. Alternatively, institutions may claim that cost increases are caused by price escalation when in fact they stem from falling productivity.

NGA’s Metrics
It is instructive to review NGA’s proposed metrics in terms in light of these concerns. In the “Common College Metrics” paper, I would say degrees and certificates awarded, enrollment in remedial education, success beyond remedial education, success in first-year college courses, credit accumulation, and course completion are, arguably, effectiveness metrics. Graduation rates, transfer rates, time and credits to degree, and retention rates, though useful for policy purposes if applied carefully, are not proper measures of effectiveness, efficiency, or productivity. As NGA sets out to establish efficiency and effectiveness metrics, I would observe that measures such as degrees relative to the needs of the labor force certainly reflect effectiveness. However, measures such as degrees and certificates awarded relative to enrollment and cost per completion capture important information elements that will be needed in constructing productivity and efficiency measures, but by themselves they can’t serve as such metrics without additional information. I’ll say more about this in the next section.

Design Considerations
Productivity and efficiency measurement in nearly every industry must cope with the problem of multiple inputs and outputs. Products come in different sizes and quality levels, for example, and there are different kinds of labor and raw materials. The same is true in service industries, of which higher education is a quintessential example. Decades of economic analysis and practical experience with productivity measurement have yielded good ways of dealing with such complexity.

I’ve already noted that productivity measurement is, at root, a physical rather than a financial concept and that weighted “market baskets” of physical units are used to combine multiple outputs and/or inputs. The key idea is that, for outputs, the weights reflect relative value to end users and, for inputs, relative value in production – values that are likely to change slowly if at all. Schemes with constant or near-constant weights ensure that changes in the productivity metric will be attributable to production methods and capital deployment rather than, as in the efficiency metric, to a combination of productivity and price changes.
Output Measures
The first step in metric design is to agree on the physical output and input units to be considered. The two prime output candidates in higher education are credit hour production and degrees or certificates awarded. These two quantities must be combined into a single, comprehensive, measure of output that reflects the value of what colleges and universities produce. Unfortunately, some of the more popular measures fail to do that. Looking only at degrees and certificates, for example, ignores the educational value of the learning acquired on route to the degree – which is inconsistent both with common sense and the results of labor force studies. Likewise, looking only at credit hours produced will ignore the very real benefit of attaining the credential. It’s likely the weights will have to be determined, at least in part, by applying some kind of judgment. Making such judgments is difficult in a politically-charged environment, but failure to do so guarantees a wrong answer by asserting that the value of one of the two output components is zero. Either answer risks significantly distorting incentives.

Outputs at different levels, such as associate, bachelors, and first professional degrees, need to be differentiated, as do the various kinds of institutions (two-year, four-year, etc.) that make the awards. The data also should control for the field in which the award is made, so that enrollment shifts between high and low cost fields will not be confused with productivity changes. Student transfers to other schools should be reflected in outputs for individual institutions, but these inter-school transactions will be consolidated out for the sector as a whole and even, in some cases, for individual states.

Input Measures
On the input side, the prime candidates are FTE faculty, other teaching staff, other professional staff, other exempt and non-exempt staff, purchased materials and services, and physical capital usage. Once again, these must be combined using some kind of weighting scheme. For productivity, the weights should be the same for institutions of the same type as well as relatively constant over time. For unit costs one can use current prices – either averaged over institutions of the same type or for particular institutions, depending on the purpose.

I said earlier that productivity calculations don’t fall under the rubric of cost accounting, but there is one sense in which accounting methods are required. While many colleges and universities produce research as well as instructional outputs, discussions of productivity and unit cost focus mainly on the instructional domain. There are some good reasons for this. One can measure enrollments and degrees with reasonable reliability and validity, but it’s difficult to do the same for research outputs. (I have built models based on publication counts and citations, for example, and can testify that the approach is fraught with difficulty.) Furthermore, most
states are more interested in the productivity of instruction than of research. Probably this is because most research is funded by the federal government and foundations, with the residual being viewable as a byproduct of the educational process.

Cost accounting can separate the inputs that go to instruction and research. Faculty FTEs charged to grants and contracts should not be included as inputs to education, for example, and university overheads should be allocated as well. Expenses attributable to the so-called “departmental research” function (which isn’t segregated in University accounting systems) present some special issues that are beyond the scope of this paper, but they aren’t showstoppers. Despite the fact that cost accounting may be used to allocate inputs among the University’s various “product lines,” the allocated inputs are considered to be physical quantities, not costs, for purposes of productivity measurement.

Other Considerations
While the lists of output and input data may seem daunting, one must keep in mind that they are only intermediate variables. The finished productivity metric will combine the data into just two statistics: the weighted sum of outputs and the weighted sum of inputs. (The National Research Council Panel on Measuring Higher Education Productivity, due to report in 2011, will describe how the calculations might be accomplished.) Cost per unit of output is computed by dividing the weighted output measure by the weighted sum of inputs using current prices as weights. The two metrics are designed to further different objectives, both of which are important.

To be meaningful, the metrics should be calculated separately for each type of institution and then aggregated to the state level and the sector as a whole. Controlling for institutional type is necessary because of differences in mission and student characteristics. For example, institutions that must do significant remedial teaching will have lower productivity ratios than those that admit only students with strong academic qualifications, even though both may be operating with maximum effectiveness and efficiency. Failure to control for these differences will make the statistics meaningless and, worse, will distort resource allocations.

Comparing the productivity and unit cost data within institutional categories will provide policymakers with a sense of why costs are changing as they are, and whether the institutions are in fact responding to productivity-enhancing incentives.

Quality Matters
The quality of education is the “elephant in the room” in most discussions of college and university performance. Many schools and professors believe the very ideas of productivity and efficiency are somehow antithetical to quality, but nothing could be
further from the truth. The developers of such metrics definitely need to control for quality in some way, because failure to do so will produce even worse consequences than a poor selection of quantitative input or output measures. Institutions and professors are right to resist “productivity” measurement programs that turn a blind eye to quality. On the other hand, the well-known problems of quality assessment in higher education should not be used as an excuse to downplay the productivity and efficiency metrics. How can we square the circle?

Prices as Proxies for Quality
The most widely used approach is to adjust inputs and outputs by their relative market prices. Prices can serve as measures of value when the transactions that generate them occur in well-informed competitive markets, but it’s hard to argue that prices in uncompetitive or poorly informed markets reflect the kind of value information needed for weighting productivity and efficiency metrics.

The issue of poor or incomplete information is particularly problematic in higher education. For one thing, the price umbrella provided by highly selective private universities and the widely varying state policies and subsidy levels that apply to the public ones hopelessly distort the market’s ability to reflect differences in output quality through prices. The ability of selective institutions to charge high prices stems more from scarcity and reputation derived from research than the actual delivered quality of education for the majority of students. Prices on the public side are heavily conditioned by state subsidies and tuition ceilings, coupled in many cases with missions that value access over selectivity. Whatever one’s political and philosophical beliefs about the efficacy of markets in general, the facts in higher education severely limit the use of market prices as surrogates for the value of output.7

The situation is better on the input side, but distortions occur there as well. The salaries of professors versus student teaching assistants and “casual-payroll” adjunct faculty provide a good example. While the situation is complex, it seems likely that the difficulty of measuring relative teacher effectiveness plus professorial influence in university governance prevent salaries from reflecting marginal productivity. Despite the problems with input prices in higher education, however, it does seem reasonable to use them as proxies in defining the relative values of different kinds of labor.

Direct Quality Measures
An alternate approach is to measure quality directly and use the results to adjust the inputs and outputs. Outputs are adjusted to reflect their relative values to users and inputs are adjusted to reflect their relative values in production. Institutions or groups of institutions could define their own output-quality measures, but this would complicate the comparison of productivity and efficiency statistics. Therefore, national quality metrics
will have to be developed before direct quality adjustments can be made comparable across states and thus used for benchmarking and accountability.

Efforts to develop output-quality measures have resulted in metrics like the Collegiate Learning Assessment (CLA), The National Survey of Student Engagement (NSSE), the ETS Proficiency Profile, ACT’s CAAP, and certain discipline-based testing regimens. These have been embraced by the Voluntary System of Accountability (VSA) and they are starting to prove useful within institutions, but there is little likelihood that a consensus on “reliable and comparable” (to use the NGA’s terms) output quality metrics for whole institutions, states, and the nation will emerge anytime soon. This need not be fatal for productivity and efficiency measurement and accountability, however, as will be described in the next section.

Policy Development

Recognizing the aforementioned difficulties, one of the options left for NGA is to address quality only insofar as it can be captured by indicators of labor market demand, while encouraging states to engage the issue of measuring student learning outcomes. Although this conclusion is understandable, I believe it doesn’t fully address the issue. Unfortunately, the universities’ track record doesn’t lead one to be optimistic about their ability to maintain quality in the face of countervailing forces without a significant change in public policy. The NGA has an opportunity to influence such a policy change.

Universities have demonstrated their ability to manage quality when funding increases but there is reason to doubt their effectiveness when—as is so often the case today—funding declines. Such situations call for doing more, or at least as much, with less money: i.e., for the improvement of productivity and efficiency. But the lack of direct quality measures coupled with flaws in the higher education marketplace raise the specter that institutions will simply “do less with less”—by cutting back on quality if they are unable to reduce student numbers. There is much anecdotal evidence that, because reform and reengineering are exceedingly difficult in traditional universities, this does indeed happen in a great many cases.

As when coping with budget cuts, the easiest way for universities to maximize unadjusted output per unit of input and minimize cost per credit hour is to let quality slide – not overtly, perhaps, but in dozens of little ways that accrete over time. Greater emphasis on productivity and efficiency metrics, however laudable, is likely to worsen the situation.

The answer is not to deemphasize productivity and efficiency metrics, but rather to supplement them. Specifically, we need to couple the further deployment of quantitative productivity and efficiency metrics with a robust externally-driven procedure for “looking under the hood” of university quality assurance and improvement processes to
ensure not only that institutions are “doing the right things” but also “doing them right” or at least working diligently toward improvement.\textsuperscript{10}

Such an approach would convert the “quality problem” from one of designing formulas for adjusting productivity and efficiency metrics (which, as noted above, is a daunting task) to a constraint on how the metrics are used. It would sidestep the need for quantitative output-quality adjustment, at least for the time being, without simply kicking the can down the road.

**What States Can Do**

How could governors enforce such a quality constraint? The NGA’s outcome and progress metrics can provide clues about whether quality is being maintained, but the evidence will at best be indirect. Reports from the institutions can’t be considered probative either, partly because the tendency to spin always is present and partly because institutional leaders may not know whether rank-and-file academics are seeking out, adopting, and continuously improving on best practice as applicable to their fields. In my experience, presidents and provosts truly believe their faculty are on the cutting edge of quality provision when departmental practice is in fact mediocre— a misperception that limits their ability to report accurately and, even more importantly, to drive change within their institutions.

There is a straightforward way to get the needed look under the hood. Doing so does not involve rocket science, and the process need not be intrusive or expensive for either the state or the institutions. The approach goes by a variety of names, of which the most descriptive is “academic audit.” It has been applied over the past two decades in Australia, Hong Kong, the UK and Sweden,\textsuperscript{11} and in the USA by the Tennessee Board of Regents and to some extent the University of Missouri system and the professional and regional accreditation agencies. Governors could charge their state higher education executive officers (SHEEOs) with implementing academic audit, either directly with state resources or by outsourcing – perhaps to the accreditation agencies.

**Academic Audit**

Audit works like traditional accreditation except (and this is a big difference) that the questions focus on how institutions assure and improve educational quality, especially for undergraduates, rather than of their capacity to achieve quality or assertions that it has in fact been achieved.\textsuperscript{12} Great emphasis is placed on specificity: e.g., the identification of examples of what departments have done, how they’ve done it, what the results have been, and how they have been used (or not used) to generate improvement. Other questions explore student learning assessment policies, the institution’s outcomes measures and data systems, and (importantly) how the chief academic officer holds the
deans accountable for insuring departments are paying the right kind of attention to quality. Unsupported statements that research begets education quality and professors “know quality when they see it” are not acceptable.

The process starts with a self-study, followed six to nine months later by a visit from the audit team. The process is guided at every stage by protocols that describe what’s meant by education quality assurance and improvement, benchmarking, student learning assessment, and (in a fully modern approach) cost and productivity. Further protocols describe how the self-study should be constructed and how the team will conduct the visit. (Unlike many accreditation and program review exercises, careful team training is a “must” for audit.) Augmenting audit's data collection role is a mantra that it should be supportive of institutional initiatives wherever possible (i.e. it should be formative as well as summative) and that respondents should find the process useful. The experience in Tennessee, Hong Kong, and Australia demonstrates that these objectives can be achieved.

Academic audit shares the fundamental characteristics of financial audit, although the word “audit” also carries negative connotations (“I’m from the IRS …”). Auditors aren’t allowed to substitute their judgment on qualitative matters for that of the institution and its faculty. For example, they might cite a lack of clear educational goals or evidence about the quality of outcomes, but they would not pass judgment on whether teaching was good or bad. They might question an institution’s ignorance about or refusal to consider manifest good practice but, so long as such consideration appeared diligent, they would not second-guess the judgments stemming it. Such examples are analogous to financial audit. Such audits include tests of whether reporting practices meet “Generally Accepted Accounting Principles” (GAAP) – tests that do not substitute auditor for management judgment providing the broad principles are met.

The cost of academic audit is manageable because the self-study need not be particularly long or involved and the audit visit need not exceed a few days. (Both require a smaller commitment than the typical accreditation exercise.) Institutions don’t have to collect reams of data or perform detailed analyses and auditors don’t have to pore over lengthy arguments and exhibits. Instead, the auditors simply ask what the institution does or should do routinely as part of its ongoing operations. Audit’s probative power and parsimony stem from the fact that respondents find it difficult to sustain a coherent story about something that isn’t happening in the face of focused questioning.

The Way Forward
I mentioned that parts of the audit methodology have been adopted by some regional and professional accreditation agencies. This provides a good platform on which to build, but I believe a more comprehensive approach is needed. Such an approach would develop and propagate a nationwide (eventually worldwide) set of “Generally Accepted
Education Quality Principles,” analogous to GAAP, for colleges and universities, together with protocols and a body of expertise for auditing performance against these principles. States could outsource the audits to their regional accreditation agency, providing the agency meets stated requirements for content, consistency, and transparency.13

The short run objective would be to extend the NGA’s completion agenda as described earlier. In the longer run, academic audit would spur institutions to develop and report outcomes and progress measures that are both appropriate to their missions and comparable across institutions with similar missions. Once such measures are in hand, a continuing role of audit would be to assure governors, legislators, and the public, that the data mean what they purport to say – just like financial audits assure stockholders that a company’s financial reports accurately reflect reality.

Moving from our current fragmented system of quality assurance to a more comprehensive one will not be easy, but it seems to me that state governors are in a good position to further the effort. They “own” and help finance their states’ public universities and in some cases fund scholarships for private ones. Hence they can legitimately seek to influence the sector. Furthermore, action at the state level does not carry the baggage of federal action. I hope the working group will think seriously about whether to recommend such an approach – to “complete the NGA’s completion agenda.”

Endnotes


3 I serve on the NRC panel, which operates under a grant from Lumina Foundation and is expected to report in 2011.

4 “Resource diversion” from teaching to research can be a problem in universities, but that is beyond the scope of this paper. See, for example, Chapter 4 of William F. Massy, Honoring the Trust: Quality and Cost Containment in Higher Education (Anker/Jossey Bass, 2003).


6 See for example the Delta Project and Office of Management and Budget (OMB) Circular 8-21.

Weakly monitored delegation of quality assessment responsibility to the universities was tried in the so-called “assessment movement,” which generally has been regarded as disappointing (Massy (2003, chapter 8). See also my reference to the “dog that isn’t barking” in William F. Massy, “Creative Paths to Boosting Productivity” (in Reinventing the American University: the Promise of Innovation in Higher Education, American Enterprise Institute and Harvard Education Press, forthcoming in 2011).

Two examples illustrate these concerns. The first is a recent news report that described how a microeconomics course was being delivered to students via streaming video in their dormitory rooms. Streaming and archiving lecture material may be a good idea, but in this case it was aimed at accommodating a huge demand with minimal resources and existing teaching methods, not a course redesign aimed at improved learning. There is reason to believe it will generate less student involvement and thus less or shallower learning, yet the method will show up as a big reduction in cost per credit hour. A second example is the English department at a campus I visited recently, which showed a similarly large decrease in unit cost. Administrators and, I presume, state government officials were delighted. What I found by looking at departmental operations was a pattern of increased class size and use of adjunct faculty, less interaction between faculty and students, a drastic reduction in the number and depth of writing assignments, and conversion from essay to multiple choice examinations. This was in an English course, where the changes could in no way be reconciled with any reasonable interpretation of educational mission and goals.

A new study by McKinsey and Company, sponsored by the Gates Foundation, illustrates the potential for improvement (“Winning by degrees: the strategies of highly productive higher education institutions,” McKinsey and Company, November 2010.) Using IPEDS and other sources, the researchers stratified two-and four-year institutions according to their unit costs. They found that top-quartile institutions cost 17-38% less than the average of all institutions in their category and the bottom quartile cost about 10-20% more than their average. Then, through site visits and the study of documents, they analyzed eight of the high-performing institutions to learn what makes them so productive. While finding no “silver bullet” for productivity, the findings identified five practices that contribute significantly to it: (i) promoting higher degree productivity; (ii) reducing non-productive credits; (iii) redesigning the delivery of instruction; (iv) reengineering core services, and (v) shrinking non-core services whenever the institutional mission allows. Delivering on these practices required creation of new and streamlined operating processes, upgraded formal management systems and structures, attention to attitudes and behaviors that determine faculty/staff commitment to productivity, and in some cases the removal of barriers to productivity created by Federal, state, and systems policies. These results are consistent with experience at the National Center for Academic Transformation (NCAT), which has worked on course redesign with 150 institutions since 1999. NCAT found that, on average, costs were reduced by 37% in redesigned courses, with a range of 9 to 77%, while learning outcomes improved in 72% of cases with the remainder showing no learning degradation (Carol A. Twigg, “Improving Quality and Reducing Costs: the Case for Redesign,” Lumina Foundation, 2005, pp. 46, 48). Despite these successes, however, it remains difficult to generate interest in course redesign within most institutions.

Because the UK and Swedish approaches have been plagued by politics, they have experienced a series of starts, stops, and changed directions. This has resulted in some negative perceptions, especially on the part of academics, that are not applicable to the audit methodology described here.
12 For a detailed description see William F. Massy, Stephen W. Graham, and Paula Myrick Short, *Academic Quality Work: A Handbook for Improvement* (Anker/Jossey Bass, 2007). Readers that material will see that audit can readily ascertain whether an institution is doing the kinds of things McKinsey and NCAT have identified as being important.

13 The usual accreditation cycle of ten years between visits is too long for academic audit. However, a state could fill in with its own audit half-way between the accreditations. This would have the added advantage of keeping the SHEEO involved with institutional quality on a first-hand basis. Another requirement, alluded to in the text, is that the accreditation report be made public.