On the Use of Performance Indicators in Japan's Higher Education Reform Agenda

Darrell R. LEWIS*
IKEDA Terumasa**
Halil DUNDAR***

<Outline>

This paper explores the use of performance indicators as the principle mechanism for assessing accountability in the reform of higher education in Japan. We review the (a) historical arguments in Japan for employing performance indicators and the uses of such indicators elsewhere in the world, (b) factors calling for their use and the notion of accountability in higher education, (c) nature, concerns and controversies with performance indicators in higher education, (d) reality that performance indicators often lead to performance funding and the use of government budgets as policy tools, and (e) problematic issues in performance-based funding. All of these dimensions have important implications for the current scene in Japan.

1. Introduction

In Japan, after more than 15 years of discussion and debate between faculty, administrators and appointed officials within the University Council and the Association of National Universities, and

*Professor, College of Education and Human Development, University of Minnesota
**Professor, Center for the Studies of Higher Education, Nagoya University
***Education Economist and Project Manager, The World Bank

within the national Ministry of Education, Science, Sports and Culture [MESSC], the use of performance indicators has finally arisen within the context of assisting reformation of the higher education system. With the beginning of the 21st century it has been proposed that each higher education institution in the country will develop appropriate "self-monitoring and self-evaluation" materials, procedures and reports. Yet, little has been said about what criteria will be used, what performance will be monitored and assessed, what purpose(s) will be served, and who will do such monitoring and assessment. Much discussion has arisen with respect to the needs for reform in the context of decentralization and the needs for greater independence and flexibility for each of the public national universities (MESSC, 1995, 1999; University Council, 1998), as well as how to improve and restructure the curriculum, instruction and research infrastructure (MESSC, 1997), but little attention has been given to how one goes about conducting the process in Japan and for what purposes. This paper is intended to help in answering these questions.

2. Historical Arguments and Context in Japan

Since the mid-1980s there have been essentially two basic arguments for decentralizing and deregulating the national public universities in Japan. The first has been the argument that such decentralizing with appropriate public accountability will lead to improved quality by introducing direct market competition from the many private schools already operating outside of governmental support and much regulation. This argument has not only been coming from the private sector of higher education, but also from the executive branch of the national government. Even an advisory group of economists recently published a report under the auspices of the national Economic Planning Agency supporting greater privatization of the public national universities. They argued that more market competition between the national public and private

universities, along with more transparency and accountability, would be essential for improving the quality of Japanese higher education (Yonezawa, 1998).

A second related argument for greater decentralization and accountability emphasizes the necessity to make information on the quality of universities available for more informed consumer choice and decision-making. In brief, both arguments are being made so as to induce greater effort in the public universities towards quality enhancement and greater information available to consumers about such quality. Obvious in both of these arguments is the need for more and better information about the outcomes resulting from the public universities. So, the question really swings around what it is that needs to be reported and who makes judgments about this performance in Japan.

In 1986, following recommendations by the National Council on Educational Reform, the MESSC established a national University Council as an advisory group of experts that included representatives from the universities, industry and labor unions. In the context of earlier admonitions about the need for the public national universities to become more independent and self-reliant, the University Council recommended the introduction of a "self-monitoring and self-evaluation" system for all of the higher education systems, including the national public, local public, and private schools. The council argued that continuous self-monitoring and self-evaluation would be essential for revitalizing universities and for ensuring that universities were fulfilling their public responsibilities (Yonezawa, 1998). These recommendations were first put into effect in the 1991 MESSC regulations on Standards for the Establishment of Universities that required universities to make efforts to enhance and maintain self-evaluation systems for teaching and research.

Further urgings for self-monitoring and self-evaluation were again made within MESSC's report in 1995 on university reform. Under this mid-1990s system, both internal and external assess-

ment programs were to be designed and carried out by each individual institution. The University Council strongly supported this set of requirements and judged it to be consistent with institutional preferences for academic freedom and autonomy. The latest MESSC (1999, p. 17) report has estimated that by October, 1998 at least 533 (or about 86 percent) of the country's 622 universities were "involved" in some way with "self-monitoring and self-evaluation," but only 15 percent had introduced some form of external assessment (Yonezawa, 1998). Although the Japan University Accreditation Association had published guidelines for such self-assessment in 1991 and had in place a "voluntary external evaluation program" in 1996, most of the leading universities chose to design their own unique approaches and only a few of the universities elected to submit themselves to external assessment. It appears that almost everyone in Japan's higher education supports advancing quality and is even willing to participate in self-evaluation, but few wish to have their institution submitted for external assessment and review.

As calls for the "privatization" of the public national university system continue to arise in both the private sector and the national committee charged with making recommendations for restructuring the national government, the MESSC and the Association of National Universities have come out strongly opposing these recommendations. Now, in the past year in response to these renewed concerns about public higher education in Japan, both the ministry and the University Council have come forward with plans for developing a more systematic evaluation and quality assurance program for all of public higher education. Moreover, the University Council has recently recommended the establishment of a new centralized assessment agency that would gather and publish data necessary for making comparisons between both public and private universities independent of both the MESSC and individual universities.

The University Council (1998) consistently has been calling for

increasing the ability of each university to "independently respond to changes" --i.e., to become more independent, more autonomous, and more deregulated from central governmental agencies, but they have not called for the total "privatization" of the public national universities as some outside of the universities had hoped they would. They likewise have called for the establishment of an evaluation system conducted by third parties independent of both universities and the MESSC, and for greater institutional independence such that individual presidents could provide appropriate decision-making and implementation strategies within their respective institutions. They have also extended a call for greater evaluation of the "educational activities" and "research activities" of each program and university. Most important, they have argued "universities, as a part of society, must further inform the public of their activities...(and) should appropriately allocate resources in a more objective and transparent way on the basis of detailed information on evaluation." Nothing could be clearer. Japan needs an appropriate set of performance indicators and publication mechanisms for reporting to the public on the outcomes of its universities.

3. Historical Use of Performance Indicators Elsewhere in the World

Higher education over the past twenty years has had difficulties not only in Japan but across the world as well. It has come under intense scrutiny over the past two decades as the general pressures for institutional quality, accountability, productivity, and affordability have increased (e.g., MESSC, 1995, 1999; Gaither, Nedwek & Neal, 1994; Borden & Banta, 1994; Layzell, 1996; Cave, Hanney, Henkel & Kogan, 1997). The qualities of institutions in general and undergraduate programs in particular and the utilization of resources have become matters of public debate and scrutiny across most developed nations. This move towards greater accountability, productivity and quality has resulted in a growing

interest in the use of performance indicators for higher education to improve accountability--i.e, to monitor the "public investment" in higher education. In recent years, especially throughout the 1990s in Japan, as public resources for higher education have become even more constrained, terms like accountability, productivity, restructuring and quality have been used frequently in discussions of higher education. This has come about partly as a result of the public's perceptions that they may not be receiving sufficient value from their public institutions.

One outcome of this debate is the growing number of nations who have decided to adopt accountability reporting systems requiring public institutions to assess and report their performance on a common set of measures. All of this is particularly true in the cases of the United States (Burke & Serban, 1998), Canada (Advanced Education and Career Development, 1997), New Zealand (Lord, Robb & Shanahan, 1998), the United Kingdom, Australia, the Netherlands, Finland, Denmark, Norway, Sweden (Cave, Hanney, Henkel & Kogan, 1997) and Japan (University Council, 1998), *except that no one has written about the need for a common set of measures in Japan that could be used for comparisons across institutions*.

It seems useful to review some of the basic concepts and principles of performance indicators to gain a better understanding of how such measures and methods can contribute to accountability, productivity, and quality improvement in higher education. The purpose of this paper is to provide an overview of the literature to better understand the adequacy of presently used performance measures, methods and possible options, as well as their implications for Japan as it moves forward with its strategic plans for reforming public higher education. We believe that the paper provides a comprehensive review of performance indicator approaches and major issues in their current use. The paper also includes some practical recommendations and principles to guide the use of higher education performance indicators in Japan.

4. Factors Calling for Performance Indicators

Why are performance indicators increasingly being used in higher education? What are the major factors that have triggered the rapid growth of performance indicator systems across the many countries? Quite simply, the major factors have been competition for public funds, the need for greater efficiency and quality, and the need for public accountability.

Competition for public funds: Higher education must increasingly compete for diminishing public funds. In some nations the real values of tax revenues have declined through either inflation or recession, while at the same time they are experiencing competing demands for public dollars. Such demands are coming from a number of diverse sectors such as health care, transportation, social services, corrections (i.e., prisons), and school reform movements. In the case of Japan, the private higher education sector that currently is delivering education to over 75 percent of all students in higher education also has been pushing for the central authorities to "level the playing field" so that they might be better able to compete effectively with the public national universities.

Calls for greater efficiency and quality in delivering services: As demand and rising enrollments have rapidly expanded the public sector of higher education, both parents and public authorities are questioning whether more effective competition might induce greater efficiency as well as quality within the public sector of higher education.

Calls for greater accountability: Most governments hold all public institutions, including those in higher education, accountable for the use of public funds. This concern about accountability is a natural and appropriate outcome of public funding. Policymakers demand more quantitative data about how well higher education is performing and how public resources are used to produce the desired outcomes and outputs in all of its dimensions of instruction, research and outreach.

5. The Notion of Accountability in Higher Education

It may be necessary to briefly examine the notion and role of accountability in the development of performance measures. Accountability is defined as demonstrating the worth and use of public resources. Higher education in most countries has been faced with greater demands to demonstrate its worth and to account for its use of public resources, partly as a result of fierce competition for tightened state funds and partly as a result of other restructuring taking place throughout the public sector. Policymakers have also criticized public institutions as being inefficient, incompetent, unproductive, oversized, overspecialized, and under-focused on undergraduate education, while excessively emphasizing graduate education and research, and being unresponsive to meeting other nationwide priorities and goals. Such criticisms have persuaded some politicians to charge that public colleges and universities do not deserve the amount of public support that they have had in previous decades.

In response to such concerns, many countries have required their public institutions to report on their achievements and failures to central state authorities on a set of performance indicators to assess and monitor "public investment" in higher education. As a logical extension of such a system of performance indicators, many have also reexamined funding processes for public higher education in order to target financial resources towards quality improvement and greater accountability. There is a common belief among many policymakers in developed countries that current funding policies are obsolete and non-responsive to national economic realities and educational goals. Such policies have been criticized as having little relationship to institutional performance and productivity. Policymakers have maintained that while current public funding policies provide powerful tools for financial accountability, they have often failed to provide incentives to achieve public goals and objectives. As a result, many countries and states,

such as those within the United States, the United Kingdom, the Netherlands, Australia, Finland and Sweden, also have attempted to use performance funding for the purposes of accountability and quality improvement in higher education (Cave et al., 1997).

It should be noted that accountability in higher education is by no means a new concept in higher education despite the increased concerns in recent years. National and state governments have always held public institutions accountable. But the traditional focus in accountability has been usually on financial accountability that required public institutions to account for how they spend the funds provided by governments. The question was "were the funds spent appropriately?" However, in recent years, there has been a change in the concept of accountability in higher education. New accountability policies have increasingly focused on performance and outcomes. Public policymakers are interested in the return on investment and they ask, "what did we achieve by spending public dollars in higher education and how well was it used" (Layzell, 1996).

6. What are Performance Measures?

Performance measures or indicators are typically defined as factual or opinion information, usually in quantitative forms (e.g., ratios, percentages, ranks, and so forth) but also in qualitative forms as well, about various aspects of the functioning of higher education institutions and for various purposes-- e.g., monitoring, evaluation, and resource allocation (see, for example, Kells, 1992; Sizer, Spee & Bormans, 1992; Cave et al., 1997). Performance measurement reflects the view that higher education needs to be more responsive to state concerns and more accountable to a broader constituency that includes students, employers, parents, and the general public.

Measures usually provide information about the resources (inputs), characteristics of the educational production (process), and

outputs or outcomes at various levels of the higher education systems (e.g., system, institutional, or college) and allow institutions to compare their relative position in key strategic areas to peers, to past performance, or to some standard or reference point. Selected indicators range from simple quantifiable indicators such as student/faculty ratios or costs per student to more qualitative indicators such as student satisfaction measured by surveys or assessing the quality of research and scholarship activity. Types, numbers, and purposes of measures vary greatly by nation or state and by institution. For example, while some institutions report about 250 specific measures, others report fewer than a dozen measures. Nonetheless, the actual number of measures typically ranges between 15 and 25; and most nations, states and institutions usually share a common core of measures despite individual differences. It should be noted that this consistency is more related to the availability of certain data rather than with broad consensus about what is most important across the institutions. A comprehensive but by no means complete list of potential performance measures in higher education in the United States is provided in Borden and Banta (1994). The list includes about 280 specific measures in 21 areas, ranging from admissions to teaching/learning. Another useful source would be the 1997 annual report on performance indicators by the University of Minnesota (Office of the Executive Vice President, 1997). Similar lists and examples of such performance measures are provided by Burke (1997) and Ruppert (1994) for the United States, by Cave and his colleagues (1997) and Johnes and Taylor (1990) for the United Kingdom, and by Lord and her colleagues (1998) for New Zealand.

The major contribution of the performance measurement approach has been to provide a framework to examine data and link the data with institutional priorities to facilitate strategic changes. Performance measures provide indicators for achievement in relation to goals and for variation from expected levels of activity. They are useful for monitoring and evaluating perfor-

mance, and for guiding management and policy decisions. Performance indicators can be powerful policy tools to help inform higher education decision making when the indicators are also well integrated with other planning and funding policies. Their purposes vary by country system or institution but generally they have much broader views of performance assessment than earlier forms of student assessment. They focus not only upon students but also on other strategic issues faced by the institutions such as research, outreach, administrative and management effectiveness and efficiency.

Performance measures have multiple uses. One should not lose sight of the multiple purposes for which performance measures might be employed within higher education. Many institutions, for example, use individual faculty performance indicators to assist in making decisions about annual salary increases in those institutions with a merit pay system. Other institutions use unit or program performance indicators for resource allocation decisions within colleges (Lewis & Kallsen, 1995) or between colleges within universities (Dolence & Norris, 1994; Massy, 1996). Still others use performance indicators for reporting to their boards of trustees (Office of the Executive Vice President, 1997). And, of course, the most common form of performance indicators have been used to report to the state or nation about performance on those measures that are important to the institution's mission and the states priorities.

In almost all cases, the development of performance measures has led to a transition from essentially a regulatory internal review and resource reallocation role to one of providing information to the consuming public. Cave and his colleagues (1997) have pointed out that this has had several consequences. First, performance measurement has ceased to be only a centralized monolithic system serving only the institution and state, but has become a joint product of both the institution and public sector funding organizations and a variety of more specialized, possibly private sector, organizations. The development of consumer guides such as the U.S News

and World Report annual issue on colleges and universities, *Barron's Guide to American Colleges,* and *The Times Good University Guide* in the United Kingdom are examples of this tendency.

It is also likely that the new purchasers of information about higher education institutions will want it in a variety of different forms. The information needs of prospective students will differ materially from both public and private funders of research and parties interested in external services and outreach programs. Thus, the development of performance measures must be broadly conceived and understood that its elements must be accessible to multiple constituencies for multiple purposes.

7. Concerns and Controversies with Performance Measures

Despite their increasing popularity, numerous concerns exist about whether performance measures can accomplish their broad and ambitious goals. These concerns need to be addressed before adopting a set of performance indicators. Some of these concerns include the following issues.

First, and most important, there are serious issues of validity and reliably in the selection and application of performance indicators (Kells, 1993). The most prevalent concern about validity is that often the measures selected are those most readily available or those that are the easiest to collect, rather than those most important to the mission or goals of the program or institution. Moreover, some performance indicators might result in deflecting attention from more critical issues or other unintended outcomes since considerable time and resources are often spent for collecting data through a variety of surveys and other instruments.

There may also be a lack of a common set of measures for similar institutions since each institution usually attempts to develop its own measures. This event makes difficult a comparison of institutions based on their performances. Certainly for accountability to

parents and students there needs to be some minimum number of common indicators such that public judgments can be made when comparing across institutions (Linke, 1992).

Types of performance measures vary greatly because this depends on the unit developing the measures. For example, while most legislators or governing boards generally focus on input and output measures from readily available quantifiable data such as the number of students served, degrees granted, retention, and completion rates and per student expenditure, institutions are more interested in process and outcome related measures such as student experiences and faculty scholarship and research accomplishments which are difficult to quantify in terms of simple statistics, counts, or indicators. Since easily quantifiable information is not necessarily the most informative and useful for decision-making and quality improvement, such a focus becomes a particular concern for several areas in which no readily available data may exist.

The purposes of performance measures also vary depending on the unit that develops them. For example, while legislatively mandated performance measures are usually intended to require higher education institutions to demonstrate accountability and achievement of their missions and goals, institutionally developed measures are often designed to influence the institution's priorities, monitor the process, communicate its achievements and success, and improve its quality.

Moreover, there is often a tension between the demand for accountability and institutional autonomy. An appropriate balance between the legitimate need for information and public accountability and institutional autonomy is a particular concern to many institutional administrators and faculty who are skeptical about performance measures due to concerns about intrusion of the state in institutional autonomy.

While there is an increasing use of quantitative (objective) measures, the use of qualitative measures needs to be also emphasized. However, the difficulty in measuring and collecting the data

remains as a major impediment in using such measures. At the least, every developed nation that is conducting graduate programs needs an external agency to assess the quality of each of its programs. We are not here recommending accreditation standards, although in some program areas it may be worthwhile to have minimum standards, but what we are recommending is national assessment of the quality of each graduate program based on both national rankings by external peers and by quantitative measures similar to what one finds in the National Research Council's doctoral program assessments in the United States (Goldberger, Maher & Flattatu, 1995).

The publication of performance data (particularly in the form of ranked and comparative data) can become a controversial issue in higher education, since they can be taken out of context and misused. Nevertheless, it is essential that the publication of performance data take place in order to insure appropriate public accountability.

Finally, there might be disagreement between the government and institutions on the use of the indicators. While there is an increasing interest among public policymakers in the use of performance measures for funding, many in higher education institutions oppose such uses. A set of nation-wide measures may not be consistent with individual institutional goals and directions. The connection between indicators and selective funding even within the institution is not as clear as is often assumed.

8. Developing Performance Indicators often Leads to Performance Funding

Initially performance reporting was used to demonstrate institutional and public accountability and no attempt was made to link the indicators directly to a budget. However, institutional assessment without a link to some form of funding had only limited success and was not as far reaching as many policy makers desired or

anticipated. During the 1980s, several countries began to use performance measures both for incentive funding and as rewards for enhanced quality and directed assistance on national priorities (e.g., the United Kingdom, several states in the United States, the Netherlands, and Australia). Despite the lack of a direct link between assessment and funding in many programs, an indirect link has always existed to the extent that students would enroll at institutions with good performance, which in turn led to increased appropriation to support that enrollment.

Across the world there is an increasing recognition of the use of performance measures to guide public planning and budgetary decisions. Many policymakers in almost all of these countries have concluded that the current funding mechanisms require a major change; from growth in funding, principally through enrollment based formula funding, toward funding performance and results. Numerous public bodies in these countries have linked budget allocations explicitly to the results of performance measurement in order to influence directly the behavior of institutions to achieve the public's goals and priorities. For example, as of the fall of 2000 almost all of the 50 states in the United States had some form of performance measures in place, and over 30 of these states had some form of performance funding programs taking place in their public higher education systems. The rapid growth in the number of such funding programs during the 1990s in both North America and Northern Europe demonstrates the strong international interest in systems that link performance to budgeting. The major purposes of both performance indicators and funding programs have been to improve accountability, enhance the quality of undergraduate education and to achieve state- and nation-wide goals and priorities in higher education.

As performance funding in higher education has become an important policy tool in North America, Northern Europe, and the South Pacific countries of Australia and New Zealand, it is also expected that such approaches will increasingly be examined and

possibly used across other developed countries as well. One such country at the present time is Japan as it moves forward with its own higher education reform agenda. However, it should be noted at the outset that few studies have examined the implementation and efficacy of various funding and resource allocation mechanisms in general and performance funding in particular (Nedwek, 1996). Most of the countries with performance funding in place are struggling to develop a public system that will be effective, efficient, and fair in addressing the general concerns within the current reform initiatives underway.

Performance funding amounts are still rather low: In fact, most of the public systems are conducting performance and incentive funding on an annual recurring basis only at the margin and only with about one to five percent of the public's allocations to higher education. The only exception is England where it is alleged that the central government is allocating up to 10 percent of its recurring allocation to public higher education based on performance funding procedures within their new reform initiatives (Cave et al., 1997). In brief, performance funding is still one of the smallest components of most current public funding budgets for higher education.

Direct state appropriations in the United States, for example, clearly constitute a significant portion of the total revenue of all public institutions. However, by the early 1990s less than one-half of all revenues of public universities came from state and local public appropriations. The contribution of state and local appropriations to the sum of total revenues at local four-year (62.2%) and two-year colleges (67.4%) was far more important (Blasdell, et al., 1993). So in reality, we are noting that only about one-half of one to five percent of public institutional revenues is being allocated via performance or incentive funding mechanisms in a country with a strong preference for performance funding.

An important development in both the United States and England over the past two decades has been a significant shift

downward in the relative contribution of state funding to the overall revenue of public institutions, while the relative importance of tuition and fees has increased. For example, in the United States the overall state contributions to public research universities had declined from about 45% of total current fund revenues in the mid-1980s to less than one-third by the mid-1990s. On the other hand, the contribution of tuition and fees to total revenue had increased from 13% in 1978 to over 18% by the mid-1990s. Thus, to some degree the increase in tuition and fees as a revenue source has offset the decline in state support. The federal government also provides substantial support to higher education in the form of student aid and research grants and contracts.

9. Using Governmental Budgets as Policy Tools

The budget has increasingly become a policy tool to ensure the achievement of accountability and productivity as well as nationwide priorities in higher education across the developed world. Many policymakers see the utility of the budget as a fiscal tool for accountability and that it reflects state priorities. As a result, new fiscal policies increasingly attempt to tie funding to specific outcomes and performance (Minnesota Higher Education Coordinating Board, 1993).

There is a diverse set of allocation mechanisms in higher education for direct public operational subsidies. At one extreme, the bureaucratic (e.g., line item budgeting) approach requires that each expenditure item and staffing be approved by the funding agency and considers all staff members as civil servants. Such restrictions are usually justified as a means of ensuring accountability from institutions; for instance, prescribed staffing patterns are supposed to ensure quality control. However, such strict control of institutional expenditures focuses primarily on financial accountability. In other words, institutions account for how they spend public funds provided by the state with little focus on program outcomes. This

approach provides little institutional autonomy or authority. At the other extreme, public agencies can allocate resources through "block grants" and allow institutions to have maximum flexibility in allocating state resources based on their own strategic directions and goals. The degree of state control over institutional funding and accountability mechanisms vary between these two extremes from country to country. Clearly Japan currently lies closest to the extreme of state control.

Two other common approaches to public funding for higher education are incremental (historical) and formula approaches and both are found within North America and Northern Europe. The incremental approach generally assumes the continuation of existing activity. Thus, it provides little policy context for strategic planning. The funding level is determined based on the prior year's allocation after some judgmental or analytical adjustments (e.g., enrollment change, inflation). The formula approach, for example, emerged as the method of choice for distributing most state funds for higher education during the 1960s and 1970s in the United States. Using objective criteria, public funds are allocated among all the public institutions. The major goal is to provide equal public funding to similar institutions engaged in similar activity or achieving similar outcomes.

Since these approaches provided little accountability in the use of public funds, several new approaches emerged during the 1990s. These were student funding through governmental scholarships and student aid (i.e., vouchers), strategic (incentive) funding, contractual funding for specific services or work product, and performance based funding. When one of these approaches has been adopted, it has been typically added as a supplement to the current approach in use, as in the case of performance based funding described above. The principal goal of all four of these new approaches is to hold public colleges and universities more accountable in their use of public resources and make them more responsive to the stated needs of public policy.

Although public funding mechanisms vary from country to country depending upon their on-going academic and political culture, there are a number of desirable characteristics of an effective funding mechanism. These basic characteristics include serving broad public policy objectives, being directive and forward looking, providing equitable distribution among institutions, providing income predictability, stability and flexibility, and being practical and transparent. These characteristics can also have various weights relative to their importance depending upon the priorities of the public sector. Since a single funding mechanism often fails to include all these characteristics, a mix of various funding mechanisms is often recommended for university funding.

It is important to note that in no case has any developed country cut its public national universities loose and told them to become private institutions. However, in many cases the state has encouraged diversification of revenue sources, including seeking additional funds from the private sector including raising tuition and fees. In all cases the states and nations have acknowledged the important public role of public universities as they have contributed to the social capital of the country that extent beyond just skill preparation for jobs. These externalities have frequently been addressed in the literature and are readily recognized (e.g., Becker & Lewis, 1992).

While all countries make some forms of subsidies to public higher education institutions and use budgets for accountability and in achieving their priorities and goals, the degree of state control over budgets and how the budgets are used to achieve these goals varies substantially by country. Even within some countries, no single method applies to every state and to every institution. Many countries and institutions have a variety of features with several allocation mechanisms. More important, the question remains to be answered as to what extent governments should use budgets to set educational policy. What strategies are most successful in achieving results?

Special initiatives and incentive grants: Some states use public budgets to address accountability and quality concerns by implementing "non-formula, special initiatives." Such initiatives include endowed chairs, special funding for centers of excellence, and competitive or incentive grants for various campus initiatives. These non-formula funds come as additional funding as the governmental agencies support certain initiatives on different campuses. The main emphasis is on quality improvement and addressing the needs of the nation or region by providing non-formula funds for special initiatives. This has been used quite extensively in both the United States and Scandinavia during the past two decades and is currently underway in Japan through targeted scholarship and research funding (MESSC, 1997).

Accountability reporting on performance: A growing number of countries and states require public institutions to develop and report on a system of state or nation-level performance measures. This reporting is called "accountability reporting on performance" using reporting cards, or assessment reports. Its purpose is to demonstrate institutional accountability, but no attempt is made to link the indicators directly to the budget. Although the actual results of assessments are not tied to funding, indirect links between the funding and performance results exist to the extent that better performing institutions will have more students and resources, which in turn leads to increased state appropriations to support these enrollments and other activities. Moreover, some nations and states include strong budgetary sanctions for institutions that fail to comply. Institutions are also required to report annually on progress made in carrying out productivity improvements and the budget process is identified as the key strategy for addressing priorities and making productivity improvements.

Performance based funding: An increasing number of countries and states have adopted or are considering adopting performance based funding schemes that provide a direct link between performance and public sector funding. These allocation mechanisms are

perceived as "rational" allocation techniques. In such systems, funds are allocated on the basis of performance criteria. There are many different approaches to performance funding which range from very strong ties to very loose connections between funding and performance measures.

Merged budgetary and academic plans: Finally, some states have combined budget and academic plans with the hope that such a combination would result in improved quality and greater accountability. Such approaches have been used in a number of institutions (e.g., Wisconsin in the United States) over the past decade in an effort to improve quality and provide greater accountability. The thrust of this approach is institutional flexibility in managing and reallocating its funds provided by the state in achieving the mission, goals, and objectives identified by the public sector's higher education master plan and institutional strategic plans. These plans serve as the essential foundation for a new funding system. While in the past the link between plans and funding had been at best peripheral, this approach suggests a well-established link between the two. The state's role is to provide a higher education master plan in consultation with its institutions and then allocate state funds as "block grants." Performance measures are used to monitor results. Each institution has maximum flexibility in determining how to allocate its resources to achieve the goals and objectives identified in the state's master plan and institutional strategic plans. The critical issue is to develop a carefully designed linkage between planning and budgeting.

While the first three approaches rely on the government as the catalyst, the last one stresses the importance of institutional autonomy and decision-making in achieving the desired results from public investment in higher education. These four approaches are by no means independent. No single approach applies to all countries and institutions. Indeed, most countries and states employ a combination of these approaches to select their best features.

10. What is Performance Funding?

Performance funding is simply the allocation of public funding based on a set of performance criteria. The focus is on outcomes and performance. The general purpose is to ensure that public institutions will meet a range of public priorities and expectations. The specific purposes of performance funding are to achieve statewide goals and objectives from higher education institutions; achieve greater accountability in the use of public funds; and improve the quality of education, research and services of higher education institutions.

Over the years, new approaches to budgeting have been devised that allow institutions to have autonomy over decision making, yet ensure greater accountability over the use of public funds. Some of these methods include management by objectives, zero-based budgeting, program planning budgeting systems, total quality management, and strategic planning (see, for example, Caruthers, et al., 1994). The most recent interest has been on performance funding. Across the many nations there has been a growing emphasis on the formal assessment of institutional performance and use of public funding as an incentive and reward for high performance achievement of the stated goals. The use of performance data has also differed from past practice. While the focus in the past has been on the process of reporting data, the current emphasis is on critical analysis of what the data mean for the purpose of change (i.e., the product) and how public funds can be used for this purpose.

Despite the growing use of various forms of performance funding methods, there seems to be little consensus on elements and approaches. A growing number of countries and states have been using financial incentives for enhancing quality in higher education as well as greater accountability. A 1983 survey in the United States, for example, found that 13 states were changing their financing structure to promote quality. A more recent 1996 survey

found that at least 24 states now have explicit incentives in their budgeting process to improve the quality of higher education as well as for providing greater accountability and responding to state priorities (Layzell, 1999).

Some may ask why performance based funding policies are necessary since most nations provide funding based on their desired goals and priorities. The budget does reflect public values and state priorities for higher education. During the 1960s through the 1970s and on into the 1980s in both Japan and in most of the rest of the developed world, statewide goals for higher education addressed access. Budget mechanisms, primarily funding formulas, were prevalent as a means of promoting growth in higher education and equity in the allocation of resources. In Japan the principal mechanism was the government's facilitation and assistance in the expansion of private higher education.

Beginning in the mid-1980s, there has been a change in the focus of higher education goals from continuing to promote equity in access and funding to a value driven system that focuses on student and institutional performance and improvement. The budget has begun to be viewed as an instrument to control expenditures with the intent of improving efficiency.

Problematic issues in performance based funding: Despite their growing popularity, performance funding is not a new idea. It has been tried in several countries and states and sometimes even discarded because of its failure to achieve its intended purposes. The appropriateness of performance based funding models for higher education has not been clearly established in all countries that have tried them. It has even been alleged that no successful models of performance based funding exist (Bateman & Elliott, 1994). While the merits of performance based funding remain unclear, many are still skeptical about its use. Therefore, the potential effects of the proposed funding methods need to be carefully examined. Nevertheless, it is predicted that more countries will be attempting to implement such policies, given their increased concerns about

accountability, quality, and productivity in higher education. Unfortunately, there are only a limited number of studies examining funding techniques in general and the efficacy of performance funding methods in specific terms (Layzell, 1996). Most have been only descriptive and not very analytical.

Nonetheless, our review of the literature suggests several lessons. Performance based approaches to funding requires careful program design and implementation. Funding objectives and the measures to provide funding must be very explicit. Measurement must be an on-going effort. Failure in the implementation of performance funding policies often results from complexities in the design of such programs. Such initiatives can have the greatest potential of success when carried out as part of an overall plan of higher education development, not simply used ad hoc to respond to special interest pressures, or a changed fiscal or political climate.

Some existing or newly created performance measures may not be appropriate for funding purposes since the cause and effect relationship between performance and funding is not always clear. More importantly, such systems could cause institutional administrators to focus only on the "rewards" of reaching measurable goals rather than on the management of institutions or achieving the broader goals and objectives of the institution as a whole.

There must be a linkage between planning, performance measures, and budgeting to have a maximum effect. Yet, a particular problem with nation-wide performance measures has been their failure in successfully linking measures to institutional planning and funding. Some evidence in the literature also suggests that linking performance measurement to planning and budgeting has not proven effective in practice, despite the fact that several carefully designed attempts have been made (Bateman & Elliott, 1994). While many countries and states have attempted to link funding directly to planning and performance, it is not clear whether performance indicators can be both an accountability device for charting the past and a planning tool for meeting higher education needs for

the future.

Institutional self-governance and academic freedom have been important principles in the academe throughout the past century. They are widely regarded throughout the developed world as necessary principles for success. Some public institutions have even historically considered themselves autonomous from governmental policy formulation. Some contrarian stakeholders in higher education even believe that public institutions do not need to justify their activities to government or society at large. While institutional autonomy and academic freedom are critical parts of the modern university, it is usually accepted that they also bring both a privilege and a responsibility. Any institution using public funds has an obligation to show how those funds are used and what they have accomplished. Performance funding mechanisms can combine institutional autonomy and accountability to ensure adequate performance, but the problem must be addressed on all campuses.

It is unclear whether schools should be rewarded or punished if they accomplish the stated objectives or fail to accomplish them. Bateman and Elliot (1994 (pp.50-51)) note, "it is not at all clear that reducing funding for poorly performing institutions will cause them to improve... Nor is it clear that additional funding is the most effective motivator for higher education institutions". According to conventional employee management theory, people are motivated by the intrinsic satisfaction of a job (e.g., the opportunity for achievement, challenge, contributions, excitement, and personal recognition). To have a successful incentive program, incentives must be meaningful to individuals, not just to an institution. Yet, the basic structure of public performance funding systems reward and recognize groups through institutional incentives and not through recognizing individual incentives. The question remains as to whether such "collective rewards" can effectively motivate individual faculty and staff to achieve greater performance. The answer to this question is not yet known (Gaither, Nedwek, & Neal, 1994, p.25). How an institution internally uses performance

rewards, once received, to motivate individual learning, creativity, and initiative becomes a critical issue. Many institutions were struggling with ways to define internal reward structures (Lewis & Becker, 1979).

Much of the debate on performance funding is on measurement, not on the concept of the funding. One of the main lessons learned from attempts to implement performance based funding systems is that there must be effective measures of both performance and quality. Public systems wishing to use criteria for quality or performance in the budget process must deal with definitions of quality and effectiveness. Yet, most have found it difficult to define or measure such dimensions. "Bad data are worse than no data when indicators become the primary tool for managing higher education or allocating resources" (Gaither, et al., p.22).

It is recommended that measures be simple and easy to administer. While there are certain advantages to this approach, simple measures (many of which are routinely available from institutions) may not reflect the intended goals and objectives that the state wants to achieve. Performance funding often reflects past efforts to show improvement on important issues that have already been assessed to be successful; or it may reflect factors that are not mission related or outside the control of the institution.

One of the most controversial issues associated with performance funding is determining the amount of performance funding to be allocated to institutions. Performance funding can be threatening to institutions. For this reason, it is recommended that performance funding operate at the margin. It should be small enough to not threaten institutions, but big enough to be taken as a serious effort by institutions. When the amount of performance dollars is seen as a significant amount by institutions, it certainly gets attention and the system by which it is distributed will have major influence on changing institutional behavior. Yet, it is not clear what portion of the budget should be involved in performance funding. While some have suggested not more than 2 to 3 percent, others

have recommended 5 to 10 percent. Some have argued that there should be a gradual increase in the size of the performance funding budget component after starting with a small percentage.

Timing is also an important factor in establishing baselines, collecting outcome information, and measuring improvement. There is often a two- to four-year time lag between performance and funding. This can be a particular problem for allocating resources for planning objectives. Moreover, the amount of time required to develop these programs, measure their performance, and report them can be high.

11. In Summary

This paper has reviewed the expressed need for effective performance indicators in the reform efforts of Japan's public national university system and we concur with the final published set of public recommendations by the MESSC. We have also reviewed the international literature with respect to both performance indicators and performance funding in higher education. From this literature, we have several important recommendations for Japan.

First, despite some limitations of performance measures, the identification of meaningful indicators for determining, assessing, or reporting on measurable goals and outcomes is viewed as a good and useful idea. They can be used to document the past and they can inform the future when they are developed within a policy framework ensuring that they are policy relevant and purposeful. Individual institutions for both internal review and reallocation can use them. They can be used by decision makers in the private sector (including parents and students) for choice making. And the government or the Ministry of Education for public accountability and inter-institutional assessment can use them, as the need for public accountability is very clear in Japan. They might also be used for incentive and performance based funding by Ministry, but the jury is still out on this latter issue and we do not have the

answers. We can only frame the issues, problems and opportunities as we have done in this paper.

Nevertheless, a recent study on performance indicators has noted that:

The trend is clear and irreversible: Higher education institutions must start developing better ways to judge more adequately how well they are doing. Higher education has been reluctant to develop performance indicators because it is believed that the mission of higher education is too diverse to measure and short-term measurement might be inadequate to measure long-term success. If the members of the academy-- faculty, academic leaders, students-- do not participate in the process of developing and improving the use of performance indicators, however, external organizations will force some form of indicators on them (Gaither, Nedwek, & Neal, 1994, p. xi).

Finally, we have found that the experiences within many other countries suggest that performance measures can be especially effective when they are linked to institutional or nationwide planning and resource allocation efforts. Perhaps, the most important use of performance measures is their use for funding purposes within the institution itself that might serve as a catalyst for institutional change to improve its quality and achieve its goals and priorities. Some have argued that many previous campus-driven assessment approaches have not been successful in meeting accountability demands largely because they have lacked incentives in the form of performance funding. Thus, many are now predicting an increased use of performance measures as a basis for funding decisions by public policy makers (Gaither, 1997; Folger & Jones, 1993; Serban, 1998; Cave et al., 1997). Yet, the experiences in many countries suggest caution in moving too quickly. There are many "unresolved" issues regarding performance measurements and their use for funding. The belief that performance indicators can provide accurate information on institutional functioning appears to have weakened in recent years, with early optimism

having become more tempered by debate and experience (Yorke, 1997). Perhaps a bit more use of "self-monitoring and self-evaluation" along with more incentive based funding on top of existing core funding might be in order across the entire system of higher education in Japan.

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