Policy Papers on Higher Education

Priorities, Quality and Productivity in Higher Education: The Illinois P•Q•P Initiative
Priorities, Quality and Productivity in Higher Education
The Illinois P•Q•P Initiative

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# TABLE OF CONTENTS

- Acknowledgments ........................................................................................................ iv
- Foreword ...................................................................................................................... v
- Introduction ................................................................................................................ 1
- Reexamining Productivity in Higher Education ......................................................... 3
- Defining Guidelines for Productivity Improvement .................................................... 5
- The Results .................................................................................................................. 20
- Future Issues and Challenges ..................................................................................... 23
- Endnotes ...................................................................................................................... 26
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This report was prepared for the Education Commission of the States (ECS) by Robert A. Wallhaus. As deputy executive director of the Illinois Board of Higher Education when the Priorities, Quality, Productivity (P•Q•P) initiative was launched in late 1991, Wallhaus played a key role in developing the concepts and productivity guidelines described in this paper. Prior to nearly two decades with the Illinois board, he was a faculty member at the University of Illinois and held leadership positions with the National Center for Higher Education Management Systems in Boulder, Colorado. Since leaving the board, Wallhaus has contributed to a variety of projects with ECS, the State Higher Education Executive Officers, the National Center for Education Statistics and other organizations. ECS appreciates the combination of internal insight and external perspective the author brings to the complex issues of state higher education needs and policy strategies.

ECS also wishes to acknowledge the contributions of Richard D. Wagner, executive director of the Illinois Board of Higher Education and long-time ECS commissioner from his state; and Arthur F. Quern, chairman of the Illinois board, as well as chairman and CEO of Rollins Hudig Hall in Chicago and former chief of staff for then Governor Jim Thompson. Their leadership, a key component to the impact of the P•Q•P initiative in Illinois, demonstrates the understanding of the issues and commitment necessary to achieve significant change in higher education and state policy.

At ECS, Charles S. Lenth, Josie Canales, Sherry Freeland Walker, Amy Sebring and Anna West contributed to various aspects of this report.

This report is part of an ongoing series of higher education policy papers prepared or commissioned by ECS. The series is part of ECS' commitment to work with state leaders to provide objective analysis and develop effective policy approaches to meet the nation's changing education needs. This report, along with others in the series, is intended to stimulate debate and understanding of the core challenges facing postsecondary education and what state higher education leaders, governors, legislators, business leaders and others can do to help promote appropriate change.
FOREWORD

In October 1991, Illinois higher education embarked upon a major initiative to refocus priorities, improve quality and enhance productivity. This initiative, called Priorities, Quality, Productivity, or P•Q•P for short, already has had a pervasive and lasting impact on colleges and universities in the state, and on how well they serve Illinois students and the public at large. Despite the unavoidable conflicts that arise in making hard choices and the formidable challenges of putting new definitions of quality and productivity into place, no one can look at the record of P•Q•P and not see positive results. Most important, P•Q•P continues to have an impact. It set into place the processes, energized the leadership and helped to provide resources for Illinois colleges and universities to face the future with renewed confidence.

Illinois is not alone or unique in the conditions and challenges it faces. Over the past decades, the state and the public at large invested wisely in a strong public university system, developed community colleges throughout the state and supported diverse private colleges and universities. In recent years, however, the costs of nearly all parts of higher education escalated, potentially putting college out of reach for many students and at risk of maintaining public support. At the same time, the needs and expectations for postsecondary education continued to grow, requiring all colleges and universities to reexamine operations and services and refocus priorities.

Virtually all states and institutions across the country faced similar challenges, seen again and again in the many manifestations that rising costs and improving quality bring to the surface. Too often and for too long the strategy for dealing with these challenges was simply to raise prices — higher tuition, new fees and continuous requests for large increases in public subsidies. When prices and revenues could not be raised, the next choice was for temporary, across-the-board cuts or deferring expenditures on the assumption that “normal” times would return soon enough. And when normal times did not return, there was a tendency for intrusive micromanagement, punitive accountability or hand-wringing declarations of bankruptcy — at least in some states.

What Illinois exemplifies is a determination and process to confront these challenges directly. Through P•Q•P, Illinois strengthened its statewide framework for program review, developed new management tools at both the state and institutional levels, and put into place tougher procedures for making choices and setting priorities. What Illinois also demonstrates is the importance of policy leadership. The Illinois Board of Higher Education established the P•Q•P initiative as a vehicle for sustaining a focus on quality and achieving long-term change. Statewide or system coordinating and governing boards can play powerful roles when they are proactive in addressing the concerns of elected officials and community leaders, when they have the processes in place to set statewide priorities and if they are willing to turn up the heat when appropriate to stimulate action by institutional leaders and governing boards.

Major policy initiatives also depend on the vision and determination of individuals in leadership roles. Arthur F. Quern provided those and other elements of success as chairman of the Illinois Board of Higher Education. On the basis of his experience in state government and the private sector, he provided the vision and basic conceptualization for P•Q•P as a statewide quality initiative.
He and members of the Board of Higher Education worked closely with staff and institutional leaders, communicated the importance of this initiative to political leaders and the public, and provided the essential leadership to achieve broad cooperation and support. The board's actions demonstrate not only how to succeed with large-scale organizational and governmental changes, but also why that change does not occur in the absence of such leadership.

This paper examines the concepts and processes underlying the Illinois P•Q•P initiative. The 25 productivity guidelines developed by the Illinois Board of Higher Education and outlined in this paper include the areas of instruction, research and public service, overall academic and administrative productivity, and state-level procedures and regulations. They suggest areas and questions through which all institutions and states can examine the services provided by higher education and take steps to enhance quality and productivity. The paper also presents the results achieved in Illinois as well as the transition of P•Q•P to support the ongoing processes involved in making choices about how Illinois higher education, at all levels, can most effectively use its resources to serve people's needs. These are ideas and lessons we believe will be useful for other states as well.

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Director of Policy Studies                        Executive Director 
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INTRODUCTION

In October 1991, Arthur F. Quern, chairman of the Illinois Board of Higher Education (IBHE), asked all Illinois college and university presidents and chancellors, both public and private, from two- and four-year institutions, to “join the Board of Higher Education in undertaking a major initiative addressing the priorities, quality and productivity of Illinois Higher Education.” Quern’s letter spelled out the rationale and set the stage for what became known as the P•Q•P initiative in the following terms:

Illinois is fortunate in the tradition of leadership it has achieved with its strong and diverse system of higher education. It is this very position, however, that poses the greatest challenge to those of us involved in supporting higher education in Illinois.

As we confront the clear reality that neither the taxpayer nor the tuition payer can continue to accept escalating increases in the costs of higher education, we will come face to face with the need to make choices. We must choose to support quality and eliminate less effective programs. We must choose to demonstrate that every current dollar spent achieves the maximum impact by improving education before we ask for additional dollars to expand our services. Confidence in all of us as leaders and advocates will be based on our setting priorities and acting on them, not on hearing the hollow advocacy of reflex cries for more money.

Acting on priorities means that we put our support behind those things most important to our mission. Those things which are not as important to our mission and which we do not do well should be eliminated. The funds for building the future will come not from digging deeper into pockets already emptied but from our making choices on what we must stop funding in order to pay for those things which we cannot allow to be underfunded.

In Illinois, as in many states across the nation, growth in public financial support for higher education slowed significantly in recent years. Nationally, between 1979 and 1994, state budget revenues increased an average of 1.5 annually after adjustments for inflation. Within slowly growing state budgets, appropriations for Medicaid, prisons and other social programs grew much more rapidly than support for higher education. Tax support for colleges and universities, often seen as one of the few discretionary components in state budgets, became the cushion for absorbing the resulting shortfalls after entitlements and other priorities had been covered. At the same time, societal demands on higher education increased, including demands to expand access to postsecondary programs, contribute to economic growth and accelerate the stream of new knowledge.

Illinois labored under fiscal stringency during most of the 1980s. This adversely affected higher education budgets, which were relieved only partially by a temporary increase in the state income tax in 1989. The 1991 national study of state appropriations for higher education, carried out annually by the Center for Higher Education at Illinois State University, showed that state appropriations for Illinois higher education increased only 1.3 over the two-year period of fiscal
During these same two years, the Consumer Price Index increased 8.9 (and the Higher Education Price Index increased 10.6). Given these factors, when the P•Q•P initiative was announced in October 1991, many people within Illinois saw it as a budget-cutting exercise and reacted with, “So what's new?”

Indeed, most Illinois colleges and universities had already adopted various strategies to make up for shortfalls in state revenues and to cope with new demands. Most of what had been done in Illinois and across the country, however, could be classified as “across-the-board strategies” or “revenue-raising strategies.” Over the past decade, colleges and universities had raised tuition by amounts far exceeding the rate of inflation and increased personal income. In addition, colleges and universities increased student fees at a rapid pace and designated special fees for costs normally covered by tuition, such as “computer fees.”

While revenue-raising strategies did allow many institutions to avoid budget cutting, some ominous side effects became apparent. Private colleges and universities found it necessary to increase substantially their institutional-aid budgets to offset increases in charges for their lower-income students (and in some cases avoid enrollment losses). As a result, larger and larger proportions of the tuition revenues were used to meet student-aid costs. In effect, the same thing happened at the state-budget level. Greater shares of the total higher education budget were allocated to the state's already large student financial-aid programs to protect needy students from the large increases in tuition and fees. As higher education's slice of the state-revenue pie shrunk, these increases in student aid were made at the expense of institutional allocations.

Colleges and universities also implemented “across-the-board strategies” to deal with budget reductions. Fixed percentage reductions assigned to all administrative and academic units to cover a shortfall at least have the appearance of “even-handed treatment.” Across-the-board cuts are based upon an assumption that all departments could find a small percentage of “fat” to cut without undermining quality or faculty confidence. Another strategy is to defer expenditures, for example, by freezing open positions, reducing non-personnel budgets (e.g., equipment, supplies and library materials) or deferring preventive maintenance expenditures. Such approaches are often less controversial because they are replaceable as soon as state support returns to normal. When such budget-cutting strategies are repeated year after year, however, additional expenses accrue as deficiencies are replaced at even higher costs or when the lack of preventive maintenance takes its toll. Colleges and universities also could curtail services when budget cuts become necessary, for example, by cutting summer classes or reducing the hours of library operation.

By October 1991, most Illinois colleges and universities already had used some combination of these strategies in responding to hard fiscal realities. As a result, the immediate response of many institutions to IBHE’s P•Q•P initiative was: “We have cut budgets,” “We have reallocated resources,” “We have already improved productivity!” Within months, the reality began to sink in, however, that these strategies were not what the chairman of the board had in mind when he wrote, “neither the taxpayer nor the tuition payer can continue to accept escalating increases in the cost of higher education . . . . Those things which are not as important to our mission and which we do not do well should be eliminated. [We must make] choices on what we must stop funding in order to pay for those things which we cannot allow to be underfunded.”
REEXAMINING PRODUCTIVITY IN HIGHER EDUCATION

Common use of the term “productivity” often means cutting costs or reallocating resources. The concept of productivity is, however, much broader than those interpretations. Micro-economists have long been interested in analyzing the production-process relationship between inputs (the capital equipment, raw materials and human resources) and outputs (the number of widgets produced). This relationship between inputs and outputs is called the production function. The idea of productivity is not limited to simply counting widgets and inputs, but extends to placing a value on inputs and outputs.

In economics, the value of inputs and outputs is generally their price in the marketplace; for example, the purchase price for raw materials, the wages paid to workers and the selling price of widgets. When the notion of value is introduced, quality becomes an important element of the production process. Products of higher quality have greater selling prices; thus, productivity improvements can be achieved not only by producing more widgets but by producing better widgets. Further, productivity improvement results from focusing on those products in high demand and valued most by the consumer. Productivity improvements occur when more and higher quality products are produced without increasing the cost of inputs, when the same level and quality of product is produced while reducing the cost of inputs, or by some combination of inputs and outputs that increases the ratio of the value of outputs relative to the value of inputs.

Productivity improvement does not necessarily occur when costs are cut or when a different production process is employed (such as when resources are reallocated), particularly if the value of outcomes is simultaneously reduced. Indeed, productivity improvements can result from new investments, such as retrofitting buildings to reduce energy use, or capitalizing upon computer- and communication-based technologies to expand education services. This is why many of the “across-the-board” and short-term strategies employed by colleges and universities in making budget reductions are questionable productivity improvements in practice.

A great deal has been written about the application of productivity concepts in higher education. At the same time, many individuals within higher education take great exception to viewing higher education as a “manufacturing process” and running the enterprise from a “businessman's perspective.” The implied analogy between a college graduate and a widget is viewed as a shocking lack of understanding of the values of the academy, its culture and its role in society.

While colleges and universities use human resources, capital, materials and equipment that may be analogous to the inputs used in other production processes, the outcomes of higher education are much more difficult to define and measure than products of manufacturing processes and other service industries. Colleges and universities produce many results ranging across discoveries, cognitive development of students, health care, community economic development, inventions, socialization of young people and retraining the workforce. Some of these results are realized over a long time span, as college graduates build upon their academic experience to reach their full potential, and as applications based upon the findings and theories of research gradually realize economic and social value. Some higher education outcomes are produced jointly and in ways that
make it virtually impossible to assign input costs directly to services or products. For example, total medical education costs cannot be proportioned out easily when the medical student simultaneously learns from both coursework and from delivering health care services. The college student is simultaneously an input to the education process and the product of it, and a contributor to the education process while simultaneously a benefactor of it.

These complications notwithstanding, higher education is a type of production process. It uses inputs, carries out production functions (usually referred to as instruction, research and public service) and produces outcomes. At the same time, higher education production processes are very complex, often not well-understood and virtually impossible to quantify in all respects. Many concerns are raised when productivity concepts are applied to college and university operations, particularly when these concepts do not recognize the inherent complexities of education and depend heavily on quantitative applications of productivity definitions.

In his research, Henry Levin, director of the Accelerated Schools Project, identified three fundamental ways to improve productivity in higher education.5

- **Use resources efficiently (operational efficiency).** For example, productivity can be affected by improving the scheduling of physical plant operations and maintenance, creating positive incentives that raise the levels of effort and aspirations of students or staff, improving instructional technologies, changing operating factors such as faculty workloads or class sizes, or helping students make better informed choices of programs.

- **Allocate available resources optimally (allocative efficiency).** Resource allocation decisions, made at all levels within higher education, can affect productivity — e.g., when the department chair makes trade-offs between the computing budget and new laboratory equipment, when the chief academic officer decides to strengthen one academic program at the expense of another, when the dean of the library strikes a balance between improving circulation services and making new acquisitions, and when the state-level higher education board allocates state support for higher education.

- **Pursue the right goals (preference efficiency).** For example, productivity is affected by the priorities given to undergraduate education, community service and research.

Clearly, these approaches to productivity improvement reach far beyond raising additional revenues, cutting costs or deferring expenditures. They also involve setting priorities and improving quality. To emphasize that the initiative intended to address this broader concept of productivity, IBHE named it P•Q•P — priorities, quality and productivity.
DEFINING GUIDELINES FOR PRODUCTIVITY IMPROVEMENT

In many ways, Illinois colleges and universities were well-positioned to carry out the P•Q•P initiative. For over 10 years, public institutions carried out program reviews following statewide guidelines established by IBHE in the early 1980s. Every instructional program and research and public service center or institute had been reviewed at least once, and most more than once, by the time P•Q•P was launched. For the most part, these reviews were rigorous and comprehensive; the strengths and weaknesses of individual programs were well-documented, though in some cases the reviews were somewhat dated.

Each program was reviewed more or less independent of other programs at both the campus and state levels. Relative programmatic priorities were not explicitly part of the statewide program-review process. Further, eliminating programs was difficult if a strong case was not presented against an individual program as being among the “worst of its kind.” P•Q•P envisioned a much more aggressive posture in considering priorities and program elimination.

Illinois also was well-positioned to carry out the P•Q•P initiative by virtue of the higher education information systems that had been established on a statewide basis. Many of these systems had been maintained for more than 20 years and provided a rich source of longitudinal data. For example, an annual statewide cost study for both community colleges and public universities had been conducted since the early 1970s, yielding comparative unit cost data by discipline and instructional level. Data on enrollments and number of degrees granted had been maintained for an even longer period of time, as had detailed financial data through the Resource Allocation and Management Program. In addition, IBHE annually carried out a faculty course-load study and a survey of student financial aid, and periodically collected data on space usage in Illinois higher education.6

Since the mid-1980s, IBHE, in cooperation with the Illinois Community College Board and the public university governing boards, developed several additional types of student and institutional performance data systems. Longitudinal databases of student “unit records” provide feedback to high schools on their graduates' academic performance after they enter college. A statewide “tracking” system follows students when they transfer across institutions. Surveys of the satisfaction and success of college graduates are undertaken regularly (in the case of baccalaureate graduates at one-, five- and 10-year intervals). Board staff also work with the Illinois Occupational Coordinating Committee to develop supply-and-demand analyses in standard occupational categories.

While the basic ingredients to carry out the P•Q•P process statewide were in place, a great deal of uncertainty remained concerning expectations and specific implementation steps. To define better the P•Q•P initiative, board staff identified 25 guidelines for improving productivity.7 These guidelines were comprehensive both programmatically and across levels within higher education. Some guidelines were applied at the state level, others at the institutional level, and still others at the academic- and administrative-unit levels. The guidelines for productivity improvement, built upon the pre-existing program-review process and information resources of Illinois higher education, provided the analytical underpinning for the P•Q•P initiative. Five broad areas were covered: (1)
productivity of instruction, (2) productivity of research and public service, (3) academic productivity of the institution (4) productivity of administrative units and (5) productivity on a statewide basis. For a listing of guidelines, see Table 1 below.

Table 1
Twenty-five Statewide Productivity Guidelines for Illinois Colleges and Universities

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<td>• Quality of Instruction</td>
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<td>• Quality of Research and Service</td>
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<td>• Centrality in Relation to Institutional Mission</td>
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<td>• Staffing Patterns</td>
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<td>• Faculty Workloads</td>
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<td>• Faculty Scholarships and Renewal</td>
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<td>• Time Patterns and Student Productivity</td>
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<td>• Consolidation of Programs</td>
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<td>• Effectiveness of State-Level Processes</td>
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Many of the guidelines have been successfully implemented, and processes are being established for the longer-range application of others. The productivity improvement guidelines in each area and their implementation into the P\*Q\*P process are described in the following sections. Each guideline promulgated by the board included suggests analyses or actions to be taken by institutions and at the state level as appropriate. These are summarized below as one or more key questions, which the institution or instructional unit needs to analyze and address to respond to the board's guidelines.

**Productivity of Instruction**

Guidelines related to improving instructional productivity focus on individual academic units (i.e., degree programs, departments, schools and colleges, centers and institutes). Consequently, they are tied closely to the existing program-review process. The following seven guidelines for improving instructional productivity are intended to be applied concurrently, not independently:

1. **Capacity in Relation to Student Demand.** Are enrollments excessively high or low in relation to resources, which may be reflected in unusually high- or low-unit costs? Factors associated with this condition include large class sizes, closed course sections and high student-faculty ratios, which in turn can adversely affect quality and student learning. In contrast, low enrollments may drive up unit costs and lead to an inability to offer courses on a timely basis. When indicated, appropriate capacity adjustments in disciplines and fields of study need to be applied at the state, institutional and academic-unit levels.

2. **Capacity in Relation to Occupational Demand.** Are there imbalances between occupational demand and supply, measured in terms of students enrolled in and completing programs in fields of study associated with particular occupations and industries? Colleges and universities need to examine the workforce needs of the communities and regions they serve and adjust the mix and scope of their offerings to be responsive to changes in occupational demands. Further, institutions can gain insights about occupational priorities through follow-up studies of graduates' employment status, employer feedback on workforce needs and employees' success based on their education background.

3. **Centrality in Relation to Instructional Mission.** How important is a discipline to the overall mission of the institution, the people and geographic region it serves? What role does the discipline serve in supporting other instructional programs? If a relatively large number of credit hours are taken in a discipline by majors in other instructional programs, the discipline is more central to the institution's overall instructional offerings than disciplines serving smaller numbers of non-majors. Examination of the number of credit hours that majors take in each field of study in each discipline can provide insights into how central various disciplines are to the university.

4. **Breadth of the Instructional Unit.** Are the number of courses offered in a department and the number of specializations supported in a degree program in reasonable balance with the number of students enrolled? With the range of interests and expertise of the faculty in the discipline? With the academic support resources (e.g., library holdings and laboratory facilities) available to the discipline? When attempts are made to support too wide a range of offerings, resources will not be adequate to offer desired or required courses on a timely basis, economies of scale will not be
achieved, and quality will suffer if faculty are not well-prepared to deliver specialized offerings. Productivity can be improved by ensuring adequate resources are available to support the range of offerings represented in the college catalog and by eliminating courses, specializations or degree levels when this balance is not being achieved.

Another potential concern is the gradual expansion of credit hours needed for degree completion. This occurs when additional courses are required without reducing existing course requirements. As the number of required credit hours to complete a degree expands, additional institutional and student resources also are necessary. To prevent this kind of productivity decrease, institutions should consider placing strict limits on the total credits that departments require for degree completion, or at the very least should expect a sound justification for credit-hour requirements beyond standard levels.

5. Quality of Instruction. Do program reviews examine a wide range of factors that contribute to quality, including faculty qualifications, curricula, academic support capabilities (e.g., resources and advising) and student achievement? Is information provided on factors such as assessment of student progress, peer review of faculty, student ratings of instruction and measures of student achievement (e.g., success rates on licensure and graduate school entrance exams)? Such information needs to be collected systematically as part of the program-review process and used to identify ways to improve instructional quality. Because it is difficult to judge quality from a distance, such as from the state level, it is necessary to rely heavily on a program-evaluation process carried out at the academic-unit level to gain insights into these central dimensions of instructional quality.

6. Student Satisfaction and Success. Are the trends in employment, additional education and satisfaction of graduates indicators of educational effectiveness provided by a college or university? These kinds of information can be obtained through student tracking and follow-up systems. Ideally, students should be surveyed at different periods following graduation, for example, at one-, five- and 10-year intervals. Student satisfaction and success can be viewed as additional indicators of instructional quality. Addressing deficiencies in these areas can result in productivity improvement.

7. Program Costs. Are costs excessively high or low in a discipline or degree program? Do they indicate potential productivity problems? Very high costs can be associated with low student demand and excess capacity, course proliferation and inefficient instructional delivery systems. Low-unit costs point to inadequate resource allocations, large classes, excessive use of adjunct and part-time faculty, and high student-faculty ratios, any of which could adversely affect quality. To check this, costs can be benchmarked across disciplines or across the same discipline and instructional level on a statewide basis.
Instructional Productivity Results

These seven guidelines for improving instructional productivity are interrelated; applying them independently can be misleading. In Illinois, these guidelines were applied on a statewide basis using similar degree programs as the unit of analysis. Trends in student demand (based on enrollments and degrees granted) and trends in occupational demand (based on occupational supply-demand projections developed by the Illinois Occupational Information Coordinating Committee) were used to identify where statewide capacity adjustments are needed within each field of study and degree level.

These analyses led directly to the question of where capacity adjustments (i.e., which degree programs at what institutions) were to be made based on quality, cost and centrality criteria. Programs that exhibited high costs based on statewide cost-study comparisons and historical program reviews were subject to further scrutiny. Programs that raised concerns about low quality, excessive breadth of offerings or low student success and satisfaction were candidates for downsizing or elimination. Centrality in relation to institutional mission was also an important consideration. Instead of focusing solely on programs that were the “worst of their kind” application of the centrality guideline meant that some “good” programs were recommended for elimination, largely because they were not central to the institution’s mission.

When all these considerations were brought together, IBHE recommended that the state’s 12 public universities “consider for elimination” 180 degree programs and 10 academic units. This recommendation represented approximately 12 of the degree programs offered by public universities (7 of the undergraduate programs and 15 of the graduate and professional programs). While many programs identified were small or already defunct, a number of large and politically sensitive programs — a law school, a department of agriculture, an MBA program, numerous Ph.D. programs and several departments or professional schools — were included. The recommendations also included some instructional programs and units that were not academically deficient and some with substantial enrollments. The board concluded, however, that “these programs were of a lesser priority from a statewide perspective or within the context of institutions' missions, and that the significant resources associated with these programs should be reinvested in higher campus priorities.” The board’s recommendations were not the usual admonition to “do more with less,” but to “do less with more” — to focus on those things which the institution did best and which best served its students even when this would require additional resources.

Subsequent to the board's recommendations, the statewide program-review process was restructured to reflect the ongoing application of the new guidelines for improving productivity. For example, all degree programs within a given field of study are now reviewed during the same year. Prior to undertaking reviews at the institutional level, a statewide capacity analysis in relation to student and occupational demand is carried out, along with a policy issues analysis relevant to the field of study. Recommendations resulting from these statewide studies can address, for example, curricular issues, concerns about minority student enrollments and off-campus priorities, in addition to expanding or contracting capacity in the field of study or at certain degree levels. The statewide analyses are intended to serve as a backdrop for applying guidelines related to quality, costs, student success and...
satisfaction, breadth of offerings and centrality leading to decisions about programs that improve
quality and productivity, and focus priorities.

Productivity of Research and Public Service

As is the case with instruction, the following guidelines for improving productivity in research and
public service focus primarily on individual campus units and build upon the findings of program
reviews.

8. Capacity in Relation to Need and Demand. Are research and public service functions linked to
the overall mission priorities of the individual college or university? Too often research and
public-service activities cannot be justified in terms of the fields of study and instructional levels
offered or by the needs of the clientele or geographic regions served by the institution. Frequently,
research and public-service projects are launched when the institution is not well-positioned to
support the effort. Research or public-service capacity — specifically, the resources allocated to
these functions including faculty expertise and assignments, equipment and laboratory facilities —
should be well-aligned with the research and service priorities pursued by the institution.

9. External Support. Are research and public-service activities carried out by colleges and
universities directly linked to the needs and interests of external constituents, for example, federal,
state or local governmental agencies, communities, business and industry? The ratio of external to
internal support for research and public-service projects, institutes and centers is a measure of the
value that external constituents place on these functions. Ratios of external to internal support can
be benchmarked across disciplines and institutions.

10. Quality of Research and Service. Is the quality of research and public service determined as
part of a rigorous program-review process? The basic ingredients of quality to consider include
faculty qualifications, academic resources (laboratories, equipment and library materials), peer
evaluations and ratings (both internal and external), research and public-service outcomes
(publications, inventions and discoveries) and recognition (citations and awards). Colleges and
universities should consider discontinuing research and public-service activities that do not reflect
quality standards across these indicators.

11. Centrality in Relation to Institutional Mission. Does the research or public-service project,
center or institute contribute to the scholarship and the professional development of faculty in ways
that enhance their long-run contributions to the mission of the institution? How does the research
or public-service activity contribute to instructional priorities (for example, are students directly
involved)? How do these activities contribute to the communities, geographic regions and sectors of
society the institution serves? While any given research or public-service activity cannot be
expected to serve all aspects of a college or university's mission uniformly, a direct relationship
should exist in at least some areas if the activities are deemed central to the institution's mission.

As is the case with instruction, the guidelines for productivity improvement in research and public
service need to be applied collectively, not independently. Further, they are best applied to
individual research and public-service projects, centers and institutes through a regular program-review process initiated at the academic-unit level.

IBHE did not make recommendations regarding individual research units and public service as part of the P•Q•P initiative. Instead, the board developed benchmarks related to the ratio of external to state-appropriated research and public service, and the ratio of research and public-service expenditures to total expenditures. The board also analyzed trends in research and public-service expenditures over the preceding 10 years. Based on these benchmarks, the board recommended that campuses and governing boards reinvest 6-9 of their expenditures in research and public service in higher priorities. Public universities subsequently eliminated or significantly restructured approximately 40 research and public-service centers and institutes.

Academic Productivity of the Institution

The productivity-improvement guidelines discussed above focus on individual instruction, research and public-service programs. It is probably even more important, however, to examine academic functions and priorities from an institutionwide perspective. Guidelines for improving the institution's academic productivity involve structural changes and, in most cases a reexamination of academic policies. Often, fundamental questions are raised concerning academic values and culture. Results may not materialize immediately and tensions can mount in the interim, but the potential productivity improvements that can be garnered by applying the following institutionwide productivity guidelines are worth pursuing:

12. Scope of Offerings. Has the college or university critically examined the scope of its offerings with respect to the demand of students seeking to major in the field of study and the support that courses in the field provide to other instructional programs? Has there been a unit cost comparison for each field of study? Has course proliferation undermined productivity? Has the institution kept a careful eye on the net additions and deletions to their course inventory over time? Fields of study with high student demand and high centrality relative to other majors are generally more viable and have a higher priority than programs with a combination of low student demand and low centrality relative to other fields.

Quality is difficult to maintain if the array of courses offered is expanding while resources are not keeping pace. Institutions also should monitor optional courses with low average enrollments over time and consider whether students might be served just as well without additional courses. The standard response that “even though a lot of courses have been added, they currently are not being offered” raises questions about whether the course catalog is a credible “consumer guide.”

13. Staffing Patterns. Is the college or university employing part-time and temporary faculty in greater proportions to staff instructional programs? Some institutions have moved so far in this direction that they in effect have two faculties: one full-time and tenured that carries out the research and graduate programs, the other part-time and temporary that carries out the lower-division instructional program. Institutions and states should be concerned that substantial shifts in staffing patterns may affect institutional missions, quality or productivity.
14. Faculty Workloads. How is the institution as a whole addressing questions and policies for faculty workload? The central question is not how hard faculty work, but what they work on. Have faculty over time placed greater priority on research and graduate education, and correspondingly less importance on their role in undergraduate education? Have faculty compensation, promotion and recognition systems rewarded such shifts in their efforts? Colleges and universities that do not have primarily a research and graduate education mission may see productivity reductions. In Illinois, these issues have been addressed by IBHE's Faculty Advisory Committee in a series of policy papers and annual statewide conferences that bring faculty and academic leaders together to seek viable approaches to faculty workload concerns.

15. Faculty Scholarship and Renewal. Does the college or university invest in the faculty as a long-term asset, as opposed to a short-term service provider? Are faculty properly supported to keep abreast of knowledge in their field, actively engaged in scholarship and provided opportunities to renew intellectual commitment, as well as teaching skills? Institutions have many options for improving productivity by facilitating the pursuit of many forms of scholarship, such as suggested by Ernest Boyer in Scholarship Reconsidered. For example, does the institution design sabbaticals tailored to different disciplines as opposed to lock-step patterns that are inappropriate in different fields of study? Does it pay attention to the development of part-time and temporary faculty who are entrusted with responsibilities to deliver high-quality instruction?

16. Time Patterns and Student Productivity. How does the college or university ensure that academic calendars, scheduling procedures and curricular requirements make effective use of student and faculty time and campus facilities? Is the institution finding ways to increase student learning productivity? This is particularly important when students take five or more years to complete baccalaureate degrees.

Is the college or university examining “time-to-degree” trends? Are students taking longer than the expected number of terms to complete their degrees and, if so, why? Have curricular requirements expanded over time? Are students able to register in the courses that they need to complete their programs in a timely manner? Are students taking responsibility for their own productivity? Are they dropping courses, changing majors, taking excessive numbers of electives or taking reduced loads for justifiable reasons?

IBHE examined time-to-degree issues as part of the P•Q•P initiative. When the board studied the academic calendars of all public universities and selected community colleges and private institutions, one finding was that during the regular academic year (i.e., summer sessions excluded) approximately 20 of the potential classroom days (not weekend or final exam days) were used for semester breaks and extra time off around holidays. It is not difficult to see how student time on task could be increased substantially through modifications in academic calendars. Year-round operation and tri-semester systems also are being given increased consideration. Not only do these options make more intense use of student time, they also can increase student and faculty flexibility in scheduling time for research activities and allowing students to take a full term off to work (as opposed to a more abbreviated summer job).
Other possibilities would simultaneously reduce student demand and provide a powerful incentive to shorten time to degree by capping the number of credit hours students could take and continue to receive student financial aid or limiting the number of credit hours per student that would qualify for state subsidies. Incentives, such as tuition rebates for students that complete their degrees ahead of schedule or linking state subsidies to degrees granted rather than credit hours taken, are also possible approaches.

Institutions also can find ways to make more effective use of student time by examining course-scheduling procedures. Irregularities in time-day patterns make it hard to mesh student schedules. For example, a course scheduled from 9 a.m. to noon on Wednesday will preclude students from taking other morning classes on the popular Monday-Wednesday-Friday pattern. It also precludes using the classroom for offering other courses in these time slots. Good reasons may be given for many irregular time-day patterns (e.g., a laboratory or studio course generally cannot be scheduled for one hour, three times a week). Colleges and universities, however, would likely be surprised at the number of different time-day patterns they use. One Illinois university that analyzed its scheduling procedures found more than 500 different time-day patterns used in a single semester. This same analysis revealed numerous instances where required courses, or courses that majors would likely want to take in the same semester, were scheduled into the same time-day pattern.

Telephone registration systems can capture valuable information about the difficulties students have in enrolling in required or desired courses. This information should be analyzed to find ways of improving student productivity. One of the best ways institutions can communicate high expectations for students to take responsibility for their learning efforts is to take visible steps to make efficient use of student time.

17. Technologies. Are colleges and universities making up-front investments in telecommunications and computer-based technologies necessary to garner potential productivity improvements? Are improvements more likely to appear as an expansion of education services and access rather than cost reductions in offering programs to under served areas, serving multiple sites simultaneously and other economies of scale? For example, a language course which would be in low demand at most campuses (and consequently not offered or offered at a high unit cost) could be offered simultaneously to small groups of students at several sites. Technologies even can be used to facilitate student-faculty interaction, for example, through e-mail and faculty “home pages” on the World Wide Web used by both students and other faculty to locate resources and pursue mutual interests. Greater flexibility in learning formats, scheduling and accessing learning experiences can result in improved student learning productivity. The P•Q•P initiative did not view Illinois’ substantial investment in a statewide telecommunications-based instructional delivery system, although the greatest long-run productivity gains could well result from this investment.

18. Consolidation of Programs. Do colleges and universities, academic units and faculty tend to act as isolated and independent entities in establishing academic programs? Are there procedures for consolidating small-scale operations with similar programs at the campus or state level? Are there cooperative efforts that span campus and community college boundaries in order to achieve economies of scale, capitalize on underutilized resources and use the special strengths of other institutions?
Effective coordination across programs and institutions is particularly difficult to achieve at off-campus sites. This results in a duplication of programs and proliferation of small-scale, independent efforts that are not cost effective and are unable to provide adequate academic support services. IBHE analyzed credit hours offered by discipline and instructional level at all off-campus locations where instruction was offered. These data, collected from all institutions, public and private, as well as out-of-state institutions operating in Illinois, revealed much program duplication. They also raised questions about geographic missions. For example, many institutions offered small numbers of courses at dozens of sites across the state with no clear attempt to focus on the priority needs of any particular site.

As a result of these analyses and the work of a special policy committee, Illinois established regional consortia organized along community college district boundaries to coordinate off-campus priorities among both public and private institutions. The regional consortia also provided the organizing framework for sharing resources, supporting industry outreach efforts and developing the state's telecommunications-based instructional delivery system. In January 1996, IBHE updated previous studies of off-campus activities and the use of telecommunications and computer-based technologies for delivering instruction as a means to focus off-campus priorities and encourage the use of new instructional technologies to serve the needs of the state's diverse geographic regions.

States also can expand services in geographic areas that do not have access to a public institution by capitalizing upon the capabilities of private institutions. Illinois, for example, supported a local private university's proposal to serve education needs in its metropolitan area at state university tuition rates. This arrangement was achieved through a creative combination of state subsidies and subsidies offered by the private institution, which it could justify by the economies it gained in serving larger numbers of students in selected programs.

Illinois also has invested productively in library resource sharing, establishing a system that links all of its public universities and a substantial number of private colleges and universities and community colleges to a common circulation system, bibliographic search system and interlibrary loan delivery system. These pre-existing resource sharing activities were not formally viewed as part of P•Q•P, but they do reflect important approaches to productivity improvement and investment as central aspects of long-run productivity improvement initiatives,

19. Organizational Structures and Processes. Are learners able to make a variety of transitions as part of their training and educational experiences? How smoothly can they move from secondary to postsecondary education, from community college to baccalaureate-level institution, from basic literacy and English as a Second Language training to GED and postsecondary programs, from school to work and from work to further education and training? How well do training and education build upon prior learning experiences?

Illinois historically has given a great deal of attention to articulation between associate degrees and transfer to four-year institutions because the state's comprehensive community college system is the gateway to postsecondary education for a large portion of entering students. When students lose credits in transferring from one program to another, student, as well as institutional, resources are wasted. This is true when students transfer between institutions as well as when students transfer to
a different program at the same institution. While it is not possible to totally overcome articulation problems when students choose new majors, many colleges and universities have not given sufficient attention to minimizing these problems.

As part of the 1993 Illinois Articulation Initiative, a joint effort of IBHE, the Illinois Community College Board and the Transfer Coordinators of Illinois Colleges and Universities, a transferable General Education Core Curriculum is being implemented on a statewide basis. To facilitate implementation of this core curriculum, panels of faculty members are developing articulated curricula in major fields. To date, articulation agreements have been established in engineering, nursing, business, clinical laboratory science, music, psychology, early childhood education, elementary education and secondary education.  

Articulation between secondary and postsecondary education also is becoming a higher priority as schools and colleges develop tech-prep programs, and as both sectors move toward new learning formats and new ways of measuring achievement, such as competency-based learning, certifications of skill mastery, and integration of work-based and school-based learning. These developments have ramifications for college and university admissions processes and could result in significant barriers to college entry if they are not addressed.

Student transactions from secondary to postsecondary education also suggest that productivity improvements can be achieved through better-prepared students. School-college partnerships that encourage advanced placement, offer opportunities for concurrent enrollment of qualified high school students in college courses, establish higher standards, help students become aware of the demands of college, and reduce the need for remediation can result in major productivity gains.

Productivity of Administrative Functions

On many campuses, expenditures for administrative functions to support instruction, public service and research come close to, and in some cases exceed, 50 of total expenditures. Clearly, it is important to look for ways to improve productivity in administrative functions. Approaches to productivity improvement in administrative areas often take the form of “across-the-board strategies” based upon the assumption that every function has some degree of inefficiency or nonessential activity and that costs can be cut without adversely affecting services.

Across-the-board strategies are usually short range. They frequently involve deferring expenditures in such areas as preventive maintenance of equipment, remodeling of facilities or purchasing of library materials on the assumption that it will be possible to compensate for deferrals with increased expenditures as “times get better.” Short-run and across-the-board strategies may make sense in some instances since they are less disruptive of institutional operations than are structural changes such as elimination of functions, reorganization of administrative units, or attempting to change incentives and expectations. Short-run and across-the-board strategies can erode institutional assets, however, if they involve severe cutbacks that become more or less permanent.

The following guidelines for improving the productivity of administrative functions are interrelated and encompass short-term strategies as well as structural changes. IBHE recommends these
guidelines be implemented through a regular process of administrative-unit review that is analogous to the reviews of instructional, research and public-service programs outlined above. In applying these guidelines, it is useful to monitor the ratio of expenditures relative to activity in an administrative area, for example, expenditures to operate the student financial aid office relative to financial aid awards made or financial aid dollars awarded. In the case of library operations the ratio might be expenditures relative to holdings or to patron transactions. It is useful to compare these ratios to benchmarks across similar administrative functions; it is even more useful to compare to benchmarks within an administrative function across institutions, if comparable data are available. For example, if comparative data show admissions office expenditures relative to student applications are significantly larger than the average across similar institutions, it would be important to address the questions raised in the following guidelines for improving the productivity of administrative functions as they relate to the admissions office. It is also useful to monitor benchmarks over time.

20. **Centrality to Mission.** Which administrative operations are most critical to the primary functions of instruction, research and public service? Are resources used to provide the quality services in areas vital to institutional operations in areas peripheral to the overall mission of the institution and quality of its academic programs? Centrality to mission is difficult to measure. One method is through a system of “internal pricing” in which organizational units (academic as well as administrative) “purchase” the services they need from other units. In effect, the revenues collected through the “billing out of services” determines the level at which a unit can afford to operate.

As an example, academic units can purchase whatever level of maintenance and computer service they need or pay a fee each time a student or faculty member uses the library. The magnitude of operations in physical plant maintenance, the computer center and the library would be determined by the level of services purchased in each of these areas. Likewise, academic units can “lease” the classrooms they need from a central pool. While helpful, such internal pricing arrangements quickly can become very complex and difficult to administer. It is hard to determine precisely the differential needs for services across academic units, and pricing and tracking units of service can be an accounting nightmare. This must be balanced against the potential for internal pricing strategies to provide powerful incentives for using resources more effectively and efficiently. Even very limited applications can result in productivity improvements. Contracting for services from external providers can produce similar results. Organizational units can be given the flexibility to purchase services external to the campus even when such services are available from internal units. Using external vendors for food services is a good example.

21. **Breadth of Functions.** Has rapid growth in administrative bureaucracies contributed to low productivity? Has the institution examined the breadth of activities carried out within administrative units, colleges and universities in order to curtail or eliminate those that are peripheral or overextended? One indicator of potential productivity problems in administrative areas is a higher differential growth in expenditures when compared to expenditure growth in instruction, research and public service. A related indicator is an adverse trend in relation to internal or external benchmarks. Administrative-unit reviews should focus on explaining such indicators and set directions for addressing the associated productivity problems.
22. Redundancy of Functions. To what extent are common functions unnecessarily duplicated across administrative and academic units? Are there good reasons for various departments and colleges to have separate development offices and maintain separate libraries and computing centers? Is it necessary or desirable for different offices to maintain their own accounting and student data systems, as well as office supply storerooms and purchasing functions? Centralizing all functions is not necessarily optimal in either the cost or service-delivery context. Duplicating functions across organizational units, however, should be a conscious productivity-improvement decision, not a matter of mere convenience, control or lack of alternatives. One way to examine decisions about centralizing or decentralizing administrative functions is to periodically review similar functions across all academic and support units. For example, reviews of all development and fundraising activities or all publication functions carried out across the campus should be undertaken periodically to identify areas of unnecessary redundancy and potential cost savings.

23. Efficiency of Operations. What are the processes for improving the quality of services while holding down costs? How does college or university management find ways to cut costs and do more with less in ways that extend beyond day-to-day operational tactics? How does management communicate high expectations, organize work in ways that optimize the use of staff talents and insights, provide incentives for high-performance levels and focus on goals rather than process? These are the ingredients of maintaining high staff morale and commitment to organizational mission, which result in enhanced productivity. There are numerous management models that emphasize one or more of these ingredients, such as Total Quality Management (TQM), Continuous Quality Improvement (CQI) and Management By Objective (MBO). Institutions and their component administrative units need to seek ways to continually improve the efficiency of their operations as an important dimension of regular management review processes.

Early in the P•Q•P process, IBHE called upon public universities to phase out all state support for intercollegiate athletics over a three-year period. In essence, the questions posed by the board in this area were: How can the overall productivity of the institution be improved by eliminating public subsidies for intercollegiate athletic programs? Are these subsidies really necessary and, more important, can the costs be reduced or eliminated rather than shifted to other sources of support?

A March 1995 report shared mixed results in carrying out the board's recommendations. Some institutions made progress in eliminating state support. Other universities sought additional sources of revenue to maintain their commitment to intercollegiate athletics, including shifting funding to increases in student fee revenues. This strategy ran counter to the board's intent since increases in student fees required increases in state support for student financial aid for needy students. In effect, institutions that adopted this approach were simply shifting support to another source of state funds. In June 1995, the board set aside its recommendation in this area. Instead, the board asked public universities to justify allocating state dollars for intercollegiate athletics in the context of their individual missions and address the appropriate size and scope of their intercollegiate athletics programs in an August 1996 report to the board.
Productivity of State-Level Processes

State systems of higher education also have a responsibility to enhance productivity in their own operations as well as to support productivity enhancements at the institution level. State regulations can undermine productivity improvements through rigid or inappropriate budget and personnel policies. On the other hand, states and systems can create an environment conducive to productivity improvement if they provide positive incentives for colleges and universities to seek ways to improve productivity and support institutional efforts while promoting high expectations. The following P•Q•P guidelines focus on improving productivity through actions in two broad areas — state regulations and state-level processes:

24. Effectiveness of State-Level Regulatory Requirements. Do state regulations in such areas as fiduciary controls, purchasing policies, property management and reporting requirements adversely affect productivity at the campus level? Are staff time and campus resources unnecessarily consumed by ill-designed, low-priority reporting systems, burdensome requirements to inventory and maintain records of property, redundant payroll and personnel systems? Do procurement statutes or policies waste staff resources by requiring extensive bid procedures at low expenditure thresholds? Does this contribute to long project delays, multiple review levels and sign-off, elaborate bid procedures and voluminous paperwork? Periodically, states and systems need to review their regulatory requirements and seek ways to minimize the resource burdens and delays imposed at the campus and administrative-unit levels.

State and systemwide regulatory requirements also can generate incentives or disincentives for sound management at the campus level. For example, accountability statutes that lapse unspent balances in accounts at the end of the fiscal year encourage year-end spending even though funds could be better used if carried forward into the next fiscal year. Greater flexibility regarding what funds are appropriated by the legislature and how state-appropriated funds can be used encourages sound decisions at the campus level. States and systems need to communicate a message that sound, innovative management decisions at the campus level are encouraged and expected.

Efforts launched as part of the P•Q•P process to change state statutes and regulations in such areas as purchasing, property management and payroll processing continue in Illinois. To date, bureaucratic turf protection and a lack of creative alternatives to assuring accountability have resulted in little progress. IBHE, however, made significant modifications and reductions in its data systems in an effort to relieve campus reporting burdens as part of P•Q•P.

25. Effectiveness of State-Level Processes. How do state- and system-level processes in such areas as budget development, program review and approval, mission definition, and planning and policy development influence productivity improvement at the campus and academic-unit levels? Do budget allocations (e.g., budget formulas) encourage — or discourage — appropriate institutional responses to enrollment demands? How can these processes create positive expectations relative to the quality of programs offered, student learning productivity and responsiveness to clientele served? These incentives have far-reaching productivity ramifications but are often overlooked at the state or multicampus system level. As part of the P•Q•P process, IBHE significantly revised its
statewide program review and planning processes to emphasize state-level issues and policies which support and focus on priorities identified at the institutional level.

States also can support inter- and intrastate cooperatives that expand access to services and lead to more effective resource use. For example, states and geographic regions can save money through joint purchasing programs in such areas as telecommunications services, property and liability insurance, and technology equipment. States can find utility in student exchange and tuition reciprocity agreements with other states. Institutions can benefit from joint efforts to develop curricula delivered through computer- and telecommunications-based technologies.

Productivity improvement involves risk to institutions by colleges and universities. If states and systems expect institutions to capitalize upon productivity-enhancing opportunities, they will need some protection from the adverse effects of potential loss of “market share,” that is, some assurance that their core services and support will continue. From the state level, institutions also may need “political cover,” active support for local leadership and ways that allow institutions to reap the benefits of their efforts. For example, in Illinois all cost savings resulting from P•Q•P remained with the campuses for reinvestment in higher priorities. This mechanism helps to empower institutional leaders to take the initial risks and enables them to reward support from important campus-level and community-based constituencies.
THE RESULTS

In terms of dollars reinvested in higher priorities, P•Q•P has been a short-term success. As indicated on Table 2, Illinois public universities and community colleges have allocated close to a quarter of a billion dollars as a result of P•Q•P during the first three years of the initiative. These reallocations have been reinvested in areas such as improving undergraduate education, enhancing salary competitiveness and other institutional priorities, such as minority student achievement, technology enhancements, deferred maintenance and library support. This amount represents approximately 10 of overall state appropriations for higher education (which includes tuition revenues collected by public universities and allocations for student financial aid).

Table 2
Illinois Public University and Community College Reinvestment of Resources (dollars in thousands)

<table>
<thead>
<tr>
<th></th>
<th>FY1993</th>
<th>FY1994</th>
<th>FY 1995</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Universities</td>
<td>$39,655</td>
<td>$38,980</td>
<td>$40,303</td>
<td>$118,938</td>
</tr>
<tr>
<td>Community Colleges</td>
<td>$65,200</td>
<td>$17,429</td>
<td>$40,100</td>
<td>$122,729</td>
</tr>
<tr>
<td>Totals</td>
<td>$104,855</td>
<td>$56,409</td>
<td>$80,403</td>
<td>$241,667</td>
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</table>

Table 3 summarizes the sources of reinvested funds at public universities during fiscal year 1995, and Table 4 summarizes how these reinvested resources were used.

Table 3
FY 1995 Sources of Resources for Reinvestments at Public Universities (dollars in thousands)

<table>
<thead>
<tr>
<th>Improvements in Instruction</th>
<th>Improvements in Research and Public Service</th>
<th>Improvements in Institutional Productivity</th>
<th>Improvements in Administrative Productivity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,375</td>
<td>$3,815</td>
<td>$12,510</td>
<td>$13,602</td>
<td>$40,303</td>
</tr>
</tbody>
</table>

Table 4
FY 1995 Reinvestment of Resources at Public Universities (dollars in thousands)

<table>
<thead>
<tr>
<th>Undergraduate Ed</th>
<th>Minority Achievement</th>
<th>Salaries</th>
<th>Library</th>
<th>Technology</th>
<th>Equipment</th>
<th>O&amp;M</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,336</td>
<td>$663</td>
<td>$12,300</td>
<td>$1,527</td>
<td>$4,947</td>
<td>$3,132</td>
<td>$3,405</td>
<td>$7,034</td>
<td>$40,303</td>
</tr>
</tbody>
</table>
As indicated, the largest source of dollars for reallocation was from administrative functions, while the highest priority uses of reinvested dollars were salary competitiveness and improvements in undergraduate education.

Illinois colleges and universities also demonstrated significant results in eliminating lower priority instructional programs in the early stages of P•Q•P. Community colleges discontinued over 400 small or low-priority programs during their initial review under P•Q•P; public universities eliminated 68 (about 36) of the 190 degree programs and academic units initially recommended for discontinuation by IBHE. At the same time, however, the universities eliminated an additional 79 programs that they themselves determined were of lower priority than some of those recommended by IBHE. In total, public universities discontinued 147 programs and academic units between 1992 and 1994, representing 77 of the total recommended for elimination by IBHE.

For many campuses, the elimination of degree programs does not result in significant resource savings in the short term because of the need to continue essential courses, reallocate tenured faculty and other rigidities built into the institution. While public universities eliminated fewer degree programs than IBHE recommended, they also eliminated 42 academic units (i.e., departments, colleges, and research and public service centers and institutes), a far larger number than recommended. Although enrollment trends and supply-demand imbalances (which are degree program related) capture attention in the context of statewide priorities, institutions realize that significant dollars can be reallocated only as a result of reducing or eliminating organizational units.

Perhaps the most significant outcome of the P•Q•P initiative is the recognition received from external constituents that higher education is attempting to be accountable and to use resources effectively. This has been particularly important in terms of the support received from the governor and legislature, which together fully funded IBHE’s operating budget recommendations in fiscal years 1995 and 1996. In announcing his fiscal year 1995 budget for higher education, Governor Jim Edgar stated, “I am delighted to support this funding because it not only enhances the affordability of higher education, but also recognizes the unique effort by the state universities and colleges to assure that the money we have sent to them is spent wisely and productively.”

In announcing his fiscal year 1996 budget Edgar said, “Reforms in higher education and full funding go hand in hand . . . . Because taxpayer dollars are being used more effectively at state universities and colleges, I have been pleased to fully fund IBHE's budget request for the last two years.” And yet again for the 1997 budget, Edgar stated, “I continue to emphasize that high-quality educational programs require wise and effective use of state resources. I applaud your Priorities, Quality and Productivity initiatives and the results achieved which improve the efficient and targeted use of available resources.” It also should be noted that in all three fiscal years, the legislature appropriated the funds recommended by IBHE and in the governor's proposed budget.
Restructuring of Productivity Improvement Processes

A central concept of P•Q•P is the need to focus on the most important priorities at every level within higher education. This idea is often articulated, but seldom implemented in a meaningful way. Illinois has attempted to get beyond the “high sounding” language of institutional mission statements, which are always difficult to operationalize. Through the development and regular review of “Priority Statements,” both institutions and the state coordinating board are forced to choose potential tradeoffs.

For example, when questions related to program expansions and reductions are addressed, priority statements provide the basis for “making choices on what we must stop funding in order to pay for those things which we cannot allow to be underfunded.” Similarly, when concerns about program quality are raised as a result of program reviews, the decision of whether the program should be eliminated or strengthened should be made on the basis of the program's overall importance to meeting public needs. Priority statements articulate an institution's distinctive strengths and contributions, and thereby provide the basis for determining the centrality of individual programs. Priority statements also provide the foundation for strategic planning, budget development, program review and development of new programs.

In 1994, IBHE asked each institution to translate its mission into specific statements of focus and priorities that could be used in the ongoing processes of planning, budgeting and program review. These statements were reviewed by the board in September 1995 and are now a key consideration in the board's decisions and recommendations regarding new programs, budget allocations, program reviews and policy directions.15

IBHE also modified its program-review procedures to better align them with P•Q•P. One key modification is that all programs within a discipline or field of study will be reviewed by all institutions within the same year. This allows program priorities and capacity judgments to be considered on a statewide basis, which is not possible when programs within a given discipline and instructional level are reviewed independently at the campus level. The board's program-review procedures also provide for a statewide study of the discipline in the year prior to reviewing programs in the discipline at the campus and governing board levels. This modification was designed to place campus-level reviews into the context of statewide priorities. It also serves to clarify the role of IBHE in the program-review process by emphasizing the board's unique role of bringing a statewide perspective to the process.

Specifically, the board annually adopts steps for achieving statewide priorities and capacity adjustments in the disciplines scheduled for review at the campus and academic-unit levels in the subsequent year. These steps are similar to those carried out during the first several years of the P•Q•P initiative. The difference, however, is that they would be carried out on a regular, systematic basis within the annual program-review process. More important, they place responsibility for taking the initiative on individual program decisions clearly at the campus and governing board levels within a timeframe that allows for meaningful consultation and input at all levels. They also emphasize the role of IBHE is to bring a statewide perspective to the P•Q•P process.
FUTURE ISSUES AND CHALLENGES

As Illmois looks to the future, a number of issues and challenges must be addressed to sustain P•Q•P and achieve long-term benefits. These include faculty buy-in for the process, achieving partnerships and resource sharing, linking P•Q•P to state budgets and financial incentives, and rethinking organizational roles and structures.

Faculty Involvement and Commitment to P•Q•P

Nothing has a greater impact on productivity and quality than where faculty place their priorities and how they use their time. This was the basis for the board's productivity guidelines related to “Staffing Patterns” and “Faculty Workload,” although no explicit attention was given to implementing these guidelines until September 1993. At that time, IBHE received a report defining issues related to faculty roles and responsibilities. As a follow-up to this report, the board sponsored two workshops in early 1995 to define further issues related to faculty roles and responsibilities, to give statewide visibility to these issues and to encourage institutions to address them. Approximately 150 faculty and academic administrators attended.

The Board of Higher Education's Faculty Advisory Committee (FAC) provided leadership in addressing these issues from the outset. In addition to working with the board's staff in preparing the 1993 report, the FAC prepared three position papers entitled “Defining Quality,” “Quality and Faculty Productivity” and “Investing in Undergraduate Education.” Subsequent workshops on faculty roles and responsibilities were held in spring 1995 and 1996.

Following the initial workshops, FAC presented a report to IBHE suggesting future steps that could be taken to encourage campuses and governing boards to launch initiatives and to refine or redirect continuing efforts to enhance faculty productivity. Included among these steps were recommendations that colleges and universities: (1) reexamine faculty hiring, compensation, promotion and tenure policies to ensure consistency with institutional mission; (2) develop long-range plans to increase faculty contributions to institutional missions and launch initiatives in such areas as faculty development and effective incentive systems within the context of their long-range plans; and (3) develop meaningful and reliable assessments of faculty work to better understand and support faculty contributions. IBHE requested colleges and universities to formulate plans to enhance faculty contributions to institutional missions based on these suggestions, and in November 1995 a report on actions taken by campuses and governing boards was presented to the board.

Subsequently, the FAC devoted attention to defining faculty roles in P•Q•P. Despite groundwork laid for faculty to be a major force in P•Q•P, grassroots involvement has been difficult to achieve. Ultimately, P•Q•P will not attain its full potential without a high level of faculty commitment and involvement. To accomplish this, the board intends to support and integrate faculty input processes as a major component of P•Q•P in the coming years.
Partnerships and Resource Sharing

Productivity gains will increasingly rely upon sharing resources and establishing partnerships, both across academic and administrative units within institutions as well as across institutions. Several factors contribute to this. First, resource requirements associated with such areas as instructional technology, workforce development needs of corporations and the health care needs of rural communities exceed the capacity of most colleges and universities to “go it alone.” Second, institutions can leverage their contributions by drawing upon the resources, geographic positioning and capabilities of other organizations. For both resource and service reasons, it often is advantageous for colleges and universities to form alliances.

As one example, the State of Illinois has invested close to $50 million in an interactive voice-video network to be shared by all state higher education institutions as well as businesses, schools, health-care facilities and others. To maximize the return on this public investment, colleges and universities need to develop and use these technologies in cooperation with other institutions, particularly in the area of instructional delivery. Even in areas where an institution's resources and capabilities are adequate to move forward independently, its expertise can help other colleges and universities improve their productivity by sharing the leading-edge developments.

In another area, agriculture extension is frequently cited as an exemplary model for successful cooperation and out-reach efforts. The principal reason given for the success of agriculture extension is its ability to link the expertise and research findings of the land-grant university in a direct and timely way to the needs of farmers and communities. Clearly, agricultural extension would never have succeeded to the extent it did without a “local presence” — the agent. It was the agent the farmer knew and trusted. Another frequently overlooked ingredient to success was local cost sharing in the form of county board matching funds. The importance of local cost sharing is that local priorities are focused upon as opposed to focused on some abstract understanding developed from afar. Higher education would do well to try to replicate these basic ingredients in other areas of outreach. To do so requires establishing alliances with other institutions that can offer special contributions, as well as with institutions and other organizations geographically positioned to provide a local presence and resources to cooperative ventures.

Colleges and universities need to overcome the tendency to view themselves as self-contained enterprises down to individual campus units. A key productivity-improvement strategy in the future must be to capture the potential of partnerships and resource-sharing opportunities.

Budget Functions and Incentives

Priorities, quality improvement and productivity should be linked explicitly to budget development. In Illinois, state budgets provide the incentives to move P•Q•P priorities forward in a timely manner. IBHE's fiscal year budget recommendations emphasize programmatic directions and provide explicit state support for priorities established through statewide policy studies. In recent years, support has been provided specifically to address concerns about affordability, workforce development and technology. Similar incentives and programmatic priorities need to be incorporated in budget development at the governing board, campus and academic-unit levels.
The guidelines for improving productivity of administrative functions suggest a number of approaches for using campus- and unit-level budget processes to generate incentives for productivity improvement. Such approaches encourage organizational units (administrative as well as academic) to use resources wisely by giving them greater control over resource use and making them accountable for results. Giving these units flexibility to purchase services wherever they find the best values, whether on-campus or off, also can lead to better resource use.

In the future, higher education at all levels needs to reexamine the ways resources are allocated, whether these be explicit policies or “the way it has always been done.” At the state level, for example, budget protocols and formulas should be reexamined in the context of productivity improvement. Similarly, staff benefit packages could be improved to better serve employees and reduce costs. On campus, allocations for salary and promotion, as well as tenure policies, need to be reconsidered in the context of making sound long-range investments in human resources.

**Reexamining Organizational Configurations and Roles**

The key questions for P•Q•P's future directions involve how to redefine timeframes; engage governing boards, institutional leadership and faculty; and sustain the process of refocusing priorities without losing momentum. Answering these questions in new ways will never be easy. Individuals directly responsible for a program have greater insights as to quality and how to improve productivity than those several levels removed. Unfortunately, people directly involved with a program or functional area are usually reluctant to make hard choices about its future. This resistance, however, is fading as faculty and campus leadership begin to implement their perspectives on P•Q•P. Though often quite different from statewide approaches, these initiatives need to be supported when positive results are attained. Institutions need to be supported in developing new organizational configurations, since reconfiguring organizational boundaries can often drive change. Institutions also need to be encouraged to use their own mechanisms for bringing about change, including renegotiating contracts and other long-term commitments.

IBHE, for its part, will continue relentlessly to remind higher education what P•Q•P is about: “We must choose to support quality and eliminate less effective programs. Acting on priorities means that we put our support behind those things most important to our mission.” The board brings to the process a distinctive perspective — that is, an understanding of what is important on a statewide basis and how the different priorities of different sectors and institutions can best be pursued and integrated in a way that makes them mutually supportive.

In the end, P•Q•P cannot be sustained simply as the means of addressing a short-term budget crisis or of weeding out weak or duplicate programs through a review process managed by IBHE. Rather, P•Q•P can be sustained only if it draws in and empowers Illinois decisionmakers at many levels of higher education to acknowledge and act on the complex principles and difficult challenges posed by the P•Q•P initiative. When this is done, P•Q•P will become the very essence of decisionmaking at all levels within Illinois higher education.
ENDNOTES

1 Letter from Arthur F. Quem, chairman of the Illinois Board of Higher Education (IBHE) to presidents and chancellors of Illinois colleges and universities (October 1, 1991).
6 For an overview of these developments, see the Illinois Board of Higher Education, Information Systems, Agenda Item #12 (Springfield, IL: IBHE, 1990).
9 IBHE, Undergraduate Education Policies — Part A: Enrollment, Transfer, and Degree Patterns of Public University Baccalaureate Recipients (Springfield, IL: IBHE, 1993).
11 ___, Serving Under served Areas Through Off-Campus Coursework and Tele communications (Springfield, IL: IBHE, 1996).
13 ___, Productivity Improvements in Intercollegiate Athletics (Springfield, IL: IBHE, 1995).
15 ___, College and University Priority Statements (Springfield, IL: IBHE, 1995).
17 ___, Faculty Roles and Responsibilities — A Status Report (Springfield, IL: IBHE, 1994).
18 ___, Faculty Roles and Responsibilities (Springfield, IL: IBHE, 1995).