

# **IMPROVING INSTRUCTIONAL QUALITY** **Focus on Faculty Development**



The logo of the Asian Development Bank (ADB), consisting of the letters 'ADB' in white serif font on a black square background.

ADB

# **IMPROVING INSTRUCTIONAL QUALITY**

## **Focus on Faculty Development**

December 2011

---

**HIGHER EDUCATION IN DYNAMIC ASIA**

---

Asian Development Bank

© 2011 Asian Development Bank

All rights reserved. Published in 2011.  
Printed in the Philippines

ISBN 978-92-9092-519-4  
Publication Stock No. RPS124228

Cataloging-In-Publication Data

Asian Development Bank

Improving instructional quality: focus on faculty development.  
Mandaluyong City, Philippines: Asian Development Bank, 2011.

1. Higher education. I. Asian Development Bank.

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB), its Board of Governors, or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

ADB encourages printing or copying information exclusively for personal and noncommercial use with proper acknowledgment of ADB. Users are restricted from reselling, redistributing, or creating derivative works for commercial purposes without the express, written consent of ADB.

Note:

In this report, “\$” refers to US dollars.

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
Tel +63 2 632 4444  
Fax +63 2 636 2444  
[www.adb.org](http://www.adb.org)

For orders, please contact:  
Department of External Relations  
Fax +63 2 636 2648  
[adbpub@adb.org](mailto:adbpub@adb.org)

# Contents

Abbreviations	iv
Foreword	v
Preface	vi
Introduction	1
External Context	5
Growing Concerns about Quality and Accountability	5
Shift toward Privatization	6
Increased Interinstitutional and Cross-National Competition	8
Implications: Relationship of External Context to Internal Efficiency	9
Components that Contribute to Internal Efficiency of Higher Education Institutions in Asia	10
Mission	11
Human and Physical Resources/Inputs	11
The Work of the University	16
Employment Systems	25
Institutional Culture	28
Summary: Internal Efficiency in Higher Education	30
Recommendations	31
Recommendation 1: Improve instructional quality by enhancing the capacity of academic staff	31
Recommendation 2: Continue to focus and differentiate institutional missions within coordinated systems of higher education, and balance resource allocations to support those goals	32
Recommendation 3: Develop university-based research efforts consistent with individual institutional missions	32
Recommendation 4: Improve faculty incentive and evaluation systems	33
Recommendation 5: Strengthen the quality of private higher education	34
References	35
Higher Education in Dynamic Asia: Study Reports	39

# Abbreviations

ADB	Asian Development Bank
HEI	higher education institution
ICT	information and communications technology
Lao PDR	Lao People's Democratic Republic
PRC	People's Republic of China
THES	<i>Times Higher Education Supplement</i>
UIS	UNESCO Institute for Statistics
US	United States

# Foreword

Quality education is essential for creating a sustainable human resource base upon which to build a country's development. Asia is experiencing a growing need for skilled managers and professionals in a variety of fields. Investing in higher education will help developing Asian countries build high-income economies, with the innovation, knowledge, and technology needed to thrive in an interconnected, competitive world.

ADB has accumulated significant experience in providing support for improving education systems in its developing member countries. In response to the growing needs of these countries, ADB is boosting its support for higher education. The changing landscape of higher education requires new thinking and updated practices. Questions central to the issue include: What are the strategic and operational priorities for higher education in the region? How should support be targeted to achieve a high, sustainable impact? How can ADB best assist its developing member countries to substantially raise the quality of and expand access to higher education within a reasonable, yet ambitious, timeframe?

To provide insights into the kinds of changes demanded in higher education, ADB financed a major regional study drawing on the views of subject experts, higher education leaders, regional stakeholders, and participants of an international conference on higher education in Asia.

*Higher Education in Dynamic Asia* is the result of this study. I am confident that it will provide valuable input into the process of higher education reform across Asia. It will also provide critical input into ADB's work in assisting the region to develop the full potential of its people.



Bindu N. Lohani  
Vice-President (Knowledge Management and Sustainable Development)  
Asian Development Bank

# Preface

In many countries in developing Asia, higher education is rapidly expanding, a development that promises economic and social benefits for the countries involved. The challenge remains to increase the number of well-educated higher education graduates with the abilities and skills needed for employment; for citizenship; and for productive, relevant research—without a significant increase in the funding available for higher education. Improving the internal efficiency of HEIs will require the continuing commitment and efforts of government leaders, institutional leaders, and academic staff. Quick interventions are unlikely to have much impact, since HEIs are complex and often resistant to change. A wiser approach, likely to have more impact, will view HEIs as systems in which substantive, long-lasting change requires using multiple strategic approaches.

Using a systems approach, this volume begins with an examination of the external context affecting HEIs in Asia. The analysis then turns to a consideration of key elements of HEIs in Asia as complex organizations: the human and physical resources, including the academic staff who carry out the work of HEIs; key characteristics of the work of teaching, research, and service; the employment systems in higher education, including opportunities for professional development, evaluation processes, and incentive systems; and elements of institutional culture, including norms and values pertaining to autonomy and academic freedom, integrity, and collegiality.

Specific priorities for strengthening the internal efficiency of HEIs are identified, along with the rationale for their importance and recommendations for institutional actions. Recommendations also are made on how the Asian Development Bank and possibly other development partners can target their project support to help HEIs improve their internal efficiency. Recommendations underline the importance of improving instructional quality by enhancing the capacity of academic staff; continuing to focus and differentiate institutional missions within coordinated systems of higher education, and to balance resource allocations to support these goals; developing university-based research efforts consistent with specific institutional missions; and improving faculty incentive and evaluation systems. The recommendations would benefit private HEIs as well as public ones. In addition, to improve the internal efficiency of private HEIs in particular, specific recommendations are made for cultivating cross-institutional collaborative linkages of such HEIs.

This publication, *Improving Instructional Quality: Focus on Faculty Development*, is one of the study reports emanating from the regional technical assistance on Higher Education in Dynamic Asia. It draws on material prepared by Ann E. Austin. Imelda Marquez provided administrative support, Stephen J. Banta provided editorial advice and inputs, and Dorothy Geronimo coordinated typesetting and publication. Many thanks to all for their contributions.

A handwritten signature in black ink, appearing to read "Jouko Sarvi". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jouko Sarvi  
Practice Leader (Education Sector)  
Regional and Sustainable Development Department  
Asian Development Bank



# Introduction

**H**igher education institutions (HEIs) are critically important to the well-being of the countries in which they are situated. In most nations in Asia, higher education is rapidly expanding, a development that promises economic and social benefits. At the same time, expansion is accompanied by challenges and issues that require innovative thinking and policy decisions, dedication from the academic staff and institutional leaders who carry out the work of the HEIs, and thoughtful wrestling with vexing challenges that have no easy solutions. This publication focuses on the internal efficiency of HEIs in Asia, examining their work; the efficiency and effectiveness of that work; and the problems, dilemmas, and barriers they are facing in fulfilling their missions. It also offers recommendations for ways in which governments and HEIs themselves can improve internal efficiency, as well as suggestions for the role that development agencies, such as the Asian Development Bank (ADB), might take in supporting such efforts.

HEIs in Asia are situated in a dynamic environment in which they face an array of expectations. They must meet these expectations while holding costs down and keeping quality high. These expectations include

- offering support for the learning needs of a diverse student body as access to higher education expands;
- providing good teaching and offering up-to-date curricula that prepare graduates for the current labor market as well as for evolving workplace and societal needs;
- producing research that leads to innovation and economic growth in an international, competitive world market; and
- preparing citizens to understand their roles as leaders, citizens, and family members in diverse local and global societies.

Internal educational efficiency concerns both quality and cost-effectiveness. Internally efficient educational institutions optimally allocate and use available resources to improve the quality of education and increase the products of the educational process. Efficiency is greatest when the inputs to an educational organization maximize the outputs produced. Inputs relevant to internal efficiency include human and physical resources, such as facilities and equipment, while outputs refer to student learning outcomes and achievement (Hanushek 2001, Haddad and Jurich 2002, Tsang 2002). Qualitative internal inefficiencies may be lowered by such issues as weak preparation and teaching effectiveness of instructional staff, inappropriate or outdated curricula, inadequate availability of instructional materials and resources, and employment systems in which expectations and rewards are out of alignment. Quantitative internal inefficiency may be evident in low student completion rates, low student/instructor ratios, and low evidence of student achievement of intended learning outcomes.

The central argument of this publication is that the internal efficiency of HEIs in Asia is not sufficiently robust to enable nations' goals to be fully met. In recent years, access has widened, resulting in significant enrollment growth. However, emphasis on access (maximizing the student flow) to higher education is not enough to ensure internal efficiency and the production of desired outcomes. The challenge remains to increase the quality and quantity of the products of higher education—well-educated graduates and productive, relevant research—without an infusion of higher levels of funding. In response to this challenge, a key priority for governments and HEIs should be *enhancing instructional quality* by improving the capacity of instructional staff. HEIs must not only provide wide access; they must offer those admitted a high-quality learning environment and produce graduates with the abilities and skills needed for employment and citizenship.

This publication also highlights four other priorities that will enhance internal efficiencies:

- focusing and differentiating institutional missions within coordinated systems of higher education, and balancing resource allocations to support those goals;
- strengthening university-based research efforts consistent with institutional missions;
- improving faculty incentive and evaluation systems; and
- strengthening the quality of private higher education.

This publication takes a systems approach to analyzing HEIs as complex organizations, comprised of various subsystems, processes, and components (Weick 1976, Birnbaum 1988, Cohen and March 1991). As highlighted in Figure 1,<sup>1</sup> the components of the organization addressed include (a) human and physical resources (inputs), including academic staff and facilities and equipment; (b) work activities of the institution, including the nature and process of carrying out teaching, research, and service; (c) employment systems, including opportunities for professional development, evaluation processes, and incentive and reward systems; and (d) institutional culture, including norms and values pertaining to autonomy and academic freedom, integrity, and collegiality. Leadership and governance processes, including administrative processes and internal institutional governance processes, also constitute a component of the organizational system; however, this component is discussed in depth in another publication. Figure 1 also shows how HEIs are situated within external contexts with factors that affect their internal efficiency and that impact the ways in which institutional outputs are valued and assessed. While acknowledging that the external environment includes a number of factors relevant to higher education (as discussed in another publication), this volume highlights four specific factors in the external environment with particular implications for internal efficiency: (a) demand for higher education, (b) quality and accountability, (c) privatization, and (d) competition and globalization.

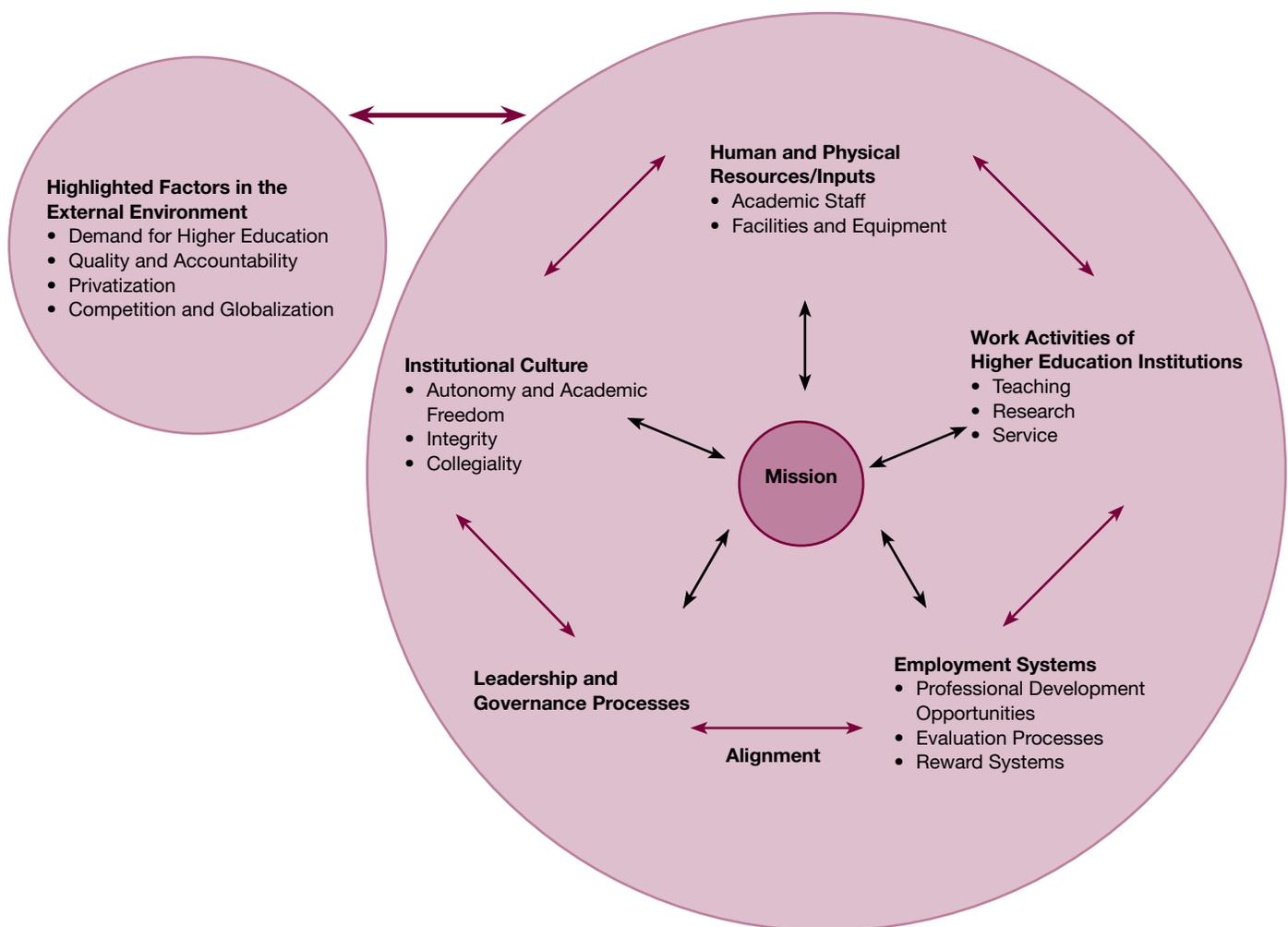
As a prelude to discussing the internal efficiency of HEIs in Asia, one important caveat is in order. While the countries of Asia have distinct and noteworthy histories, cultures, and recent current events, this publication does not include an in-depth study of any country. The overall

---

<sup>1</sup> This approach is informed by and adapted from Austin (1998a, 1998b), who discussed a conceptual framework for organizational change; the multiframe model of organizational analysis of Bolman and Deal (1991), which highlights four frames (structural, human resources, political, and symbolic) as “lenses” through which to understand organizational issues; and the work of Eckel et al. (2001) and Kezar (2001), which explains various models for understanding organizational processes.

purpose of these publications is to examine key trends and issues with relevance to many of the countries in the region. The specific target countries for this analysis are Cambodia, Indonesia, Lao People's Democratic Republic (Lao PDR), Malaysia, Philippines, Sri Lanka, Thailand, and Viet Nam. At times in the analysis, it is useful to group some countries. Cambodia, Lao PDR, and Viet Nam are postconflict countries engaged in developing their HEIs within contexts of strong central government control. Indonesia, Malaysia, Philippines, Thailand, and, to some extent, Sri Lanka have more developed HEIs, with some degree of autonomy, and are positioned to have more presence at the current time in the international higher education landscape. The People's Republic of China (PRC) and India, large countries engaged in huge expansion of their higher education systems, are mentioned from time to time for purposes of comparison but fall beyond the primary focus of this study. Many of the smaller countries in the region also have not been examined in depth for this publication.

**Figure 1 Overview of Components of Internal Efficiency in Higher Education Institutions**



The publication is organized in three parts:

- a brief discussion of three key trends in the external context relevant to internal efficiency (more extensive analysis of the external environment is provided in another publication),
- analysis of key subsystems and components of HEIs and their relevance in regard to internal efficiency, and
- recommendations for strengthening the internal efficiency of HEIs in Asia.

# External Context

**H**ElIs function within a broad national and global context. The external environment affects the resources (inputs) available to the institution, the employment systems of the institution, and the culture within which the work is done. The external environment also frames the expectations for the outcomes or products of the university's work—the kind of graduates a university should produce, the kind of research it should do, and the kind of roles it should play in society. One key development in the external context is the increasing demand for higher education as the economies of Asian nations grow and the numbers of young people increase. This publication argues that access and expansion must be coupled with attention to instructional quality in order to ensure that those who enter HEIs actually reach the educational outcome levels that such access is intended to achieve. In fact, some countries may need to reduce the pace of expanding access for a period of time in order to ensure that educational quality catches up with wider opportunity.

In addition to the growing demand for higher education, three other trends in the external context merit specific attention in this publication, as each relates directly to internal efficiency:

- growing concerns about quality and accountability,
- the shift toward privatization, and
- increased interinstitutional and cross-national competition coupled with the push for world-class universities.

## Growing Concerns about Quality and Accountability

Accompanying the expansion of access to higher education are voices of concern about the quality of the learning experience that students encounter once they enter HEIs. Unemployment rates invite questions about internal efficiency and particularly about the quality of preparation students receive for the workplace. Examples are available from many countries throughout Asia.

Countries such as PRC, Indonesia, and Thailand can claim that more than one-fifth of employees hold tertiary level degrees (World Bank Blog 2010). Nevertheless, employers lament that prospective employees do not have the attitudes and skills needed in a global economy. One estimate suggests that only about 10% of the 1.6 million engineers in the PRC have the qualifications appropriate for work in multinational companies (Hvistendahl 2009). In Sri Lanka, many graduates, particularly those from distance education and university external degree programs and those with arts and management degrees, cannot find jobs in the private sector. Reasons include insufficient English language and information technology skills and the inability to adapt well to work environments. Graduates end up working in public “make-work schemes,” unable to find jobs in the private sector (World Bank 2009). Similar reports about

higher education in Cambodia emphasize that rapid expansion has been coupled with a lack of quality control so that graduates do not have the skills needed in the workplace (Chealy 2006). While firm figures are elusive, estimates suggest that up to 90% of graduates from private institutions in Cambodia are unemployed 1 year after graduation or take jobs outside their fields; the comparable figure for graduates from public institutions is only 3% (Ford 2006).

A way to summarize this problem is “not enough skilled workers, high rates of graduate unemployment, frustration all around despite high rates of economic growth” (World Bank Blog 2010). One hypothesis is that unemployment rates may be due to the low quality of tertiary education and insufficiently relevant curricula. Another is that graduates may have unrealistic expectations about labor market opportunities. Both may be true.

In response to these concerns, most countries have or are developing formal mechanisms to assess quality. Strategies include encouraging internal institutional programs to monitor and assess quality, and developing national standards; expected outcomes; and systems of assessment, measurement, and accreditation. A number of countries are developing national qualifications frameworks and are wrestling with strategies to honor diversity while upholding recognized standards of quality (UNESCO 2008). For example, in Cambodia in 2003, a royal decree established the Accreditation Committee of Cambodia. Despite some early problems, it has made progress, including defining minimum standards for all HEIs, mandating that all HEIs must be accredited to confer degrees, and recruiting external assessors (Chealy 2006, Ford 2006). In Malaysia in 2007, an act of Parliament established the Malaysian Qualifications Agency to serve as a national regulatory body and to provide accreditation, based on international standards, for certificates, diplomas, and degrees awarded by private universities (UNESCO 2008).

## Shift toward Privatization

As demand for higher education increases, privatization is seen as a practical way to handle larger enrollments. In many institutions, public funding is not keeping pace with increasing enrollments (Rizvi et al. 2005). Several strategies are used in response. Many universities, even those that are public, now charge full or partial tuition recovery costs. Additional ways in which universities raise extra funds are by conducting research for industry, publishing textbooks and study guides, selling the professional services of academic staff, and levying special fees (Bray and Thomas 1998, cited in Welch 2007). Additionally, an emerging trend is the blurring between public and private HEIs as public institutions are urged to find more private sources to supplement their support from the government (UNESCO 2008: 3). The most noteworthy form of privatization, however, is the establishment of private HEIs.

Statistics from several countries provide examples of the shift toward privatization. Indonesia and Philippines (as well as India) now have more than 50% of their higher education enrollment in private institutions (UNESCO Institute for Statistics [UIS] Education Database [May, 2005], cited in Kapur and Crowley 2008). In Indonesia in 1975, private institutions numbered less than 400; by 1995, there were 1200, and by 2007, approximately 1800 (Indonesian Statistics 2002, cited in Welch 2007). Lao PDR, Malaysia, and Mongolia have 25%–50% of their students attending private institutions (UIS Education Database [May, 2005], cited in Kapur and Crowley 2008). In Malaysia, there were no private universities in 1995, while in 2008 there were almost

600 (UNESCO 2008:2). Twinning arrangements with international HEIs (discussed in depth in another publication) are often part of the private sector arrangements in Malaysia. In Cambodia, the presence of private sector HEIs is quite new, but growth has been rapid and uncontrolled. By 2004, 83% of the total higher education enrollment was in private and fee-paying institutions, including both nonprofit and for-profit (Sloper 2004, cited in Chealy 2006). Some countries are still early to this trend. Private higher education is quite new in Sri Lanka, with most private institutions having fewer than 1000 students (World Bank 2009), and Viet Nam has little private higher education (UIS Education Database [May, 2005], cited in Kapur and Crowley 2008).

Explanations for this increase in private higher education include claims that it can provide greater efficiency, more accountability, and opportunities for students to have more access and choice. Supporters assert that private higher education can be more responsive to market demands and, thus, can lower graduate unemployment rates; and that it increases competition and, thus, quality. An additional assertion is that private HEIs reduce the financial burden on governments for providing higher education (Wilkinson and Yussuf 2005). Supporters of privatization in higher education see it “as a practical solution to the problems of increased demand” (Rizvi et al. 2005:29). These claims, however, are met with strong concerns and counterarguments.

The greatest concern—and one that is very relevant to this publication—pertains to quality. Asia has the majority of private HEIs in the world—but the private sector is lowest in the prestige order among academic institutions in the world. In most cases, the private sector provides *access* at the expense of *quality* (Altbach 2010). Some characterize private HEIs as “at best teaching shops” (Kapur and Crowley 2008:18). As discussed later in regard to faculty issues, many of the academic positions in private HEIs are not full-time. Overall, academic staff are less well credentialed than their counterparts in public education, and they are typically not concerned with knowledge creation. Furthermore, many private institutions are situated outside major living areas, perhaps one reason that they tend to be less well regulated than public universities. One result of less regulation is that they often have inadequate facilities, laboratories, and libraries (Welch 2007).

A second concern is that the private institutions undermine equity even as access expands. There are concerns that in some cases “poor students are seen to have access only to poor quality private higher education” (UNESCO 2008:6). Furthermore, private institutions, particularly those that are respected, often have high fees. In Indonesia, for example, the per capita income in poorer regions, where private institutions tend to be located, is about one-tenth of the per capita income in Jakarta. Whereas at public HEIs fees range from about \$100 to \$400, at private institutions the fees range from \$100 to \$1000 (and fees are only 15%–20% of the total costs) (World Bank 1996:3, cited in Welch 2007).

A third concern is that, with their orientation to the labor market, private institutions emphasize private benefits from higher education rather than the social benefits that could accrue from research productivity and attention to broad learning outcomes (Wilkinson and Yussuf 2005). In short, critics note, privatization emphasizes knowledge as a marketable commodity rather than a social good (Lee 2003). However, the apparent attention to market demands does not necessarily result in high employment rates for graduates, due to skepticism about the quality of their credentials.

Overall, the growth of the private sector in higher education is a major development in response to demands for expansion of higher education. But while the impact and benefits of private HEIs vary by national context, there is widespread concern about the quality, efficiency, and effectiveness of the private sector.

## Increased Interinstitutional and Cross-National Competition

At the same time that the rapid expansion of higher education and the trend toward privatization have raised concerns about quality, countries are experiencing heightened competition within the higher education sector. This competition can impact institutional quality and international efficiency in several ways.

Within a country, institutions compete for funding, qualified students, and physical resources. While competition might be expected to lead universities to focus on improving their internal efficiency, it can sometimes undermine quality. In Cambodia, for example, the considerable competition among private institutions is leading to the lowering of fees. This trend toward reduced revenue, coupled with inattention to applying regulations that would support quality, results in weak institutions, expressed in high unemployment of graduates (Ford 2006).

In the international context, countries race to create world-class universities to engage in cutting-edge research that contributes to economic growth, innovation, and international leadership. Garnering prestige in the international knowledge economy is a motivating factor. International rankings of universities report the results of the ongoing institutional competition for international recognition. The rankings published annually by the *Times Higher Education Supplement* (THES) and the Shanghai Jiao Tong University are followed closely. The stakes are high. For example, when the September 2005 posting of the THES rankings revealed that the top two Malaysian universities had fallen about 100 places, due to changes in the calculation system, the repercussions included a call for a royal commission to explore what had happened. Additionally, the Vice Chancellor of the University of Malaysia resigned (Salmi 2009).

Developing world-class universities is a formidable challenge. Altbach has summarized the situation: “everyone wants one, no one knows what it is, and no one knows how to get one” (Altbach 2004a, cited in Salmi 2009:4). Research on these elite institutions, however, highlights some essential ingredients. They need a critical mass of highly capable faculty members and students; top-notch facilities and resources that support high-level research; a range of disciplinary strengths; competitive remuneration for faculty; an environment that values meritocratic advancement, collaboration, and academic freedom; and government support for innovation and institutional autonomy (Salmi 2009, Altbach 2010, Levin 2010b).

Whether national resources are best directed toward the creation of world-class universities is a debatable question. While some countries can probably succeed in this goal if they focus their resources on specific institutions, it is not necessary for every institution to strive to be “world-class” (Levin 2010b). In his thorough analysis of the trend and aspirations toward world-class institutions, Salmi (2009) argues that a wiser strategy for some countries may be to focus the talents and resources in HEIs on local communities and their needs. In fact, he suggests, creating HEIs whose quality outpaces the level of opportunities open to graduates within the country may intensify the process of brain-drain to other countries.

Certainly not all HEIs can be “world-class.” However, the press for status and ranking is part of the external environment affecting each institution’s internal efficiency. Some institutions may make decisions based on aspirations for higher status and ranking; others may struggle for resources to meet their missions in national contexts, whereas other institutions are targeted for special support.

### **Implications: Relationship of External Context to Internal Efficiency**

The work internal to a university never occurs in a vacuum. The external environment creates expectations and conditions in which the institutional work occurs. Three trends in the external environment are particularly relevant to analysis of the internal efficiency of HEIs in Asia and identification of strategies to strengthen them: First, the dramatic increase in enrollment in recent years across Asia has created a situation wherein the quality of the learning experience does not match the promise associated with enrollment. Universities and their academic staff face large numbers of students with diverse learning needs. Employers are unconvinced of the quality of graduates’ qualifications. The time has come to improve instructional quality to match the successes of efforts to expand access. Second, the shift toward privatization is creating a large set of institutions where quality is compromised by low faculty credentials and commitment. These institutions must improve if they are to optimize their contributions to national education goals. Third, the competition among institutions is leading to cost-cutting strategies that can ultimately undermine educational quality and internal efficiency. Furthermore, international competition encourages countries to allocate substantial resources to a few institutions designated as research pillars, often at the expense of less prestigious institutions that carry the bulk of the teaching mission. As a set, these three trends in the external environment, as they affect HEIs, make analysis of internal efficiency both timely and important.

# Components that Contribute to Internal Efficiency of Higher Education Institutions

This chapter analyzes the internal efficiency of HEIs in Asia, guided by the conceptual framework presented in Figure 1. Each component of the framework is analyzed in regard to trends, themes, and concerns. Following the analysis of each component in the framework is a summary of implications for internal efficiency. (While leadership and governance processes constitute a key component in the framework presented in Figure 1, this component is discussed in another publication.)

The information and analysis in this chapter are based on a review of the relevant literature as well as the discussion and analysis that occurred in a major regional workshop sponsored by ADB on the topic of “Faculty Development in Dynamic Asia.” That workshop, organized as part of the regional technical assistance on Higher Education in Dynamic Asia and held in June 2010, convened higher education leaders and academic staff from Cambodia, Lao PDR, Malaysia, Philippines, Sri Lanka, Thailand, and Viet Nam. Key issues raised in the workshop parallel the major themes in the literature on higher education in Asia (see Table 1). Specific points, examples, and conclusions that emerged in the workshop are indicated in various places throughout this analysis.

**Table 1 Issues, Tensions, and Challenges of Concern regarding Faculty as a Key Resource**

Topics of Concern
<b>Primary</b>
Recruiting and Retaining Highly Qualified Academic Staff
Relationship of Teaching and Research
Opportunities for Professional Development
Evaluation Processes
<b>Additional</b>
Quality of Facilities
Impact of Market Issues on Higher Education
Academic Freedom
National Higher Education Policies
Quality of Students

Note: The issues were identified and prioritized by higher education leaders and academic staff at a major workshop held at the Asian Development Bank in June 2010.

In places throughout this chapter, countries are grouped to indicate similar circumstances. For example, Cambodia, Lao PDR, and Viet Nam are characterized by more central government control of higher education than the other countries, and, thus, issues concerning faculty autonomy are similar across these countries. On other issues, themes or trends play out across all the countries in similar ways, or groupings fall out differently.

## **Mission**

At the center of the diagram depicting key system components in higher education organizations is institutional mission (see Figure 1). An efficient and effective HEI has a clear mission that is supported by the system components. Without a clear mission, an organization's efficiency and effectiveness are compromised. A significant problem confronting HEIs in Asia is the array of conflicting expectations they face. These include pressures to provide higher education for more students and more diverse students, to prepare students for employment in both local and international labor markets, to develop internationally competitive research programs, to contribute to local and national economic development, to do more with fewer resources, to attract new sources of revenue, and to increase quality overall (Chapman 2009). In the face of such potentially conflicting pressures, effective institutions need to clarify their mission and priorities, and align the organizational subsystems and components so that all efforts work together to advance the mission.

## **Human and Physical Resources/Inputs**

The resources of an HEI are its faculty, facilities, equipment, and working environment.

### **Academic Staff**

The academic staff members of an HEI are its greatest resource. They carry out the mission of the institution and largely determine its quality. HEIs need academic staff with solid content knowledge; effective teaching and communication skills; and, if knowledge creation is part of the mission, some level of research competence. Yet, the rapid expansion of higher education in Asia has resulted in a great shortage of qualified academics, a development that seriously threatens quality.

### ***Need for Pedagogical Expertise***

The expansion of access to higher education has increased the need for talented and committed faculty members. Meeting the needs of a wide diversity of students with various learning styles requires faculty members with expertise in using an array of teaching skills. For example, with less-prepared students pursuing higher education, teachers must know how to handle students' remedial needs. In a recent ADB-sponsored regional workshop concerning faculty work in higher education, participants expressed particular concern about the challenges of teaching unmotivated students. They lamented that students do not strive to meet academic expectations, neglect to read and to prepare for class, and follow a culture of passivity that apparently had been acceptable in their primary and secondary education (ADB 2010). In this context, teachers must understand what factors motivate learning and how to apply those motivators within their classrooms. Adults are particularly attracted to the open universities that educate large numbers of students as well as to the external degree programs offered

at many institutions. Adult students often have different approaches to learning than younger students, as well as many demands in their lives, including families and work, calling for their attention. Academic staff who teach adult students should be expert in using effective strategies particularly appropriate for the circumstances and learning needs of this population. Furthermore, teaching with technology or through distance learning requires creative teaching strategies that capture the interest of students across time and space. Viewed as an input into higher education, academic staff need to have the pedagogical expertise to support the learning needs of many different students.

### **Quality Concerns**

Although the need is great for academic staff with excellent teaching skills, the academic profession in Asia varies with regard to faculty members' qualifications. While there are a small number of well-qualified professors, often holding doctoral degrees from foreign universities, the great majority of academic staff have very modest credentials (Altbach 2003). Many are young, particularly those in the private institutions, and come to their academic work with little hands-on work experience. Many have little preparation as teachers. The inability of some to communicate in English is another concern, especially when countries are striving to prepare graduates to work effectively within internationally oriented workplaces.

Many faculty members hold only a bachelor's degree. Those without advanced degrees have not had the opportunity to develop deep-level subject matter expertise or to be exposed to new developments in their fields, shortcomings likely to diminish the quality of their teaching. Furthermore, without specialized knowledge in their fields, as well as the research training that is part of advanced education, they are unprepared to engage in research.

### **Examples**

- In Indonesia in the mid-1990s, within public HEIs, only 30% of the academic staff had degrees higher than the bachelor's, while the comparable figure in private institutions was 11% (World Bank 1996, cited in Welch 2007). In 1997, only 8.6% of academics in public institutions held doctorates, with a lower figure in private institutions (Buchori and Malik 2004).
- In Sri Lanka in 2009, 40% of academic staff held a doctorate, but the variation across institutions was considerable; in the newer institutions the figure was less than 30% (World Bank 2009).
- Malaysia requires that public university academic staff members have master's degrees and has formulated a "medium-term" goal to raise to 75% the number of lecturers who have doctorates (World Bank 2009).

### **Recruitment, Retention, and Salary Issues**

The lack of quality among academic staff is coupled with the difficulty of recruiting staff. While some status is associated with an academic position, salaries are typically not competitive, particularly in comparison with those in private firms and industry (Lee 2003). Academic staff members in Asia are generally part of the civil service system, which restricts salaries to specific scales that cannot compete with other sectors; furthermore, real income for civil servants can fall precipitously when inflation occurs. While academic staff members in Asia often receive compensation and benefits beyond salary, such as housing supplements, medical support,

and car loans, these incentives do not make up for noncompetitive salaries (Lee 2003). When salaries are low in comparison with remuneration in other professional settings, recruitment into the academic profession is difficult. Other opportunities are more attractive.

### **Examples**

- In the Lao PDR, the salaries of university faculty, despite their greater qualifications, are only somewhat more than those of primary school teachers and slightly more than those of upper secondary teachers. Since they are members of the civil service, the government cannot adjust their salaries in the face of significant inflation such as occurred in 1998 (Chapman 2002).
- In Thailand, the move toward autonomous universities means that new faculty members are hired as “university personnel” rather than as civil servants, as was the earlier practice. While salary scales are designed to retain attractiveness, those hired recently into the university personnel system lament the greater benefits (such as lifetime health benefits) perceived to be associated with civil servant status (ADB 2010).
- In the Philippines, not only is initial recruitment into faculty work difficult; retaining staff is a related challenge. Many lecturers in mathematics, science, special education, English, and early childhood education are moving to the United States (US) to work in special education and basic education (ADB 2010).
- In Malaysia, departure from academic positions has risen. In 1990, attrition from the faculty ranks at Universiti Sains Malaysia was 7%, and in 2000, 27% (Lee 2003).

Given the challenges of finding and retaining qualified faculty, what options can institutions pursue? Three routes are typical: hiring their own graduates, seeking faculty members from overseas, and “borrowing” or hiring part-time academic staff. When an HEI hires its own graduates, the staff person knows the culture, expectations, and priorities. However, “inbreeding,” as this practice is called, carries liabilities. The practice limits the new ideas and creativity that often come into an institution with faculty members whose preparation and experience occurred elsewhere. In some countries, where norms of deference to seniors are deeply engrained in the culture, junior academics who studied under the senior staff are likely to hesitate to introduce alternative perspectives or to pursue new avenues of work (Lai and Lo 2007). While hiring from within may make easier the initial transition of a new staff person, the disadvantages have led many well-regarded and long-established universities in other parts of the world to develop informal norms that preclude hiring a graduate until he or she has developed a respected career at another institution.

Academics who have international credentials (especially from Europe, United Kingdom, or US) bring prestige and fresh ideas to a university. Thus, some universities seek expatriates, if they can afford them. While the “brain drain” to other countries has been a concern in Asia, many scholars who have studied overseas now find ways to stay connected with their home countries. Some choose to return permanently to help strengthen higher education at home; others remain abroad but serve as consultants, advisors, or visiting faculty members for short-term periods (Altbach 2003). These academics with international degrees often assume

the role of the “power elite” (Altbach 2003:7); they are respected and knowledgeable about both their own countries and higher education norms and practice overseas. However, while they bring new ideas as well as prestige to an institution, they also may be more oriented to research than teaching (a preference that may not align with actual faculty responsibilities). They also may be perceived as arrogant by colleagues who have not had international experience. Another problem is that expatriate faculty members hired on term appointments may express minimal institutional commitment. They may see their greater priorities as the enrichment of their own credentials in order to be competitive for other appointments elsewhere (Selvaratnam 1994, cited in Lee 2003).

The third source available for institutions seeking academic staff is hiring part-time faculty members or “borrowing” staff members who already hold positions at other institutions. This is a widespread practice in Asia that seriously undermines quality. The next section discusses the prevalence of outside employment for academic staff, which meets a need for institutions trying to fill empty positions while also addressing the interests of poorly remunerated academics seeking ways to enhance their incomes. However, while such an arrangement meets short-term individual and institutional needs, it also significantly undercuts the quality of academic work (teaching, research, institutional citizenship) both at the primary employing institution and at the institution making the part-time appointment. This problem of hiring part-time faculty is especially keen among private HEIs.

### ***Outside Employment***

Even when individuals are recruited to work in HEIs, their focus is often not solely on their primary place of employment. In response to inadequate compensation, many academic staff find employment elsewhere. Those working in public universities commonly moonlight at other institutions, often at the private HEIs.

### ***Examples***

- In Indonesia, “well over half” of public sector academic staff had second jobs teaching or in management at other HEIs, or took other outside employment (World Bank 1996:5, cited in Welch 2007:674).
- An arrangement at the National University of Lao PDR provides an interesting example of the way in which faculty work is combined with outside employment, in this case with the acknowledgement and agreement of the university (Chapman 2002). Facing serious budget constraints that imperil the university’s ability to provide competitive compensation to its academic staff, National University allows faculty to consult or run private businesses out of the university. One form of this arrangement is that faculty members run private instructional programs in the evening in high-demand fields such as English language, for which they charge high tuition. Income from such activities is substantial and helps retain the instructional staff. However, in doing this kind of “extracurricular work” and other forms of consulting, academic staff are less available for advising students who attend the university’s day programs, preparing for teaching their university courses, doing research, or participating in other aspects of university work.

Inadequate compensation in Asian universities is creating a trade-off with immense implications for institutional quality. The compensation for academic work is insufficient and noncompetitive

in most countries unless universities allow academic staff to take on outside employment. Yet the arrangement results in little time for faculty interaction with students, in short office hours, and in constrained time and attention for teaching preparation and other academic responsibilities.

### ***Academic Staff at Private Universities***

Problems of faculty shortages, insufficient qualifications, inadequate compensation, and low institutional commitment are even worse at private institutions than at public ones. While the private institutions help countries meet the rising demand for higher education, the quality they offer is typically low. Private HEIs hire many part-time lecturers to save costs and to manage in the face of shortages of qualified full-time academic staff (Lee 2003). Many of the part-time academic staff at private institutions are employed full-time as teachers elsewhere, often at public institutions. Others are senior academic staff who have retired from public universities, or individuals working full-time in industry or business. Typically, the faculty at private institutions are less qualified in terms of degree attainment than their counterparts at public institutions.

### ***Examples***

- With so many academic staff working multiple jobs and some even holding two full-time positions, it is hard to find accurate figures about the number of faculty at private HEIs (Welch 2007). However, figures from Malaysia suggest that the range in that country may go from 10%–20% at established institutions to 80%–90% part-timers at newer, smaller colleges (Lee 2003).
- In Viet Nam, the new institutions in provincial areas hire lecturers from state-owned universities. Regulations state that 30% of a university's lecturers must be regular staff on the institution's payroll. However, universities cannot find enough staff to meet this standard, so they list "borrowed names" as part of their permanent faculty. A single lecturer might appear on the faculty lists at several universities (Chronicle of Higher Education 2008).
- Research shows that students learn more and are more likely to persist when they have opportunities to interact both formally and informally with their teachers (Astin 1977, Tinto 1993, Braxton 2000). Yet, when academic staff members are holding two or more positions, they cannot give much time to meeting with students, preparing their classes, engaging in continuing education, or developing even modest research programs. The fact that many faculty members, especially at private universities, have low academic credentials, constrained time, and multiple responsibilities raises challenges related to quality.

### **Facilities, Equipment, and Physical Working Environment**

The availability and quality of physical resources are another input relevant to educational efficiency and quality. Some universities that are targeted to become internationally competitive provide working environments similar to those in well-resourced western countries. Overall, however, while there are some variations across countries and institutions, the quality of the physical infrastructure in HEIs in Asia, including facilities and equipment, is generally less favorable than is typical in universities in the northern hemisphere. Poor equipment and facilities and delayed maintenance compromise teaching and research quality (Altbach 2003, Welch 2007). Both public institutions and private ones often lack appropriate laboratories and

classroom spaces. In lower income countries especially, such as Cambodia, Lao PDR, and Viet Nam, science facilities tend to be limited and outdated, with courses sometimes taught without laboratory experience (ADB 2010).

### **Examples**

- In Indonesia, a public institution had an agriculture program where fuel costs for operating equipment significantly constrained the hands-on learning time available to each student. In another case, students paid fees for each time they used the laboratories, in order to help pay for the purchase and maintenance of equipment (Bray and Thomas 1998:106, cited in Welch 2007).
- The engineering faculty in a private university in Indonesia borrowed major equipment expected to be in engineering classrooms from local firms when an external quality review was scheduled. Unfortunately for the students, this equipment was returned to the firms immediately after the review (Welch 2007).

### **Implications: Human and Physical Resources/Inputs**

Internal efficiency requires talented faculty and appropriate physical resources. In terms of human resources, HEIs in Asia need more academic staff—and they need more qualified academic staff. As tertiary enrollment increases and diversifies, academic staff must have the knowledge and skills to teach in ways that support students who differ in ability, motivation, technology-related experience, and personal characteristics such as age and gender. Rewards and incentives are currently insufficient to attract and retain qualified staff, particularly when other appealing options are available. The pipeline for preparing, recruiting, and retaining qualified, committed academic staff is not functioning effectively to meet national needs. In terms of physical resources, the inadequacy of facilities, libraries, and equipment undermines the quality of the learning environment at many HEIs in Asia and increases the need for creative, flexible, and knowledgeable faculty members. Expanding enrollments exacerbate these concerns. Since an injection of financial resources to improve physical facilities is unlikely at most institutions, finding ways to enhance internal efficiency through strengthening the skills and abilities of the human resources—the academic staff—would be wise.

## **The Work of the University**

The primary work of HEIs involves facilitating learning (teaching), creating knowledge (research), and applying expertise to societal issues (service). The quality of work carried out in each of these areas varies by country and institution. In Asia, teaching has been the primary focus at most institutions, but attention to research is increasing. Service to the community holds a distant third place but is becoming more important at some institutions. This section discusses the defining features of each of these areas of work within HEIs, as well as the challenges that relate to internal efficiency.

### **Facilitating Learning (Teaching)**

HEIs address their mission to facilitate learning through several avenues: (i) their curricula; (ii) the teaching carried out by their academic staff; and (iii) the delivery, through which students gain access to learning environments.

### **Curricula**

Concerns about the strength and relevance of the curriculum abound in countries in Asia. Enrollment statistics suggest that students believe that higher education will help them prepare for their futures. However, unemployment figures suggest a mismatch between the preparation of students and what employers actually want.

The first concern pertains to the topical areas in which students enroll. Enrollment is often greatest in the arts, commerce, management, and law. However, countries need scientists and technical experts to develop their economies. Rebalancing enrollments in the sciences versus the arts needs attention.

### **Examples**

- In Indonesia, two-thirds of the students in private HEIs enroll in education and social sciences (including business), with much lower enrollments in sciences. In public institutions, the pattern is similar, although the underrepresentation of the sciences is not as great (Welch 2007). The government has responded to concerns that the supply of science and technology graduates was insufficient to meet market needs. Incentives have been offered for science and technology programs, and restrictions placed on the further expansion of social science programs (Nizam 2006).
- In Malaysia, the majority of student enrollment in public institutions (attended by almost three-quarters of higher education students) is in arts and sciences (38%) and economics and business (17%). About one-quarter of the enrollment within private institutions is in these areas. Information technology attracts 43% of the student enrollment in private institutions (Wilkinson and Yussof 2005).

A second concern among employers pertains to the skills that graduates bring to the workplace. Employers claim they want graduates with more “soft skills” such as communication and teamwork skills, good attitudes toward work, significant levels of English, and computer skills (World Bank 2009). These skills and attitudes are often the focus of liberal arts programs in other countries. How to balance education in the liberal arts with specific job skills development is an important question within HEIs in Asia (Kapur and Crowley 2008). Some countries are embarking on reform efforts to redirect and strengthen the undergraduate curriculum.

### **Examples**

- The Royal Government of Cambodia is encouraging reform to better meet the needs of the marketplace. Beginning from the academic year 2005/06, all undergraduates have been required to take a “foundation year” of study focused on developing a broad knowledge base in four areas: arts and humanities, mathematics and sciences, social sciences, and foreign language (Chealy 2006).
- In Indonesia between 1998 and 2004, the government offered a Quality for Undergraduate Education project with opportunities for study programs to submit proposals for grants of up to \$1.8 million to engage in 5 years of institutional program development (Nizam 2006).

A third curricular issue pertains to student mobility across HEIs. Pathways that enable students to build on credits accrued in one institution to enroll in another are not well developed (World

Bank 2009). Better articulation between programs and institutions would contribute to the development of a well-educated workforce. Some countries are developing credit systems that increase student mobility across their higher education systems, but the concept is relatively new, and progress is slow. Institutions must develop guidelines, train personnel who can manage credit systems, and learn to work together collaboratively (Chealy 2006).

Ensuring that educational preparation meets national needs is essential for optimizing the efficiency of HEIs. Currently, there is some imbalance among curriculum offerings, student enrollment, and marketplace needs. Countries are finding ways to analyze and address this problem, but it continues to require attention.

### **Teaching**

**Increasing student/faculty ratios.** As demand for higher education increases, so too does the student/faculty ratio. Teaching a greater number of students, as well as more diverse students, means that academic staff have more work to do. Increases in class size also raise concerns about the quality of the learning experience, as students may have difficulty talking directly with the instructor or may feel less engaged, since they are part of a sizable group. Not only are student/faculty ratios increasing; academic staff are sometimes asked to fill teaching assignments beyond their areas of expertise (ADB 2010).

### **Example**

- Indonesia provides one example (although Welch [2007] cautions about the difficulty of getting accurate figures in systems where staff hold multiple positions). Student/faculty ratios in public institutions are rising even faster than in private institutions. The ratio in state institutions was 8.5:1 in 1989/90, 17.6:1 in 1994/95, and 19.0:1 in 1998/99 (Welch 2007).

**Methods.** Lectures, in which students have little opportunity to ask questions or interact, are the norm across classrooms in Asia (Altbach 2010). Contemporary research on optimal learning environments, however, emphasizes the value of active learning and student-centered learning, in which students discuss, debate, and grapple with ideas with each other and their teachers (McKeachie and Svinicki 2006). Even in large classes, teachers skilled in nurturing active learning can encourage students to engage thoughtfully with the material. Generally, however, these newer teaching methods are not incorporated into classes in higher education in Asia. However, in a recent regional workshop on faculty development, academic staff from Malaysia reported considerable interest in student-centered learning; in the same conversation, their colleagues from Indonesia reported variation in the extent to which student-centered learning is practiced in classrooms in their country. Other colleagues observed that the notion of “student-centered” has entered the jargon in educational circles in Asia but not the practice (ADB 2010).

The use of technology in education is increasing in Asia as in most parts of the world. While some institutions, such as the open universities, use technology extensively, academic staff overall still vary in their technology-related knowledge and skills. The ability to use technology is not the only issue; how to teach effectively with technology is another challenge. Effective teaching with technology requires new understandings about how learning occurs, how instructors and students can interact effectively in technology-mediated environments, and

how to motivate students even when a teacher is not physically present. The role of teacher also needs to shift toward coach and facilitator (Rizvi et al. 2005), which requires different assumptions about learning processes and different teaching skills than lecturing to a passive audience. Many faculty members, especially senior academic staff, are not yet adept in using information and communications technology (ICT) skills nor in strategies for using technology to enhance student learning (World Bank 2009).

Generalizations about technology use in higher education in Asia are hard to make. On the one hand, the region has seen a huge growth in e-learning and online learning, which is changing both distance and traditional education (UNESCO 2008). Overall, the use of ICT is considered cost-effective (Salmi 2002). On the other hand, Altbach (2003) has cautioned that in developing countries, many academic staff may not own or have easy access to technology. Some individuals may find Internet and technology access to be expensive both in absolute terms and in regard to disposable income (Kapur and Crowley 2008).

### ***Educational Delivery***

**Distance learning.** Distance learning is a major and expanding part of the tertiary landscape in Asia, where some countries, such as PRC, Indonesia, and Thailand, can boast some of the world's largest distance HEIs (Salmi 2002, Altbach 2004b). These institutions, which have enrollments exceeding 100,000 students, use a variety of distance learning methodologies. One advantage is that distance learning provides education for students in locations where traditional tertiary institutions are not located. Adult students, and especially primary and secondary teachers needing further education, are particularly attracted to distance learning options, which provide flexibility and do not require them to leave their jobs or to move (Nizam 2006).

Distance learning is also appealing for its cost effectiveness. In fact, online instruction provides a 60% cost savings as compared with campus-based instruction, where physical facilities are necessary (Kejak and Ortmann 2003; Khan and Williams 2007, cited in Chapman 2009). Thus, distance learning offers many advantages to countries striving to educate large numbers of their population. At the same time, effective distance and online learning environments require academic staff knowledgeable concerning the challenges associated with this kind of learning, and skilled in approaches to optimize student learning outside traditional classrooms.

**External degree programs and extension courses.** Some universities, especially in Indonesia, Sri Lanka, Thailand, and Viet Nam, offer extension courses and external degree programs. These courses and programs tend to be of poor quality. They have lower entry standards, less demanding expectations on students, and no support services (Welch 2007, World Bank 2009). Lectures are the primary form of instruction. Students study on their own, and typically have little opportunity for tutorials, group discussion, or hands-on experiences. Students receive the same credential as others in the university but experience much lower academic standards. The university gets fees, the students get a degree, but quality is poor.

### ***Example***

- A study of external degree programs in Sri Lanka showed that 25% of students indicated they were not provided with lectures, and 70% reported no time spent in tutorial hours. Students also received little advising and no support services to help them with such study skills as note taking and writing (ADB 2006).

**Graduate education.** Overall, graduate education is not extensively developed in Asia, where most emphasis in tertiary education is on the undergraduate level (Altbach 2010). Excellent graduate education requires a critical mass of research-productive academic staff, and such groups of faculty are not found at most HEIs in Asia. Additionally, high-quality doctoral education in western universities involves informal interactions among faculty members and students, and considerable opportunities for graduate students to work independently. In contrast, graduate education in Asia is characterized typically by very formal relationships between the faculty and students, with few opportunities for informal interactions or for independent student work (Altbach 2010).

Although it is not yet well developed in most countries in Asia, leaders recognize that graduate education, particularly doctoral degree production, strengthens the research capacity of a country. The availability of high-quality doctoral education offers an alternative to sending students outside the country, which can result in “brain drain.” Doctoral programs also contribute to a community of scholars whose presence strengthens disciplinary knowledge available in the country to enhance the quality of teaching and to provide avenues for higher education-industry linkages.

Recognizing the benefits of high-quality doctoral education and current shortcomings in this area, some countries are working to develop the national research infrastructure needed to support doctoral education. On this issue, countries can be grouped. Several economies not within the primary focus of this report—Republic of Korea; Singapore; and Taipei, China—have such infrastructure in place, and the PRC is rapidly developing it. Among the focal countries for this report, Malaysia and Thailand still rely on sending their students abroad (Marginson and Van de Wende 2007). However, at a recent conference of the International Doctoral Education Research Network, held in Malaysia, a large group of doctoral supervisors convened for a lively discussion of effective approaches to doctoral education in the international context and ideas for improving local practice. The energy and commitment exhibited at this meeting suggested a dynamic environment for continuing development of graduate education in Malaysia. Other countries have a way to go. Sri Lanka offers graduate education in only a few universities; in fact, two universities, Colombo and Peradeniya, produce 61% of the graduate degrees (World Bank 2009). Cambodia, Lao PDR, and Viet Nam still have far to go in developing doctoral education.

### ***Implications: The Nature and Quality of Teaching***

Broad access to higher education needs to be coupled with high-quality instruction. Internal efficiency will be enhanced through review of curricula to ensure that the content of student learning focuses on those topics and learning outcomes most appropriate for national needs and the employment contexts that graduates will enter after graduation. In terms of delivery, distance learning and open universities offer immense possibilities for continuing to address the expanding demand for higher education. However, some programs, such as external degrees and extension courses, are compromising quality in exchange for income. Most important, however, in regard to the quality of teaching within HEIs are the skills and knowledge of academic staff as teachers. Academic staff need appropriate training to become adept at using effective teaching strategies, both within traditional classrooms and in technology-mediated contexts, that actively engage diverse students in achieving learning goals.

## Creating Knowledge

### *Pressures to Do Research*

The pressure to “do research” is felt throughout higher education in Asia. Even at institutions struggling with student enrollments and inadequate funding, faculty are being pressed to be active in research. As discussed earlier, one reason is that countries and their HEIs are concerned about finding a place in the worldwide ranking systems of universities. International prestige depends largely on research productivity, and rankings of universities give heavy weight to research.

A second reason is that national leaders see research as contributing to innovation, technical development, and productivity, which lead to economic growth (LaRocque 2007, Chapman 2009). Evidence suggests that university-based research done in high-income countries produces good results with regard to economic development. In middle-income and low-income countries, however, the lower quality of university-based research results in less impact (LaRocque 2007, Chapman 2009).

A third reason for universities to encourage research is to address specific country needs. In agriculture, for example, local research may be more relevant than research conducted in distant countries, since the research interests of technologically advanced countries may not focus specifically on technologies or applications that work within the local context (Pardey et al. 2006, cited in Kapur and Crowley 2008:14). For example, research on climate change may be more fully tailored to local questions and concerns if conducted by universities in countries most affected by particular problems.

Another reason for countries and universities to encourage research activity relates to doctoral education. A symbiotic relationship exists between institutional capacity to do research and the presence of doctoral education. Research activity provides the necessary context to train researchers. At the same time, the availability of doctoral students provides the capacity for universities to conduct research (Austin 2010). If nations in Asia are to increase their capacity to prepare academic staff at home, with less need to send talented young people abroad to study (opening the possibility that they may not return), they need to expand their capacity to produce doctoral students. Increasing research activity at selected institutions will contribute to this goal.

Although some HEIs are trying to increase their involvement in research, more research investment in the Asian context is made in government laboratories and research institutes than in universities (Chapman 2009, Levin 2010a). Investment in applied research and development in Asia is greater than in basic science. One of the reasons that more research occurs within business and industry is concern about ensuring secrecy and protecting ownership. Whatever the reasons, however, the point is that universities are competing with the private sector to attract those scholars most prepared and interested in research activity (Chapman 2009).

### *Country Variations in Research Activity*

Countries across Asia vary considerably in terms of their expenditures on research and how the pressure to do research plays out in their HEIs. Table 2 shows the variation in expenditures on research and development, the number of journal publications, and the level of human

capacity for research within selected Asian countries. Across countries, most private HEIs are not engaged in research at all (Chealy 2006). On this issue of research productivity, countries vary and can be grouped.

Malaysia and Thailand are making strides in their research activity, as evidenced in their publication levels of scientific and technical journals (Table 2). Malaysia, for example, is investing special research funding in four HEIs selected as research universities. In Thailand, some of the public universities are becoming autonomous universities, partly to provide an environment conducive to greater research competitiveness.

Cambodia, Lao PDR, Sri Lanka, and Viet Nam still have far to go in developing strong research cultures. Academic staff members are typically focused on teaching, although some institutions are instituting policies calling for research. Faculty feel pressured to do research to be promoted due to what some call the “ranking disease,” but there is not a culture of inquiry prompting practical institutional support for or intrinsic faculty interest in research. Universities leave academic staff on their own to find resources or funding, essentially making any research an activity done outside one’s usual work activities (ADB 2010, Wheeler 2010). Governments recognize, however, that attention to research has benefits. For example, in Cambodia, the government has established two research departments at the ministerial level: the Scientific Research Department and the Pedagogical Research Department (Chealy 2006).

**Table 2 Research and Development Outcomes**

Country	Expenditure on Research and Development (% of GDP)	Scientific and Technical Journal Articles per Million Residents	Researchers per Million Residents
Cambodia	0.05 <sup>a</sup>	0.37	56 <sup>a</sup>
PRC	1.42 <sup>b</sup>	22.34	926 <sup>b</sup>
Indonesia	0.05 <sup>c</sup>	0.78	433 <sup>c</sup>
Korea, Republic of	3.23 <sup>a</sup>	286.34	5,340 <sup>a</sup>
Malaysia	0.60 <sup>d</sup>	21.70	917 <sup>d</sup>
Mongolia	0.26 <sup>e</sup>	2.79	671 <sup>e</sup>
Philippines	0.14 <sup>f</sup>	2.11	109 <sup>f</sup>
Thailand	0.26 <sup>b</sup>	16.70	–
Viet Nam	0.19 <sup>d</sup>	2.59	505 <sup>d</sup>

– = data unavailable, GDP = gross domestic product, PRC = People’s Republic of China.

All data in the third column are from 2003. Other data in the table are from the following years:

<sup>a</sup> 2002                      <sup>d</sup> 2004

<sup>b</sup> 2006                      <sup>e</sup> 2005

<sup>c</sup> 2001                      <sup>f</sup> 2003

Sources: Chapman 2009, World Development Indicators, and UNESCO Institute for Statistics.

Overall, governments want research, institutions push their faculties to do it, and some academic staff offer up research products to achieve promotion. However, both the meaning and quality of much of what is called research are suspect. Some institutional leaders and academic staff

observe that “doing research” means reading; perusing the Internet; synthesizing books or articles into a summary paper on a topic; or, sometimes, studying for a master’s degree (ADB 2010). A number of institutions are starting internal journals to provide avenues for their staff to publish their research and to enable the host institutions to highlight their research productivity. However, the quality and rigor of most of these journals are very modest by international standards. Peer review for grants is not a large part of the culture (Levin 2010a). When governments allocate money for research, decisions are often made based on seniority rather than on a merit system involving competition and peer review by expert colleagues. Such practices raise questions about the quality of the research produced. On the other hand, some promising new scholarly models are emerging. Problem-based inquiry, participatory research, engaged approaches that link university researchers with their communities, and program evaluation offer some interesting possibilities for producing promising and useful results (UNESCO 2008).

### ***Challenges to Research Productivity***

Despite the pressures for HEIs to make research an important part of their work, they face significant challenges. Altbach (2003:3), frankly asserts: “The professoriate in the developing countries of the South is a profession on the periphery.” His reasoning is that northern hemisphere universities set the patterns and standards for academic work, and enjoy more conducive contexts for producing internationally recognized research. Universities in the southern hemisphere typically have less wealth and access to resources as compared with those in the north. With English as the primary language used in most internationally recognized journals, many scholars in countries in Asia are not writing in their first language. Some methodologies particularly favored in the north are not as common in the south. The journals included in citation indexes used for international rankings of universities are most often located in the north. Each of these circumstances puts academics in Asian countries in a somewhat disadvantaged position when seeking recognition as researchers (Altbach 2003).

A second impediment to research productivity is the general lack of well-qualified researchers in most Asian countries. A major reason is that the numbers of PhDs and graduate students studying science and technology are modest in many countries in Asia (Chapman 2009, Salmi 2009). A critical mass of scholars with advanced knowledge in scientific and technological areas is especially important in regard to increasing a country’s capacity for internationally recognized research.

A third problem is the lack of a vibrant and strong research culture in most universities. Many academic staff have little intrinsic interest or motivation to do research, especially since most have not participated in doctoral education, which is the typical period of socialization to a research orientation (Austin and McDaniels 2006, Austin 2010). Furthermore, academic staff members in Asia are usually remunerated for teaching, not research; thus, incentive systems are not in place to direct their time, energy, and attention to research activities. Heavy teaching loads, and low salaries that lead faculty to seek additional income by moonlighting or adding hours to their teaching loads, also systematically discourage research (ADB 2010).

The lack of infrastructure is another problem. Research facilities, laboratories, and libraries are often inadequate (Chealy 2006), and university-industry relationships that can support research collaborations are often nonexistent or weak (World Bank 2009). International visitors who offer collaboration and contribute to a scholarly climate are also likely to be relatively few in number.

**Example**

- A comparison of cross-border relationships between an internationally ranked university in Australia and a national university in Indonesia revealed about 70 collaborative agreements between the Indonesian institution and international collaborators, as compared with 150 collaborators in a single school of physical sciences and engineering in the Australian university (Marginson and Sawir 2006).

**Implications: The Role and Relevance of Research**

The research mission of HEIs is becoming increasingly important in Asian countries, especially as research productivity is seen as a way to strengthen national economies and enhance universities' international status. Achieving research excellence, however, requires extensive resources and specialized talent. Many HEIs in Asia are seriously lacking in the necessary financial, structural, and human resources to achieve cutting-edge excellence in traditional forms of scholarly research. While a few universities may succeed in becoming internationally recognized centers of research excellence, the distance that most would have to travel from their current circumstances to the level necessary for international recognition is unrealistic and formidable. At the same time, diverting faculty time toward research conflicts with the heavy demand to meet teaching responsibilities at most institutions. Research has an important place in higher education, and some institutions need to be at the cutting edge of scientific and technical research. But expectations that all HEIs should engage in traditional research activity aimed at achieving international recognition may be not only unrealistic, but counterproductive to the important and necessary roles they can play in the development of their communities and nations.

**Connecting Expertise to Societal Issues**

Applying knowledge to issues in society is generally considered the third mission of higher education. This mission is commonly captured under the rubric of "service." In Asia, there is little understanding of notions of community service or engagement with societal problems. Generally, faculty members understand their responsibility to be teaching; they do not feel obliged to engage in either institutional service or engagement with the community. Furthermore, those who hold more than one job in order to supplement their incomes have virtually no time for participation in institutional meetings, nor to involve themselves within the community as part of their jobs. If research is included in the job role, it is much more likely to relate to economic growth or to be a strategy to enhance students' employability than to be a project focused on social development (UNESCO 2008).

Interestingly, however, there is some evidence of the emergence of new forms of scholarship that could be characterized as "participatory development" (Puntasen 2008:4) or "engaged scholarship" (UNESCO 2008:5). Universities are increasingly urged to share their resources with their communities and to learn from local knowledge. Calling this kind of activity the "third mission," leaders from various countries in Asia acknowledge that universities across the world are demonstrating increasing interest in connecting with public life and contributing to social transformation in their countries (UNESCO 2008:8).

**Examples**

- The Universiti Kebangsaan Malaysia is reorganizing to enhance community partnerships and to benefit more fully from community interactions (Puntasen 2008).

- In Indonesia, some universities explicitly include community development as part of their research mission as well as part of their service mission (Puntasen 2008).
- In Thailand, some universities already have long histories of involvement with their communities, and some are now developing degree programs in an area called “sufficiency economy,” which includes involvement with the community (Puntasen 2008).

### ***Implications: The Role of Service***

Including community engagement and service as part of the mission of higher education occurs to differing degrees across the world. In some countries, the primary and sole work of universities is teaching and research, while in others, such as many universities in England and the US, service to the local community and broader society is an integral part of what HEIs and their faculties and students do. This “third mission” is emerging as part of the work in some HEIs in Asia. Notwithstanding this development, as HEIs struggle with meeting rising enrollment demand and pressure to do research, the place of service as a mission priority is unlikely to be emphasized as a primary responsibility at most institutions. Yet, community-based and participatory research approaches do offer productive, low-cost, and reasonable ways for HEIs to engage in both research and service. Integrating involvement with the community and with local businesses and industry into the curriculum also offers new possibilities for student learning experiences. This form of education, often called “service learning,” is gaining traction within higher education in other parts of the world (Rhoads 1997, Jones and Abes 2004). Service learning offers an innovative option for universities in Asia seeking ways simultaneously to prepare students for their roles as citizens and employees, to encourage their academic staff to do research, and to link their knowledge with societal needs.

## **Employment Systems**

Employment systems, including opportunities for professional growth, evaluation processes, and incentive and reward systems, constitute another key component of HEIs with implications for internal efficiency.

### **Opportunities for Professional Growth**

High-quality academic work, either teaching or research, requires perspectives that are vibrant and fresh. Faculty members need opportunities to encounter new ideas, to learn new strategies for engaging students in the learning process, and to interact with colleagues who offer different perspectives. They need to be challenged, stimulated, and encouraged. The opportunity for professional growth is an “essential element” in a supportive and productive academic environment (Gappa et al. 2007).

Opportunities for academic staff to participate in formal professional development are emerging in Asian higher education but are not yet fully developed. Some institutions require new faculty members to take an initial induction course or certificate program to get them started in their teaching responsibilities. Individual faculty members may apply for scholarships or fellowships offered by various national governments, international agencies, and individual universities. Overall, however, these opportunities do not provide systematic and comprehensive professional development opportunities at a scale addressing the needs of academic staff across the countries of Asia.

Several issues stand as barriers to extensive faculty professional development activity within universities in Asia (ADB 2010). First, faculty members are overburdened with their teaching responsibilities and have little time for either short-term training sessions or long-term courses or programs. Second, taking time from one's work to participate in professional development means less income earned through teaching hours. Third, HEIs have little discretionary money to spend on professional development opportunities. Faculty members who go overseas to study often do so using their own resources.

Two other barriers are noteworthy. In some countries such as Cambodia, Lao PDR, and Viet Nam, many academic staff are not fluent in English, so they cannot make use of many of the books and resources provided by colleagues in other countries. An additional issue is that professional development often leads to new ideas and eagerness to engage in reform. Yet, in institutions pressed to meet enrollment demands and other pressures, finding time and energy to implement new ideas, regardless of how promising they may be, is very difficult. Furthermore, in countries where government control of HEIs is strong (including Cambodia, Lao PDR, and Viet Nam), governments may not be enthusiastic about professional development activities that urge academic staff to pursue new directions in their work.

### **Evaluation Processes**

In many HEIs in Asia, there is little systematic evaluation of competence or performance. Affinity is often the basis for hiring or promotion, rather than merit (Altbach 2010). Seniority and years of service; personal and family connections; and, in some countries, party connections serve as the basis for hiring and promotion (ADB 2010, Altbach 2010). The lack of fair evaluation systems and the reliance on personal connections undermine quality and accountability. Yet, changes are gradually under way that will strengthen quality and accountability within HEIs in Asia.

While evaluation systems based on performance and productivity are most common, there is also growing interest in most countries in developing quality assurance plans. Although change can be slow and can meet resistance, efforts under way indicate that more rigorous evaluation of credentials and performance of academic staff is likely to increase over the next several years. In the PRC, some institutions are implementing evaluation systems that include unannounced visits to classrooms by senior administrators, observations by colleagues, and student evaluations (Lai and Lo 2007).

### **Incentive and Reward Systems**

Rewards within workplaces include both those that are extrinsic, such as salaries, fringes, and material benefits, and those that are intrinsic, such as respect, satisfaction, and security. In most industrialized societies, academic staff earn salaries that enable them to enjoy middle-class standards of living. By contrast, remuneration for full-time academic work in many countries in Asia is typically very low by international standards, inadequate by local standards, and insufficient for a middle-class life style (Altbach 2003). However, salaries do vary across institutions and countries. To compensate for inadequate salaries, institutions often offer other compensations, such as housing supplements or extra pay for teaching additional courses.

### **Examples**

- HEIs in Hong Kong, China; Japan; Republic of Korea; and Singapore as well as more prestigious institutions or some business schools in other economies in Asia

provide competitive remuneration (Altbach 2003). In contrast to the situation in most countries in Asia, academic staff in Malaysia can earn enough for middle-class standards of living (Lee 2003). Engineering and technology-oriented specialists are likely to command higher salaries because of market demands (Wilkinson and Yussof 2005). On the other hand, junior faculty members often receive particularly low salaries, and part-time faculty members are paid much less than those in full-time positions.

- In other countries, salaries are very modest. In Indonesia, an academic staff member's monthly salary may provide only enough to support a family's needs for a week (Welch 2007). In Cambodia, base salaries in public universities are about \$75 per month, which is not an adequate rate (Ford 2006). In Viet Nam, salaries, which stand at about \$150 per month, provide insufficient incentive to attract enough faculty to meet the national need (Chronicle of Higher Education 2008).

The impact of inadequate extrinsic remuneration on institutional quality is considerable. As discussed, many faculty members take on extra work to supplement their incomes, teaching evening courses, consulting, or moonlighting at other institutions. With added work to make ends meet, they have less time to prepare for class, meet with students, focus on research productivity, or participate in professional development. Some choose to leave academe, and for those who stay, morale is at risk (Altbach 2003, Chapman 2009, ADB 2010). All told, inadequate compensation undermines quality.

Nonmonetary incentives must also be taken into account when assessing the reward system in higher education. Like faculty members across the world, academic staff in Asia report considerable intrinsic rewards and personal satisfaction from helping students learn (ADB 2010). Some experience and appreciate the recognition they receive in their communities. Job security is an incentive for those in countries such as Cambodia, Lao PDR, Malaysia, and Viet Nam, where public university staff are government employees. Academic staff in Malaysia, for example, attain permanent employment as civil servants and receive pensions upon retirement (Lee 2003).

Adequate extrinsic rewards are necessary to ensure that employees choose to stay in their positions. If salaries and extrinsic rewards fall too low, and if other options are available, academic staff may choose to leave their jobs. Thus, the long-term picture for attracting and retaining academic staff in Asia requires finding ways to provide salaries that allow reasonable standards of living. However, extrinsic rewards, while necessary, are not sufficient for ensuring that a university has a vibrant, engaged faculty; intrinsic rewards are also necessary to capture faculty commitment, motivation, and dedication. At the heart of an effective reward structure is evidence of a culture of respect for the faculty (Gappa et al. 2007). When extrinsic rewards are very low, HEIs would be wise to find creative ways to convey deep respect and regard for faculty members and to strengthen the intrinsic rewards associated with their work.

### **Implications: Employment Systems**

Opportunities for professional development, evaluation processes, and incentive and reward systems have a huge impact on the quality of work within an HEI. Attention to faculty development has increased dramatically in the past 20 years in HEIs in many countries throughout the world. Strategies that have been used successfully in other countries could be adapted in

cost-effective ways in HEIs in Asia (Austin 2002, Sorcinelli et al. 2006). Thorough and fair evaluation processes and incentive and reward systems are powerful ingredients for focusing academic staff on institutional goals. Also important is the development of an environment that provides the intrinsic reward of respect. Faculty members are the most critical ingredient for producing institutional outcomes at a high level of quality. Effective employment systems that strengthen internal efficiency in HEIs include opportunities for academic staff to grow professionally and to enhance the specific skills they need to do their work well, clear expectations and evaluation processes that assess the extent to which faculty meet those expectations, incentives and reward structures that align with expectations and provide attractive extrinsic and intrinsic rewards, and messages that convey respect for and valuing of the contributions made by faculty members.

## **Institutional Culture**

Institutional culture relates to the norms and values that are embedded in the daily life of an organization. Culture is invisible but very tangible. It pertains to what is considered important, how people interact, and the nature of the relationships among the members of the institution. In HEIs, key aspects of academic culture that relate to quality include the autonomy and academic freedom experienced by the academic staff, the extent to which integrity characterizes the work and activities of the institution, and the nature of relationships and collegiality (Gappa et al. 2007).

## **Autonomy and Academic Freedom**

Governments are providing HEIs with more autonomy in exchange for greater accountability (Chapman and Austin 2002). However, greater institutional autonomy does not necessarily mean more autonomy and academic freedom for academic staff. While specific conditions differ across countries and institutions, faculty members in Asia generally enjoy less autonomy and academic freedom than is customary in HEIs in the northern hemisphere. Historically, higher education systems in most countries in Asia have experienced government oversight by both colonial and postindependence governments (Altbach 2003).

As universities have expanded in size and as privatization has increased, the autonomy of faculty members has diminished. For example, in Malaysia, as universities have become larger, administrative staff have assumed more decision-making responsibility, and the involvement and power of academic staff in institutional policy making have declined. There are fewer committees and smaller councils, resulting in less consultation with faculty members (Lee 2003).

In regard to curricular issues, most ministries in countries in Asia exert control over the curriculum of tertiary institutions (although the move toward autonomy for some institutions will give them greater direct responsibility for and control over curricular decisions). Generally, universities receive from ministries of education curricular plans spelling out course content and goals, intended learning outcomes, number of hours to be allotted to topics, teaching methods, and assessment guidelines. In a recent workshop on curriculum design at a university in a low-income country in Asia, participants found it interesting to learn approaches to designing course curricula, but they noted that they would have little opportunity to put the information into use, as the learning outcomes and topics to be addressed in the courses they taught were provided by the government. While efficiency and consistency may be outcomes of using

common curricula, faculty members also need flexibility to make decisions about their teaching based on the characteristics and needs of their students.

In some countries, academic staff must be very sensitive about topics with political implications. Certain issues are not allowed to be discussed in classrooms. While research in the sciences is usually not subject to restrictions, academics within the social sciences feel that their freedom to select topics about which to write or speak is limited. Since autonomy and academic freedom are critically important ingredients associated with high-quality research and teaching in well-respected HEIs (Gappa et al. 2007), government and institutional leaders would be well served to consider these elements of institutional culture within HEIs in the Asian context.

### **Integrity**

Integrity coupled with excellence forms the currency of higher education. Unfortunately, corruption is a problem within HEIs in Asia, evidenced by instances of plagiarism, falsification of data, and cheating on exams (Altbach 2003, 2010; Welch 2007; Kapur and Crowley 2008). Corruption and academic dishonesty, where they occur, seriously threaten educational quality as well as the international reputations of institutions (*The Economist* 2010).

Reasons for the high level of corruption include weak or absent systems of peer review, minimal institutional monitoring of the work of academic staff, and incentives for research production that emphasize quantity over quality (*The Economist* 2010). The results of breaches in the integrity of HEIs and the research endeavor within a country are significant. Fraud, plagiarism, and other forms of corruption compromise the credibility of an institution's and a country's scholarly work. Foreign researchers think twice about whether they want to collaborate with scholars whose ethics are questionable. Graduates seeking employment or opportunities for advanced study in other countries may find the quality of their credentials doubted. HEIs have much to lose by tolerating any behavior that does not meet the highest standards of ethical behavior and integrity.

### **Collegiality**

The nature of relationships among the members of an academic community also matters in regard to internal efficiency and quality. Research on academic work in western countries indicates that a culture characterized by collegiality—mutual respect and appreciation among academic staff—is an essential ingredient to fostering good work in the academy (Gappa et al. 2007). In Asia, personal connections and networks are very important. These personal relationships affect all aspects of the work and processes within HEIs, including allocation of rewards, research funding, and student admission. While collegiality is widely considered to contribute to productive work, too much reliance on personal relationships and networks to open doors and opportunities can lead to outcomes that diminish quality. For example, filling positions by a department's own graduates can lead to inbreeding of academic staff within departments. This practice is carefully avoided at most well-regarded universities worldwide, because it can inhibit the introduction of new ideas, reify perspectives already in place, and promote the development of contentious factions within institutions.

Other cultural norms that frame academic relationships in Asian HEIs are the importance of hierarchy and the predominant respect for age. While opportunities for early-career academics

to learn from their colleagues are important, these cultural norms in Asia mean that junior colleagues must typically defer to senior faculty members in ways that can constrain the introduction of new ideas and practices, methodologies, and avenues of inquiry. Furthermore, both undergraduates and postgraduate students interact in very formal ways with the faculty. In other parts of the world, much more interactive relationships between faculty members and graduate students enliven research and deepen the learning opportunities for the students. HEIs in Asia would benefit from cultivating collegiality based on mutual respect that transcends age and personal connections, a cultural norm contributing to vibrant and effective academic cultures in many parts of the world.

### **Implications: Institutional Culture**

The cultural norms and values within HEIs are invisible but very powerful. Academic freedom, integrity, and collegiality are three of the most important cultural norms that characterize effective HEIs. Limitations on academic freedom and autonomy constitute a barrier to excellence in HEIs in a number of countries in Asia. In the academic world, quality is intimately linked with integrity, honesty, and merit. Too much is at stake for universities in Asia to avoid tackling instances of dishonesty head on. Creating greater appreciation for collegial relationships based on mutual appreciation of talent and ability, rather than solely on hierarchy and “connections,” would also enhance the quality of academic work and the integrity with which it is done.

### **Summary: Internal Efficiency in Higher Education**

The HEIs in Asia have the potential to make significant impacts on the societies in which they are situated and on the individuals they educate. However, they are facing major challenges that threaten their internal efficiency and the quality of their outcomes in alarming ways. Consensus is clear about the problems. More faculty members are needed, with higher qualifications. The current academic staff are stretched thin as they seek ways to make ends meet, and the attractiveness of the profession is declining. Challenges to academic freedom, insufficient time for professional development, underdeveloped evaluation systems, incentive systems unaligned with expectations, minimal levels of autonomy and academic freedom, lack of commitment to academic integrity, and inattention to collegiality create a set of powerful forces undermining institutional internal efficiency. Strong words such as “crisis” are used to describe the situation (Altbach 2003:20; Loh 2010). HEIs and their faculty are pressed to provide the quality of teaching and research that are needed to help fuel economic growth and address societal needs.

# Recommendations

Improving the internal efficiency of HEIs in developing Asia will require the continuing commitment and efforts of government leaders, institutional leaders, and academic staff, and timely, targeted project support from development partners such as ADB. Quick interventions are unlikely to have much impact, since HEIs are complex and often resistant to change. A wiser approach, likely to have more impact, will view HEIs as systems in which substantive, long-lasting change requires using multiple strategic approaches. Five specific priorities for strengthening the internal efficiency of HEIs are identified, along with recommendations for institutional actions and support to be provided through project operations.

## **Recommendation 1: Improve instructional quality by enhancing the capacity of academic staff**

**Rationale.** For some years, the strategic emphasis in higher education in Asia has been on enrollment growth more than on the quality of the academic staff as teachers. After this focus on expanding access, the priority should now be on ensuring the quality of instruction. Internal efficiency is achieved not only through ensuring access; internal efficiency also depends on quality instruction for those who have access. Teachers must be prepared to meet changing student learning needs. Furthermore, enhanced instructional quality leads to greater instructional efficiency and improved student learning. More students can be educated more effectively and efficiently if teaching quality is strong. Additionally, when academic staff members are better prepared, they experience a greater sense of professionalization and their responsibilities are more intrinsically rewarding, which will enhance institutional commitment.

**Recommended actions.** Establish campus-based professional development centers staffed with professionals who are knowledgeable about effective ways to organize and deliver faculty professional development. Provide instructional staff with opportunities to learn proven teaching methods that foster active and engaged learning. Recommended topics include (a) curriculum planning and course design based on intended learning outcomes, (b) strategies for linking teaching methods and student learning assessment methods to intended learning goals, (c) strategies that foster active learning, and (d) strategies that prepare students to engage in new forms of learning. Campus professional development centers should also help academic staff enhance their research skills as well as their knowledge about labor market opportunities for students in their fields.

**Recommended support through project operations.** Work with national and institutional leaders to develop *national meetings focused on strategies for improving instructional effectiveness and quality*, and designed to develop national networks to support faculty professional development. A national network could develop materials to support

institution-level faculty development and could convene institutional faculty development specialists regularly to develop their capacity for providing support to academic staff.

Projects could also help establish *subregional hubs* with a core of permanent staff, charged with developing resources and staff for campus-level faculty development. Additionally, projects could sponsor *institutional exchange visits*. Specifically, funding could be provided for visits of institutional representatives to countries with mature faculty development programs to assess strategies likely to be effective in their home environments. Funding might also bring experts in effective teaching strategies as short-term resources to national meetings and to institutions in Asia. Finally, projects could support *regional and national conferences designed for academic staff in specific disciplinary groups* to discuss and design effective discipline-specific teaching strategies.

**Recommendation 2: Continue to focus and differentiate institutional missions within coordinated systems of higher education, and balance resource allocations to support those goals**

**Rationale.** Countries are strategic when they treat HEIs (public and private; top-, second-, and third-tier institutions) as part of an overall system that is designed to meet an array of national needs. When an HEI is clear about its mission, it can focus its resources toward achieving its specific goals at a high level of quality. A differentiated higher education system enables multiple national needs to be addressed.

**Recommended actions.** Clarify institutional missions in light of analysis of national needs and available resources. Ensure that all institutional decisions serve the institution's designated mission.

**Recommended support through project operations.** To help achieve these ends, projects could support *meetings of national leaders* from Asia and elsewhere to focus on options and trade-offs in differentiated higher education systems as well as models and strategies for creating such national systems. Fruitful topics might include the establishment of specific criteria for quality assessment appropriate for institutions with particular missions, and systems for linking national quality assessment processes to resource allocation formulas. In particular, leaders from similar institutional types would benefit from workshops designed to highlight strategies for enhancing and assessing quality relative to specific institutional missions. For example, leaders in institutions focused on undergraduate teaching in local settings could benefit from discussions with leaders of community colleges in other countries regarding how quality is defined and evaluated within such settings.

**Recommendation 3: Develop university-based research efforts consistent with individual institutional missions**

**Rationale.** Research productivity is the currency of international prestige in higher education. Yet, particularly in resource-stretched environments, institutional research efforts should match specific institutional missions. In countries with higher education systems comprised of institutions with differentiated missions, institutions may take different approaches to research (e.g., cutting-edge research, teaching-focused inquiry, applied research).

**Recommended actions.** Examine how research fits with specific institutional missions. Encourage and reward research activity specifically aligned with institutional missions.

**Recommended support through project operations.** Projects could assist by facilitating *cross-institutional discussion* of diverse approaches to research and inquiry. Examples of possible interactions are (a) visits by higher education leaders in Asia to HEIs where faculty are doing applied, engaged, and community-based research and inquiry projects on teaching and learning; (b) visits to HEIs in Asia by international higher education professionals to discuss ways to encourage, support, and assess various forms of research; and (c) subregional workshops on strategies for promoting and preparing faculty members to participate in applied, community-based engaged scholarship or in the scholarship of teaching and learning.

Projects could also assist by sponsoring (or cosponsoring with regional organizations) *professional research training programs* designed to strengthen the research skills of individual researchers. Examples are (a) subregional institutes for intensive short-term skill development in a range of research methodologies; (b) development of cross-national research groups, led by experienced researchers and focused on thematically organized research topics of relevance to the region; and (c) matched mentoring opportunities to link less experienced and highly experienced researchers.

Similarly, projects could sponsor *training workshops for institutional research office leaders*. Institutional research offices should be prepared to conduct studies of direct relevance to the quality of work occurring within institutions, such as factors contributing to student retention, prevalent student learning strategies, students' perceptions of barriers to their learning, and long-term career paths of graduates.

#### **Recommendation 4: Improve faculty incentive and evaluation systems**

**Rationale.** If academic staff members are to engage fully in work that best supports the missions and goals of the institution, they must be clear about what those goals are, have the abilities and skills to do the work expected, and believe that there are sufficient incentives and rewards to make it worthwhile to do the work. Fair and transparent evaluation systems are closely related to effective incentive and reward systems.

**Recommended actions.** Institutional leaders should (a) articulate institutional goals and priorities and the expectations for the role of academic staff in advancing these priorities; (b) provide professional development that ensures staff have the skills and abilities to meet expectations; and (c) develop evaluation systems based on fair, consistent, and transparent assessment of performance and linked with valued incentives.

**Recommended support through project operations.** Projects could support *studies on faculty motivation* in the Asian context. There is a need for studies that explore the relationships among institutional expectations, faculty perceptions of self-efficacy (sense of one's ability to do what is asked), and incentives within higher education institutions in Asia. Since there are constraints on financial remuneration, discussion about the kinds of intrinsic rewards that enhance staff satisfaction and motivation could provide practical ideas, and research on motivation could contribute to the design of more effective reward structures. Along with that, projects could encourage and support *subregional training sessions on evaluation processes*. One strategy would be to join with regional associations to sponsor subregional training sessions focused on strategies for creating effective evaluation systems. Finally, projects could support subregional or country-wide *forums on improving the quality of academic work*. Such forums could encourage higher education institutions to better align expectations, incentives, and evaluation.

**Recommendation 5: Strengthen the quality of private higher education**

**Rationale.** Private higher education is expanding, but quality is often a concern. Faculty are often less qualified, with many teaching part-time while maintaining other employment. Given the financial pressures associated with expansion and the tendency of these institutions to attract students with weaker academic preparation (than those admitted to public institutions), private colleges and universities will need assistance in strengthening faculty and ensuring appropriate levels of quality.

**Recommended actions.** The previous recommendations 1–4 would all benefit private HEIs as well as public ones. In addition, to improve the internal efficiency of private HEIs in particular, consideration should also be given to cultivating cross-institutional collaborative linkages as a strategic action.

**Recommended support through project operations.** Projects could sponsor an *interinstitutional teaming program*. This might involve support to private institutions interested in teaming arrangements with international institutional partners. Such arrangements, involving cross-institutional visits and collaborative projects, might focus on institutional management, strategies for the improvement of teaching and learning, faculty development programming, innovative research approaches, and effective incentive systems.

Additionally, projects could sponsor subregional *conferences on quality assurance* that could explore dimensions of quality assurance and implementation of quality assurance criteria and programs in the context of private colleges and universities.

# References

- Asian Development Bank [ADB]. (2006). Report on External Degree Programs. Sri Lanka Distance Education Modernization Project. Colombo, Sri Lanka.
- . (2010). Regional Workshop on Higher Education Faculty Development, June 2010, at Asian Development Bank, Manila, Philippines.
- Altbach, P.G. (2003). Centers and Peripheries in the Academic Profession: The Special Challenges of Developing Countries. In P.G. Altbach (Ed.), *The Decline of the Guru: The Academic Profession in the Third World*. New York: Palgrave Macmillan.
- . (2004a) January. The Costs and Benefits of World-Class Universities. *Academe* (1), <http://www.aaup.org/AAUP/pubsres/academe/2004/JF/Feat/altb.htm>
- . (2004b). The Past and Future of Asian Universities: Twenty-First Century Challenges. In P.G. Altbach and T. Umakoshi (Eds.), *Asian Universities: Historical Perspectives and Contemporary Challenges*, Baltimore, MD: The Johns Hopkins University Press.
- . (2010). The Asian Higher Education Century. *International and Comparative Education Newsletter* No. 5. pp. 19–24.
- Astin, A.W. (1977). *Four Critical Years: Effects of College on Beliefs, Attitudes, and Knowledge*. San Francisco: Jossey-Bass.
- Austin, A.E. (1998a). The Role of Senior Leaders, Deans and Department Heads, and Academic Staff in Institutional Transformation. Paper read at Annual Meeting of the South African Association for Research and Development in Higher Education, September, at Bloemfontein, South Africa.
- . (1998b). A Systems Approach to Institutional Change and Transformation: Strategies and Lessons from American and South African Universities. Paper read at World Congress of Comparative Education Societies, July, at Cape Town, South Africa.
- . (2002). Academic Staff in Times of Transformation: Roles, Challenges, and Professional Development Needs. In D.W. Chapman and A.E. Austin (Eds.), *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. Westport, CT: Greenwood Press.
- . (2010). Reform Efforts in STEM Doctoral Education: Strengthening Preparation for Scholarly Careers. In W.G. Tierney (Ed.) *Higher Education: Handbook of Theory and Research*, Vol. 25. Netherlands: Springer.
- Austin, A.E., and M. McDaniels. (2006). Preparing the Professoriate of the Future: Graduate Student Socialization for Faculty Roles. In J.C. Smart (Ed.), *Higher Education: Handbook of Theory and Research*, Vol. 21. Netherlands: Springer.
- Birbaum, R. (1988). *How Colleges Work*. San Francisco: Jossey-Bass.
- Bolman, L.G., and T.E. Deal. (1991). *Reframing Organizations: Artistry, Choice, and Leadership*. San Francisco: Jossey-Bass.
- Braxton, J.M., ed. (2000). *Reworking the Student Departure Puzzle*. Nashville, TN: Vanderbilt University Press.

- Bray, M., and R. Thomas, eds. (1998). *Financing of Education in Indonesia*. Manila: Asian Development Bank.
- Buchori, M., and A. Malik. (2004). The Evolution of Higher Education in Indonesia. In G. Altbach and T. Umakoshi (Eds.), *Asian Universities: Historical Perspectives and Contemporary Challenges*. Baltimore: Johns Hopkins University Press.
- Chapman, D.W. (2002). When Goals Collide: Higher Education in Lao PDR. In D.W. Chapman and A.E. Austin (Eds.), *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. Westport, CT: Greenwood Press.
- . (2009). Higher Education Faculty in East Asia. Background paper for World Bank Flagship Report on Higher Education in East Asia. Washington, DC: World Bank.
- Chapman, D.W., and A.E. Austin. (2002). The Changing Context of Higher Education in the Developing World. In D.W. Chapman and A.E. Austin (Eds.), *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. Westport, CT: Greenwood Press.
- Chealy, C. (2006). Cambodia. In *Higher Education in South-East Asia*. Bangkok: UNESCO, APEID, SEAMEO-RIHED.
- Chronicle of Higher Education. (2008). As Viet Nam Expands Its Higher Education System, Professors Are in Short Supply. Chronicle of Higher Education Online.
- Cohen, M.D., and J.G. March. (1991). The Process of Choice. In M.W. Peterson, E.E. Chaffee, and T.H. White (Eds.), *Organization and Governance in Higher Education: An Ashe Reader*. Needham Heights, MA: Simon and Schuster.
- Eckel, P., M. Green, and B. Hill. (2001). Riding the Waves of Change: Insights from Transforming Institutions. In *On Change V: An Occasional Paper Series of the ACE Project on Leadership and Institutional Transformation and the Kellogg Forum on Higher Education Transformation*. Washington, D.C.: American Council on Education.
- Ford, D. (2006). Cambodian Higher Education: Growing Pains. *International Higher Education*. 44. pp. 1–2.
- Gappa, J.M., A.E. Austin, and A.G. Trice. (2007). *Rethinking Faculty Work: Higher Education's Strategic Imperative*. San Francisco: Jossey-Bass.
- Haddad, W.D., and S. Jurich. (2002). ICT for Education: Potential and Potency. In W.D. Haddad and A. Draxler. (Eds.), *Technologies for Education: Potential, Parameters, and Prospects*. Paris and Washington, D.C.: UNESCO and Academy for Educational Development.
- Hanushek, E.A. (2001). Economics of Education. In P.B. Balter and N.J. Smelser (Eds.), *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam: Elsevier Science.
- Hvistendahl, M. (2009). Asia Rising: Countries Funnel Billions into Universities. *Chronicle of Higher Education*, 1, A25–A26, A28.
- Jones, S.R., and E.S. Abes. (2004). Enduring Influences of Service-Learning on College Students' Identity Development. *Journal of College Student Development*. 45 (2). pp. 149–166.
- Kapur, D., and M. Crowley. (2008). Beyond the ABCs: Higher Education and Developing Countries. In *Center for Global Development Working Paper 139*. <http://www.cgdev.org/content/publications/detail/15310>
- Kejak, M., and A. Ortmann. (2003). E-Learning: A Way to Solve the Human Capital Bootstrapping Problem in Transitional Economies in Central Europe. Research paper funded by the World Bank's Global Development Network. <http://home.cerge.cuni.cz/ortmann/Papers/23paperkejort.pdf>
- Kezar, A. (2001). Understanding and Facilitating Organizational Change in the 21st Century: Recent Research and Conceptualizations. In ASHE-ERIC *Higher Education Report*. San Francisco: Jossey-Bass.

- Khan, H., and J. Williams. (2007). Poverty Alleviation through Access to Education; Can E-Learning Deliver? In C.A. Tisdell (Ed.), *Poverty, Poverty Alleviation, and Social Disadvantage: Analysis, Case Studies, and Policies*. New Delhi: Serials Publications.
- Lai, M., and L.K.K. Lo. (2007). The Changing Work Lives of Academics: The Experience of a Regional University in the Chinese Mainland. *Higher Education Policy*. 20. pp. 145–167.
- LaRocque, N. (2007). *The Role of Education in Supporting the Development of Science, Technology, and Innovation in Developing Member Countries: An Issues Paper*. Manila: Asian Development Bank.
- Lee, M.N.N. (2003). The Academic Profession in Malaysia and Singapore: Between Bureaucratic and Corporate Cultures. In P.G. Altbach (Ed.), *The Decline of the Guru: The Academic Profession in the Third World*. New York: Palgrave Macmillan.
- Levin, R. (2010a). The Rise of Asian Universities. *International Herald Tribune*.
- . 2010b. The Rise of Asia's Universities. *International and Comparative Education Newsletter* No. 5. pp. 1–19.
- Loh, F. (2010). Crisis in Malaysia's Public Universities? Balancing the Pursuit of Academic Excellence and the Massification of Tertiary Education. *HSU Newsletter of International and Comparative Education*. 1 (2–9).
- Marginson, S., and E. Sawir. (2006). University Leaders' Strategies in the Global Environment: A Comparative Study of Universitas Indonesia and the Australian National University. *Higher Education*. 51. pp. 342–373.
- Marginson, S., and M. Van de Wende. (2007). *Globalization and Higher Education, OECD Education Working Paper*, No. 8. Paris: OECD Publishing.
- McKeachie, W., and M. Svinicki. (2006). *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers*. 12th ed. Boston: Houghton Mifflin.
- Nizam. (2006). Indonesia. In *Higher Education in South-East Asia*. Bangkok: UNESCO, SEAMEO-RIHED.
- Pardey, P.G., N. Beintema, S. Dehmer, and S. Wood. (2006). Agricultural Research: A Growing Global Divide? In *IFPRI Food Policy Report*. Washington, D.C.: International Food Policy Research Institute.
- Puntasen, T.S. (2008). Higher Education and Participatory Development: Opportunities for Strengthening the Linkage. Paper read at Asia Pacific Subregional Preparatory Conference for the 2009 World Conference on Higher Education, at Macau, P.R. of China.
- Rhoads, R.A. (1997). *Community Service and Higher Learning: Explorations of the Caring Self*. Albany, NY: State University of New York Press.
- Rizvi, F., L. Engel, L. Nandyala, D. Rutkowski, and J. Sparks. (2005). Globalization and Recent Shifts in Educational Policy in the Asia Pacific: An Overview of Some Critical Issues. Draft Paper Prepared for the UNESCO Asia Pacific Regional Bureau for Education. Champaign, IL: University of Illinois at Urbana.
- Salmi, J. (2002). *Higher Education at a Turning Point*. In D.W. Chapman and A.E. Austin (Eds.), *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. Westport, CT: Greenwood Publishers.
- . (2009). *The Challenge of Establishing World-Class Universities*. Washington, D.C.: World Bank.
- Selvaratnam, V. (1994). *Innovations in Higher Education: Singapore at the Competitive Edge*. Washington, D.C.: World Bank.
- Sloper, D. (2004). *Consultant Overview Report of Technical Assistance to Higher Education Section of Education Strategic Plan*. Phnom Penh, Cambodia.

- Sorcinielli, M.D., A.E. Austin, P.L. Eddy, and A.L. Beach. (2006). *Creating the Future of Faculty Development: Learning from the Past, Understanding the Present*. Boston, MA: Anker Publishing Company, Inc.
- The Economist*. (2010). Replicating Success. Academic Fraud in China. 24 July.
- Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: University of Chicago Press.
- Tsang, M.C. (2002). Economic Analysis of Educational Development in Developing Nations. In J. Guthrie (Ed.), *Encyclopedia of Education*. New York: Macmillan.
- UNESCO. (2008). Conference Report on Higher Education in the Asia-Pacific Region. In *Asia-Pacific Subregional Preparatory Conference for the World Conference on Higher Education*. Macao, PR China and Bangkok, Thailand: Asia and Pacific and Regional Bureau for Education.
- Weick, K.W. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*. 21. p. 1–1.
- Welch, A. (2007). Blurred Vision: Public and Private Higher Education in Indonesia. *Higher Education*. 54. pp. 665–687.
- Wheeler, C. (2010). Personal communication, June.
- Wilkinson, R., and I. Yussof. (2005). Public and Private Provision of Higher Education in Malaysia: A Comparative Analysis. *Higher Education*. 50 (3). pp. 361–386.
- World Bank. (1996). Staff Appraisal Report, Indonesia. Higher Education Support Project: Development of Undergraduate Education (15 498-Ind). Jakarta.
- . (2009). *The Towers of Learning: Performance, Peril and Promise of Higher Education in Sri Lanka*. Washington, D.C.: Human Development Unit, World Bank, South Asia Region.
- World Bank Blog. (2010). Higher Education Graduates in Asia: Too Few? Too Many? <http://blogs.worldbank.org/eastasiapacific/node/2898>

# Higher Education In Dynamic Asia: Study Reports

The reports from the Asian Development Bank's regional study on Higher Education in Dynamic Asia provide an analysis of the issues facing higher education across Asia, suggest priorities among these issues, and offer detailed recommendations for the role that governments, higher education leaders, and other stakeholders and partners such as ADB could play in strengthening higher education systems and institutions in the region. Anticipated other titles include the following:

## **Higher Education Across Asia: An Overview of Issues and Strategies (2011)**

This publication summarizes findings and recommendations of a major regional study on Higher Education in Dynamic Asia, financed by ADB. It provides an overview of the critical issues challenging higher education across Asia. It summarizes suggested priorities and solutions among those key issues and offers recommendations to help countries and higher education institutions implement the solutions.

## **Counting the Cost: Financing Asian Higher Education for Inclusive Growth (2012)**

The publication focuses on critical issues of financing higher education in Asia, including alternative funding sources; privatization of public higher education institutions, and financial consequences of the rise of private higher education; student loans; and lower cost strategies for delivering instruction. The publication provides evidence that a key priority to strengthen higher education finance is via effective implementation of quality assurance.

## **Regional Cooperation and Cross-Border Collaboration in Higher Education in Asia: Ensuring that Everyone Wins (2012)**

An increasing number of countries across Asia are participating in regional cooperation and cross-border collaborations as a strategy for strengthening their higher education systems. Often collaboration works to the advantage of each partner, but not always. The publication analyzes the popularity of these collaborations and the range of purposes, and activities. As the collaboration mechanisms have expanded, so too have the complexities. Shifting economic circumstances converge to raise new issues for higher education leaders seeking to reap the benefits of regional cooperation and cross-border partnerships.

## **Improving Transitions: From School to University to Workplace (2012)**

The publication explores the critical issues of alignment and relevance among schools, universities, and the labor market in Asia. It argues that incoming university students must be prepared, and thus school curricula need to align with university entrance examinations. Meanwhile, university curricula ought to correspond with market demands to increase the employability of graduates with the right skill sets for the workplace.

## **Private Higher Education Across Asia: Expanding Access, Searching for Quality (2012)**

The publication focuses on the growth of private higher education in Asia. It provides a comprehensive analysis of the various types of private higher education institutions and their functions, and pursues timely perspectives, including implications for policy, quality assurance, and accreditation.

see next page 

**Access Without Equity? Finding a Better Balance in Higher Education in Asia (2012)**

Although expanded access is the major accomplishment of higher education systems in Asia, equitable provision of higher education is a challenge. The publication focuses on improving access to higher education for students from marginalized groups, and on mainstreaming access and equity in national and institutional policies and strategies. In addition, it analyzes the expansion of higher education access and equity via the growth of private higher education and effective technology-based instruction.

**Administration and Governance of Higher Education in Asia: Patterns and Implications (2012)**

The publication discusses the types and functions of various administration and governance systems of higher education in Asia. It particularly focuses on issues of institutional autonomy, and implications for financing, quality assurance, and personnel management.

## **Improving Instructional Quality**

### **Focus on Faculty Development**

The rapid expansion of higher education in Asia has been accompanied by challenges with no easy solutions and by issues that require innovative thinking and policy decisions. This publication focuses on the challenges in improving the internal efficiency of higher education institutions (HEIs) in Asia, examining the quality of the work done within these institutions; the efficiency and effectiveness of that work; and the problems, dilemmas, and barriers that HEIs in Asia face in fulfilling their missions. Recommendations are presented on how the Asian Development Bank and possibly other development partners can target project support to help HEIs improve their internal efficiency.

### **About the Asian Development Bank**

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
[www.adb.org](http://www.adb.org)  
ISBN 978-92-9092-519-4  
Publication Stock No. RPS124228



Printed on recycled paper.



Printed in the Philippines