development issues; 15 percent on trends and challenges; 12 percent on quality assurance; 10 percent addressed policies/regulations; 10 percent student issues; and only 5 percent each faculty perspectives, outcomes and impact, pedagogy and curriculum, rationales, and definitions. While it is encouraging to see the focus on management issues and quality assurance, it is troubling that outcomes and impact, as well as pedagogy and curriculum, receive such little attention. When the themes are linked with TNE modes, the quality assurance research focuses primarily on TNE in general and is not specific to one of the four main TNE modes. This raises the vexing question as to how quality assurance practices and issues differ among the modes. For example, with IBCs and franchise programs, the curriculum, qualification offered, and external quality assurance are the primary responsibility of the sending country. However, for partnership programs, the responsibility for these three aspects involves both the sending and host countries.

> The purpose of this article is to provide highlights from a recent analysis of more than 300 journal articles, book chapters, reports, and dissertations on TNE published since 2000.

Research Methods

The type of research methods (empirical, descriptive, conceptual, and policy analysis) was noted for all references. Overall, descriptive methods were used for 52 percent of the references, empirical for 40 percent, conceptual for 8 percent, and policy analysis for I percent. Interesting to note is the very small percentage of research studies that are conceptual or theoretical in approach. This may shed light on why there is such inconsistency in the interpretation and use of TNE terms.

DATES AND SOURCES OF REFERENCES

It is promising to see the considerable increase in TNE research references during the last 15 years. Of the total references reviewed, only 7 percent were published from 2000 to 2005, but this increased substantially to 42 percent between 2006 and 2010, and to 50 percent from 2011 to 2015. A deliberate choice for the review was to include academic literature only, thereby excluding grey literature such as newspaper/newsletter articles and blogs. With TNE research still being a relatively young field, it is not surprising that there is more grey literature than academic litera-

ture. But because the analysis focused on TNE research, it was necessary to focus on traditional sources. The analysis shows that about 39 percent are book chapters, 39 percent journal articles, 15 percent reports, usually from commissioned research, and only 7 percent dissertations.

It is disappointing to find so few PhD dissertations, as these researchers are critical to the future analysis of TNE. TNE dissertations available on ProQuest appear in references starting from 2005. The majority (61 percent) of the 18 dissertations focus on IBCs. This is interesting, as currently there are about 250 operating IBCs around the world, while there are thousands of TNE partnership programs. Furthermore, the emergence of joint universities (which involves collaboration from both host and sending country institutions to establish a new institution) is a relatively new phenomenon and is worthy of more research, as they are radically different from IBCs, which are essentially satellite campuses of foreign parent institutions. All in all, TNE studies would benefit from more PhD students, especially in host countries, doing their research on the different modes and dimensions of TNE.

TNE is still a relatively young sector and certainly an underresearched one. There are probably three to four times more research publications on student mobility issues than on program and provider mobility topics. However, a first key step is to develop a "Common TNE Classification Framework," with terms and definitions which are robust enough to differentiate the major modes of TNE, but flexible enough to be used by the more than 100 host and sending countries increasingly involved in TNE. This is a fundamental step to improving TNE data collection and research.

The Complex Diversity of Southeast Asian Postsecondary Education

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Are there common elements in the higher education realities of Southeast Asia? In fact, the region may even be more divergent than convergent. This can be seen in the responses that the countries in the region have made to twenty-first century higher education challenges, and such an examination yields some useful lessons and models.

ASPECTS OF DIVERSITY

The region is diverse in almost every respect. Religious traditions include Muslim (Indonesia, Malaysia, Brunei), Christian (the Philippines), Confucian (Vietnam), Buddhist (Thailand, Cambodia, Myanmar, Laos), and mixed (Singapore)-with religious minorities in most countries. British, French, Spanish, American, and Dutch colonialism have influenced the region. One country, Thailand, is one of the few in the developing world that was never colonized. Wealth varies dramatically from several high-income countries (Brunei and Singapore), some middle-income (Malaysia, Thailand), several that are close to middle-income (Indonesia, Vietnam, and perhaps the Philippines), and several that are still developing (Myanmar, Cambodia, Laos). Thus, it is not surprising that the variations in higher education realities across the region are significant-in many ways there are more differences than similarities. This is understandable, as each country needs a different approach to higher education development to meet specific national needs.

HIGHER EDUCATION REALITIES

Access to postsecondary education varies considerably in Southeast Asia—from approximately 10 percent in Myanmar to 87 percent of the relevant age group in Singapore. No Southeast Asia country, except Singapore, enrolls postsecondary students at the levels of the most advanced countries. Thailand (around half), Malaysia (37 percent), and Indonesia (32 percent) come closest. The poorer countries, such as Myanmar, Cambodia, and Laos, are all under 20 percent gross enrollment ratios. The region, with one exception, still faces the overwhelming pressures of massification—access to postsecondary education for large cohorts of students.

It is not surprising that the region has very few globally recognized research universities. With the notable exception of Singapore, which has two universities in the top 100, none rank highly, and only 15 are listed in the top 800 of the *Times Higher Education* ranking of universities worldwide. Malaysia, Indonesia, and Thailand, along with Singapore, are represented. While these rankings are imperfect measures, they do indicate generally the standing of research universities globally. The fact that the region has few research universities is a serious disadvantage if it wants to participate at the top levels of global science, attract students and scholars from overseas, and in general be a serious player in the global knowledge economy.

Again, with the exception of Singapore and to some

extent Malaysia, investment in higher education in Southeast Asia has been modest—in general expenditure from government sources has been under the support levels of advanced countries. Only Singapore and Malaysia have provided higher levels of state investment in higher education—other countries, such as Indonesia and Vietnam, spend well under I percent of GDP on postsecondary education. These relatively low levels of investment have had important implications. There are few research universities in Southeast Asia, as has been pointed out. It has also meant governments' response to the needs of massification has been limited, and that the private sector has provided much of the facilities to absorb the demands of mass access.

The private sector has emerged as a key part of the postsecondary structure in much of Southeast Asia. Singapore, Laos, Vietnam, Myanmar, Brunei, and Malaysia are partial exceptions to this generalization, although all have active and growing private institutions. In Thailand, Indonesia, and Cambodia, private providers enroll more than half of the student population. In the Philippines, more than 80

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percent of students are in private universities. Even socialist Vietnam plans to have 40 percent of enrollments in the private sector by 2020, although it is hard to see how that could be achieved without significantly lowering quality. In general, the private institutions are "demand absorbing," as countries transition to mass higher education—accepting students with modest academic qualifications and often from families from lower socioeconomic backgrounds. Many of the private providers are for-profit, and very few are high quality. In Thailand, the Philippines, Vietnam, and Indonesia, there are a few prestigious private universities, often affiliated with Christian religious organizations. Overall, little is known about the large and quite important private higher education sector in Southeast Asia.

Few Southeast Asian countries have coherent and welldesigned academic systems that provide a range of academic opportunities. Few countries, in Southeast Asia or elsewhere, have figured out how to integrate the private higher education sector so that it can contribute coherently to the public interest. Further, even within public postsecondary education, there are seldom systems in place that effectively ensure that the various sectors intelligently interlock, so that research universities, teaching-focused institutions, vocational schools, and others work together and are logically funded. Singapore, again, is perhaps an exception to this trend. It has just recently appointed a cabinet minister with a portfolio for higher education and skills.

ISSUES AND DEBATES

Is there a "Southeast Asian model" for higher education development? With the diversity described here, the answer is negative. Yet, there are a range of higher education networks, including the Southeast Asian Ministers of Education Organization (SEAMEO); the Association of Southeast Asian Institutions of Higher Learning (ASAIHL), which includes institutions from all over Asia; and the Association of Southeast Asian Nations Plus Three (ASEAN+3), that discuss common issues that may be considered in a regional context, and aspects of cooperation that may be useful. However, few lasting regional initiatives have been developed, and the desire to retain national control tends to override regional ambitions.

With few exceptions, and despite the existence of ASEAN and several other regional organizations, there is surprisingly little accurate information or analysis concerning higher education in the region. Accurate and up-to-date statistics and careful analysis of key themes and issues are necessary prerequisites for effective policymaking. Without good information, within countries and regionally, effective benchmarking is impossible. No Southeast Asia nation has an internationally visible higher education research center, and there are very few higher education specialists, whether in government or in the universities. A partial exception is Malaysia's IPPTN (National Higher Education Research Institute Malaysia). There is an urgent need for a research and policy community in higher education.

The language of higher education is a continuing issue in Southeast Asia, as it is in much of the world. The role of English, as the main world language of science and scholarship, is a particular dilemma. In general, Southeast Asian nations use their own indigenous languages for higher education. Two major exceptions are Singapore and the Philippines, which use English—as does Myanmar—although there is discussion in Myanmar concerning the appropriate language. Multiethnic Singapore found English to be a logical choice from the time of independence in 1965-a choice that helped the country build the most successful higher education system in Southeast Asia, and the only one with high international standing. Malaysia chose to jettison English and shift to the use of bahasa Malaysia, a decision that prevented the country from becoming internationally prominent, and created other problems. In the

2000s, Malaysian policy swung back to English to some extent, but now seems to be shifting again—although private sector institutions continue to offer instruction in English. Indonesia moved from Dutch to *bahasa Indonesia* following independence, although some English is now used.

The issue of language is discussed here not only because it is important in and of itself, but also because it is symbolic of the complexities of policy in the region. Language is, in some countries, a contentious political issue. On the one hand, local languages are a repository of local culture and history. On the other, English helps shape internationalization as well as regionalization, possibilities for hiring talent and attracting students from abroad, links to global science, prospects for access of local students, and others.

Few Southeast Asian nations seem to be positioned in the near future to join the ranks of the top leagues in higher education. Most continue to be concerned with coping with the continuing demands of massification, and thus pay limited attention to the global knowledge economy—with the significant exception of Singapore and to some extent Malaysia. No Southeast Asia country has sponsored an "excellence initiative," as have been initiated in such countries as China, Germany, Japan, Russia, and others, as a way of quickly building top research-focused universities—although most of the countries in the region have provided at least modest additional resources to their flagship universities. Malaysia, and particularly Singapore, have invested significant resources in them.

Southeast Asia is clearly affected by international trends. However, few countries have an international perspective or an internationalization policy. Malaysia, for example, hosts several branch campuses of Australian universities—and has one local university, the International Islamic University Malaysia, that was established to serve students from abroad. And Singapore, through its Global Schoolhouse initiative, has had an active internationalization policy that includes attracting international students and overseas academic institutions as well. But the region in general lacks an international perspective.

CONCLUSION

While there is little that links Southeast Asia's diverse nations, there are common higher education realities that face them. But rather than thinking of the region as a whole, it may be more useful to think of groups of countries with similar challenges. A first step is to develop effective data and analysis, and then to consider carefully appropriate development strategies. While problems are national, solutions may be regional, and answers may be suggested by the experiences of countries and institutions in the region.