Developing Holistic Indicators to Promote the Internationalization of Higher Education in the Asia-Pacific

Highlights

The internationalization of higher education has been emphasized by the global community to improve access and quality in higher education (SDG4.3), as well as to achieve other global goals by promoting cross-cultural understanding and tolerance. Even though the internationalization of higher education has diverse dimensions, 'student mobility' has been a predominant indicator and there are conceptual and methodological challenges in the existing sources of data and statistics.

In addition to student mobility, this document proposes a holistic set of indicators to capture other important dimensions of the internationalization of higher education, such as alignment with international normative instruments, international networking, governance and management, as well as the mobility of academics and programmes, etc. The suggested indicators are categorized into domains on two levels: system and institutional. It is hoped that this policy brief will help users better understand and adapt the indicators for use in their local contexts, so as to promote the internationalization of higher education.

The importance of the internationalization of higher education within global initiatives

The World Conference on Higher Education in 1998 declared that higher education shall be equally accessible to all on the basis of merit, and quality should be embraced in all its functions and activities.[1] The international dimension is an inherent part of its quality. The declaration from the World Conference on Higher Education in 2009 reaffirmed and strengthened the emphasis on access, equity and quality in higher education, as well as the role of internationalization, regionalization and globalization in shaping higher education.[2]

In 2015, the 193 Member States of the United Nations unanimously adopted the Sustainable Development Goals (SDGs)[3] and 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' became the overarching education goal for the global community as SDG4. The important role of higher education has been highlighted in SDG4, where Target 4.3 states that by 2030, 'equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university' should be achieved. In order to achieve this ambitious target, one of the indicative strategies is to promote internationalization of higher education through cross-border mobility programmes, institutional capacity-building and fair qualifications recognition to support increased access and quality. These efforts are especially critical in Asia-Pacific, which is the fastest-growing region in terms of the numbers of inbound and outbound international students.

1 UNESCO (1998). World Conference on Higher Education: Higher Education in the Twenty-first Century Vision and Action. Paris: UNESCO.

2 UNESCO (2010). Communique: 2009 World Conference on Higher Education. Paris: UNESCO.

3 UNESCO (2016). Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4. Paris: UNESCO

In addition to Target 4.3, there are other SDG targets closely related to the internationalization of higher education. Target 4.4 is focused on increasing the number of young people and adults with relevant skills for employment and entrepreneurship, and promoting cross-border recognition of TVET qualification and enabling workers' and learner's mobility is one of the indicative strategies to achieve this target. Furthermore, the internationalization of higher education is fundamentally related to initiatives such as Global Citizenship Education and Education for Sustainable Development under Target 4.7, by its contribution to the development of cross-cultural understanding and tolerance. Collectively, cross-national perspectives on global issues such as poverty, water, food security, the environment and climate action are essential in achieving the SDGs, in which internationalized higher education can play a pivotal part.[1, 2, 3] As a means of implementation to achieve these targets, Target 4.B articulates the strategy of expanding the number of scholarships available globally to developing countries for enrolment in higher education, which will offer an important contribution to the internationalization of higher education particularly in least developed countries.

In this context, tracking the progress of internationalization of higher education and cross-border activities in terms of meeting Targets in SDGs is crucial. The Framework of Action 2030 also calls for monitoring, follow-up and review based on evidence-based policies, which underlines the importance of the role of indicators.

Understanding 'internationalization of higher education'

Conceptually, globalization is not a new phenomenon; higher education and codified knowledge have been essentially global since ancient times, and the global characteristic of learning even pre-dated the concept of the nation-state.[4,5] However, what distinguishes contemporary globalization in the 21st century is the driving role of technology and innovation, specifically new developments in communication technologies.[6] The evolution of higher education and universities has continued to be shaped by contemporary globalization, where broad economic, technological and scientific trends further reformed the many facets of higher education and in turn led to development and a re-emphasis on international elements.[7, 8, 9] In the context of higher education, internationalization specifically refers to policies, programmes, initiatives and strategies undertaken within the sphere of higher education in response to globalization.[10, 11] More comprehensively, the internationalization of higher education can be defined as 'the intentional expansion of the spatiality of post-secondary education through cross-border mobilities and connections among institutions, students, scholars, knowledge, programmes and delivery (systems and providers).[12] For additional definitions and resources related to the internationalization of higher education, please see the links below.[13]

A traditional approach focused on student mobility

However, our current monitoring of the internationalization of higher education has focused primarily on student mobility. Indeed, student mobility has drastically increased around the world, from 1.75 million internationally mobile students before 2000

1 Egron-Polak, E. (2018). Sustainable Development Goals: A New Framework for the Future of International Higher Education? Available at https://wenr.wes.org/2018/02/sustainable-development-goals-a-new-framework-for-the-future-of-international-higher-education

2 Duran, P. (2017) Universities: Getting ready for the SDGs. Available at https://academicimpact.un.org/content/universities-getting-ready-sdgs

3 van't Land, H. and Herzog, F. (2017). Higher education paving the way to sustainable development: A global perspective. Paris: International Association of Universities.

4 Marginson, S. (2011). Introduction to Part I. In R. King, S. Marginson and R. Naidoo (Eds.), Handbook on Globalization and Higher Education. Cheltenham: Edward Elgar, 3-9.

5 Ziguras, C. (2016). Globalization and the transformation of Asian higher education. In C. S. Collins, M. N. N. Lee, J. N. Hawkins and D. E. Neubauer (Eds.), The Palgrave Handbook of Asia Pacific Higher Education, New York: Palgrave Macmillan, 73-88.

6 Michie, J. (2017). Advanced Introduction to Globalisation. Cheltenham: Edward Elgar.

7 Altbach, P. G., Reisberg, L. and Rumbley, L. E. (2010). Trends in Global Higher Education: Tracking an academic revolution. Paris: UNESCO and Rotterdam: Sense Publishers.

8 Knight, J. (2006). Internationalization: Concepts, Complexities and Challenges. In J. J. F. Forest and P. G. Altbach (Eds.), International Handbook of Higher Education (Part 1), New York: Springer, 207-227.

9 Wildavsky, B. (2010). The Great Brain Race: How global universities are reshaping the world? Princeton: Princeton University Press.

10 Altbach, P. G. (2006) Globalization and the university: Realities in an unequal world. In J. J. F. Forest and P. G. Altbach (Eds.), International Handbook of Higher Education (Part 1), New York: Springer, 121-139.

11 Knight, J. (2006). Internationalization: Concepts, Complexities and Challenges. In J. J. F. Forest and P. G. Altbach (Eds.), International Handbook of Higher Education (Part 1), New York: Springer, 207-227.

12 Williams, J. H., Brehm, W., Kitamura, Y., Sam, C. and Shibata, R. (2017, November). Internationalization of Higher Education in the Asia-Pacific: Toward a Mapping of Indicators and their Utilization. Paper presented at Second Stakeholders Meeting on Indicators for Internationalization of Higher Education in Asia and the Pacific, Bangkok, Thailand.

13 International Association of Universities (IAU); and the UNESCO, OECD (2005): Guidelines for quality provision in cross-border higher education

to almost 5 million international students worldwide by 2016.[1,2] This global trend is particularly significant for the Asia-Pacific region, which hosts nearly a million international students. The global tendency towards a shrinking world is facilitated by cheaper travel as well as regional or sub-regional harmonization initiatives in higher education such as the European Higher Education Area and the ASEAN Community. The most recent initiative in Asia and the Pacific is the 'Asia-Pacific Regional Convention on the Recognition of Qualifications in Higher Education (i.e. Tokyo Convention)' that came into force in February 2018. According to a 2017 working paper, 88% of reviewed literature and 93% of collected database from national and regional/global bodies have focused on student mobility as a component of internationalization.[3]

While the understanding of the internationalization of higher education has focused predominantly on student mobility, other aspects such as the mobility of academics, professionals, programmes and curricula, as well as the exchange of ideas and knowledge leading to capacity-building and quality enhancement have been neglected even though they are important dimensions of the internationalization of higher education.

Conceptual and methodological challenges

Data and statistics for the internationalization of higher education can be approached on two levels: the level of national systems, and the level of higher education institutions. Data and statistics illustrating the national system are typically published by national bodies and collated by international agencies like the UNESCO Institute of Statistics (UIS). The published data from the UIS on student mobility includes the number of inbound and outbound internationally mobile students, as well as indicators such as the net flow of internationally mobile students, the inbound mobility rate, the outbound mobility ratio and the gross outbound enrolment ratio. Conversely, data and statistics at the institutional level

are predominantly used in the construction of university rankings. For instance, Quacquarelli Symonds (QS) ranking relies on the ratio of international students and academics in the university who hold a foreign passport over the total population of students and academics.[4] The Times ranking, as well as using two similar ratios, also has an additional indicator for international collaboration that calculates the proportion of publications from the institution with at least one international co-author.[5]

However, there are conceptual and methodological challenges in existing data and statistical sources, underlining the need for a holistic set of indicators to understand and promote the internationalization of higher education.

First, **the lack of comprehensive data and statistics on other dimensions of internationalization, apart from student mobility, has restricted a more comprehensive understanding of the phenomenon.** For instance, our understanding of the mobility of academics has mainly centred on international academics working in foreign institutions, and even then, this is still under-researched across many national contexts.[6] Likewise, the internationalization of research has not received much attention beyond a simple counting of the number of papers co-authored by colleagues in different countries.[7] The role and function of higher education institutions and universities comprise three main areas – teaching, research and service – and therefore the current concentration on student mobility is likely to present a rather narrow view of the extent of internationalization of higher education.

Second, even within the concept of student mobility, **it is important to recognize that mobility is not homogeneous.** For example, outbound mobility ratio is defined as 'number of students from a given country studying abroad, expressed as a percentage of total tertiary enrolment in that country', has been used as an

1   UNESCO Institute of Statistics (UIS) (2006). Global Education Digest 2006: Comparing education statistics across the world. Montreal: UIS.

2   UNESCO Institute of Statistics (UIS) (2018). Education: International Student Mobility in Tertiary Education. Available at http://data.uis.unesco.org/

3   Williams, J. H., Brehm, W., Kitamura, Y., Sam, C. and Shibata, R. (2017, November). Internationalization of Higher Education in the Asia-Pacific: Toward a Mapping of Indicators and their Utilization. Paper presented at Second Stakeholders Meeting on Indicators for Internationalization of Higher Education in Asia and the Pacific, Bangkok, Thailand.

4   Quacquarelli Symonds (QS) (no date). QS World University Rankings: Methodology. Available at http://www.topuniversities.com/qs-world-university-rankings/methodology

5   Times Higher Education (THE) (2016). World University Rankings 2016-2017 Methodology. Available at https://www.timeshighereducation.com/world-university-rankings/methodology-world-university-rankings-2016-2017

6   Yudkevich, M., Altbach, P. G. and Rumbley, L. E. (Eds.) (2017). International Faculty in Higher Education: Comparative Perspectives on Recruitment, Integration and Impact. New York: Routledge

7   Woldegiyorgis, A. A., Proctor, D. and de Wit, H. (2018). Internationalization of Research: Key considerations and concerns. Journal of Studies in International Education, 22(2), 161-176.

indicator to illustrate the extent of any 'supply shortage' in the local higher education system,[1] but this indicator is only accurate if the total number of outbound students are enrolled for an entire degree programme abroad. However, if the numbers of outbound students are predominantly made up of those who go abroad for short exchange programmes, the outbound mobility ratio may in fact suggest the level of opportunities to go abroad within the total population of students enrolled in local higher education institutions, not necessarily a supply shortage of access in the local system.

It is also important to note that while the internationalization of higher education has focused on mobile students, this group of students only forms a minority in most systems and institutions. **The majority of students in higher education may not have opportunities or means to go abroad for short- or long-term study.** Hence, in order for a larger proportion of local students to benefit from internationalization without necessarily going abroad, internationalization of programmes and the curriculum, such as internationalization-at-home, may be initiated by the institutions.[2] However, these initiatives are not accounted for in existing indicators.

Third, **it has been assumed that internationalization will enhance the overall quality of education, but there is concern that this assumption may be flawed.** Does getting a foreign degree necessarily mean better quality education than a local degree? Or in terms of research and publication, where less than 26% of publications were published in one single institution and more than 35% have multiple nationalities co-authoring,[3] does having more international co-authors ensure better quality research and publications? Although the notion of quality can be challenging in terms of its operationalization, it remains an important consideration that we must constantly revisit in developing indicators.[4]

Holistic indicators of the internationalization of higher education for Asia and the Pacific

The definition and use of indicators

Before delving into the indicators, there is a need to first clarify the term 'indicator' and what this entails. Typically, an indicator refers to statistics that illustrate a specific condition, and is quantitative in nature.[5] Indicators are also expected to be measurable, realistic, meaningful and relevant in showing the desired outcome.[6] However, there are instances where qualitative indicators are equally as important as quantitative indicators, since the latter are mainly derived from statistics without much explanation and clarification.[7,8] As Martin and Sauvageot[9] have pointed out, the bottom line is not whether to opt for quantitative or qualitative indicators; it is the clarity of what is being measured that matters.

Along these lines, indicators can be used for a range of purposes, including the following[10]:

- **Description**: to inform citizens and policymakers about the circumstances of their society, to track trends and patterns, and to identify areas of concern as well as positive outcomes
- **Monitoring**: to track outcomes that may or may not require policy intervention of some kind
- **Setting goals**: to establish quantifiable thresholds to be met within a specific time period
- **Increasing accountability**: to achieve positive or improved outcomes
- **Reflective practice**: to inform practices of communities and individual programs on an ongoing basis.

1 Kritz, M. M. (2016). Why do countries differ in their rates of outbound student mobility? Journal of Studies in International Education, 20(2), 99-117.

2 Leask, B. (2015). Internationalizing the Curriculum. London: Routledge.

3 Royal Society (2011). Knowledge, networks and nations: Global scientific collaboration in the 21st century. London: The Royal Society.

4 Martin, M. and Sauvageot, C. (2011). Constructing an indicator system or scorecard for higher education: A practical guide. Paris: International Institute for Educational Planning (IIEP).

5 Shavelson, R. J., McDonnell, L. and Oakes, J. (1991). What Are Educational Indicators and Indicator Systems? Practical Assessment, Research and Evaluation, 2(11). Available at http://pareonline.net/getvn.asp?v=2&n=11

6 UNESCO (2003). Gender sensitive quantitative and qualitative indicators. Available at http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/BSP/GENDER/PDF/3.%20UNESCO%20Gender%20Lens%20for%20measuring%20performance%20guide%20for%20developing%20gender%20sensitive%20indicators.pdf

7 Sandhu-Rojon, R. (2004) Selecting indicators for impact evaluation. Available at http://www.ngoconnect.net/documents/592341/749044/Selecting+Indicators+for+Impact+Evaluation

8 UN Women (2018). Programming Essentials, Monitoring and Evaluation: Indicators. Available at http://www.endvawnow.org/en/articles/336-indicators.html

9 Martin, M. and Sauvageot, C. (2011). Constructing an indicator system or scorecard for higher education: A practical guide. Paris: International Institute for Educational Planning (IIEP).

10 Moore, K.A. and Brown, B.V. with Scarupa, H.J. (2003). The Uses (and Misuses) of Social Indicators: Implications for Public Policy, Child Trends Research Brief, 2-3.

Indicators on two levels: system and institutional

The proposed indicators for the internationalization of higher education may be operationalized on two levels: system and institutional. Although system-level indicators may simply be accumulated or aggregated institutional-level indicators in some instances, there are also unique characteristics that exist only at system level such as those pertaining to policy, normative instruments and quality tools.

Within each level, the indicators are categorized into domains. At the system level there are six domains, while at the institutional there are five (see Figure 1). Within each domain, several examples of indicators will be provided, but it is essential to note that these indicators are possible ways to operationalize each domain in illustrating the internationalization of higher education at the system and institutional levels, and they are by no means exhaustive.

Examples of indicators in each domain

A. System level

1. Mobility for teaching and learning

This domain captures the system-wide mobility of internationalization that can be divided into sub-domains of students, staff, programmes and institutions, and support. In systems that have an established data collection mechanism, some of these indicators in this domain can be accumulated/aggregated from the institutions. Examples of indicators in this domain include:

■ Student
- Outbound mobility
  - Proportion of local students in the total tertiary enrolment in the country studying for a degree programme abroad
  - Proportion of local students in the total tertiary enrolment in the country who are enrolled in a local institution and are studying abroad on short-term exchange
- Inbound mobility
  - Proportion of international students in the total tertiary enrolment in the country studying for a degree programme
  - Proportion of international students in the total tertiary enrolment in the country who are enrolled in a local institution on short-term exchange

■ Staff
  - Proportion of the total academic staff in the country holding a foreign passport
  - Proportion of the total academic staff in the country who received their highest academic qualification abroad
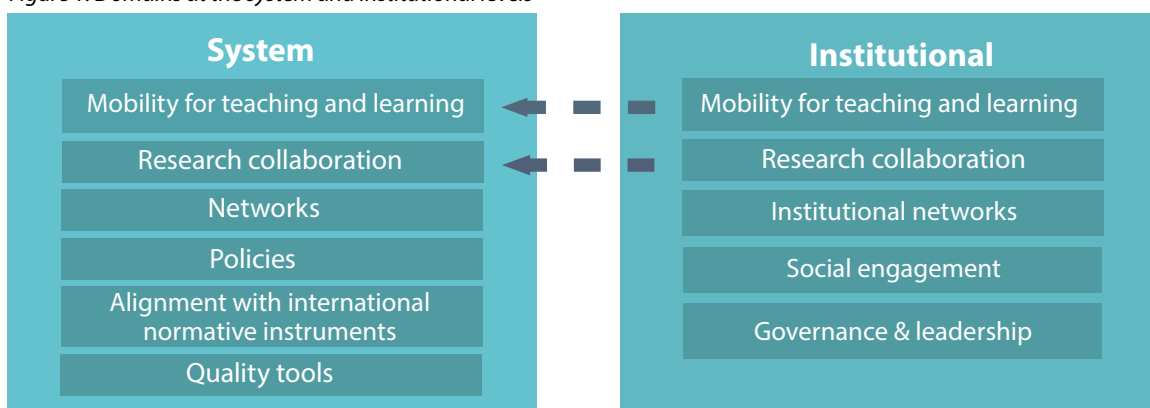
■ Programme and institution
  - Number of international academic programmes by international institutions offered locally
  - Number of local programmes offered abroad
  - Number of foreign institutions or branch campuses operating locally
  - Number of local higher education institutions with branch campuses abroad

■ Support
  - Number of scholarships available for international students
  - Number of scholarships available to support local students abroad (entire degree programmes and short-term exchanges)

Figure 1: Domains at the system and institutional levels

System
- Mobility for teaching and learning
- Research collaboration
- Networks
- Policies
- Alignment with international normative instruments
- Quality tools

Institutional
- Mobility for teaching and learning
- Research collaboration
- Institutional networks
- Social engagement
- Governance & leadership

2. Research collaboration

This domain underlines the extensiveness of collaboration across systems, specifically in the area of research. In systems that have an established data collection mechanism, some of these indicators can be accumulated/aggregated from the institutions. Examples of indicators in this domain include:

- Number and amount of research grants from abroad
- Number of research publications co-authored with international authors
- Number of languages in which research findings are disseminated
- Journals based in this country with international, regional and national focus respectively (including qualitative discusssion)

3. Networks

This domain relates to the participation of the national system/country in various regional and international organizations in higher education. The indicators in this domain are mainly items on a checklist, but importantly they should also account for the level of participation in a qualitative manner.

- Asia Pacific Quality Network (APQN)
- ASEAN Community
- Pacific Community (SPC)
- Southeast Asian Ministers of Education Organization Regional Centre for Higher Education Development (SEAMEO RIHED)

4. Policies

This domain comprises indicators that illustrate government policies and initiatives to promote internationalization, as well as commitment in terms of resources. The concept of internationalization in this domain goes beyond the cross-border mobility of students and staff, including policies and strategies undertaken to internationalize the national system. Examples of indicators in this domain are mainly qualitative in nature, and include:

- Specific policies, strategy plans or blueprints for internationalization
- Programmes and initiatives (including budget allocation) for internationalization
- Percentage of academic programmes with international components
- Academic programmes and centres on area studies and foreign languages

5. Alignment with international normative instruments

This domain focuses on indicators at the system level for the alignment of national policies with international normative instruments, including UN Conventions in general and those related to higher education and mobility in particular. Examples of indicators in this domain can mainly be qualitative in nature, and include:

- Ratification of the Asia Pacific Regional Convention on the Recognition of Qualifications in Higher Education (Tokyo Convention)
- Setting up of a National Information Centre[1]
- Implementation of the UNESCO and OECD joint Guidelines on Quality Provision in Cross-border Higher Education
- Implementation of the Incheon Declaration and Framework for Action, specifically around Global Citizenship Education
- Number of active memoranda of agreement for the mobility and exchange of students and staff

6. Quality tools

This domain accounts for the various tools that have been put in place to ensure quality in the provision of higher education, particularly with regard to cross-border mobility. Examples of indicators in this domain are also mainly qualitative in nature, and include:

- Setting up of a quality assurance agency or qualifications recognition agency
- Provision for the exchange of students in the national qualifications framework and quality assurance framework
- Number of mutual recognition agreements
- Use of credit transfer systems and diploma supplement (e.g. internationally recognized transcripts)

---

1 A National Information Centre provides higher education information to promote the recognition of qualifications (Tokyo Convention Article VIII.3)

B. Institutional level

1. Mobility for teaching and learning

This domain comprises indicators that capture the teaching and learning activities concerning internationalization. Due to the many areas involved in this domain, four sub-domains are proposed. Examples of indicators in this domain include:

■ Student
- Outbound mobility
  - Proportion of local students in the total enrolment who are on short-term exchange programmes abroad
- Inbound mobility
  - Proportion of international students in the total enrolment who are pursuing a degree from the institution
  - Proportion of international students in the total enrolment who are on short-term exchange programmes

■ Staff
  - Proportion of staff holding a foreign passport
  - Proportion of staff who received their highest academic qualification abroad
  - Proportion of local staff who have been abroad for visits, sabbaticals or exchange programmes (including research)
  - Number of foreign staff in the institution who are visiting, on sabbaticals or on exchange programmes (including research)

■ Curriculum
  - Number of collaborative academic programmes with foreign institutions
  - Number of foreign language courses offered, and proportion of students from total enrolment who are participating in these
  - Number of programmes with international focus (e.g. area studies; foreign languages)
  - Inclusion of Global Citizenship, International Understanding and Sustainable Development elements into academic programmes (qualitative discussion)

■ Support
  - Number of scholarships available for international students
  - Number of scholarships available to support local students abroad
  - Types of facilities (libraries, laboratories, eateries), services (religious, counselling, medical) and physical support (housing and accommodation) for international students

2. Research collaboration

This domain includes indicators that illustrate the extent of internationalization in the research activities of the institution. Examples of indicators include:

  - Proportion of collaborative research projects with foreign institutions in the total number of research projects
  - Percentage of research grants from foreign sources in the total number of research grants
  - Proportion of internationally co-authored publications
  - Number of languages used in dissemination of research findings

3. Institutional networks

This domain relates to the participation of the institution in various regional and international organizations, specifically those that promote academic mobility and international collaboration. Similar to the network domain at the system level, the indicators in this domain are mainly items on a checklist, but they also account for the level of participation in a qualitative manner.

  - Asia Pacific Quality Network (APQN)
  - Asian Association of Open Universities (AAOU)
  - ASEAN University Network (AUN)
  - Asia-Pacific University Community Engagement Network (APUCEN)
  - UNITWIN/UNESCO Chair
  - Number of active Memoranda of Agreement with foreign institutions over the last 3 years

4. Social engagement

This domain is made up of indicators to illuminate the extent of internationalization in the third mission of a university, engagement with the society at large. Examples of indicators in this domain include:

  - Number of community projects (including student-organized) involving foreign cultures
  - Qualitative discussion of engagement activities (apart from teaching and research) abroad (e.g. community development and fundraising projects.)

5. Governance and leadership

This domain focuses on indicators that underline institutional strategies and the governance of internationalization activities, including quality assurance and enhancement. The indicators are predominantly qualitative, and include:

- Institutional strategy on internationalization (qualitative discussion of policies, initiatives and infrastructure put in place to support and enhance internationalization)
- Type of services (academic and non-academic) provided related to internationalization
- Capacity-building for staff (academic and administrative) on internationalization
- Professional positions related to internationalization (e.g. Senior Internationalization Officer)
- Proportion of expenditure devoted to internationalization

Practical considerations and utilization of indicators

The development of a holistic set of indicators is an important step towards measuring and promoting the internationalization of higher education in Asia-Pacific. In addition, it is more important to make **a concerted effort to streamline the gathering of data and statistics in order to more accurately measure the internationalization of higher education**. For institutions and national systems to be in a position to develop this holistic set of indicators, a wider range of variables in the data and statistics is required. This includes, for example, detailed statistics on the characteristics of students and staff, which will allow meaningful insights to differentiate the long- and short-term mobility of students and staff, as well as developing a more useful description of the internationalized population of academic staff within the institution and system. At the same time, more comprehensive information on the curriculum, networking, institutional support and other aspects of internationalization within the higher education institution are also required in widening the net to capture these data and statistics. Likewise, statistics and information at the system level have to extend beyond quantitative person-count figures, and should include useful and relevant data to illuminate policy and resource allocation for internationalization activities.

The utilization of a holistic set of indicators is meant to serve as an indicator system or 'scorecard'.[1] These indicators are not meant for comparison or prestige, as with university rankings. Such a holistic indicator system will be useful and relevant for higher education institutions to monitor the extent of their internationalization activities and efforts in a timely manner. Similarly, at the system level it will also allow for monitoring and coordination across the system concerning the progress and implementation of policies to promote internationalization.

At the same time, having appropriate indicators will allow prompt identification and rectification of gaps and problem areas in internationalization at the institutional and system levels. For instance, a decline in the number of students from an institution going on short-term exchange programmes may flag the need to investigate possible causes and barriers for outbound students, thereby addressing the problem promptly. Hence, the identification of gaps and barriers through the use of indicators is crucial to further promote internationalization.

Most importantly, a holistic set of indicators provides vital empirical evidence on the internationalization of higher education, and in line with the Framework of Action 2030 and Incheon Declaration. In turn, this evidence can be used to inform and guide policy-making, planning and strategic development in national higher education systems and across institutions to enhance the holistic development of internationalization in Asia and the Pacific and move towards achieving the Education 2030 Agenda and Sustainable Development Goals.

---

1 Martin, M. and Sauvageot, C. (2011). Constructing an indicator system or scorecard for higher education: A practical guide. Paris: International Institute for Educational Planning (IIEP).

Author: Chang Da Wan

Co-ordinators: Libing Wang, Jihye Hwang, Wesley Teter

Graphic designer: Xiuwen Chen

Reviewers: Anthony Welch (Australia), Kan Yue (China), Yuto Kitamura and Yuki Watabe (Japan), Roger Chao (Philippines), Jacelyn Lin (Singapore), Nopraenue S. Dhirathiti (Thailand), and Aurélie Acoca (UNESCO UIS-AIMS)

The ideas and opinions expressed in this publication are those of the authors; they are not necessarily those of UNESCO and do not commit the Organization.

THA/DOC/EISD/18/049-400