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Chapter 3 International Dimensions in Teaching and Learning

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# Abstract

With the spread of globalization, the need to equip *all* students in higher education with international, intercultural, and global competencies have become more pronounced. International mobility has long been the preferred practice to achieve this. However, despite the continuous increases in international education, the limits to student mobility are undisputed. This is how internationalization at home became a policy priority. Internationalization at home enables the development of international, intercultural, and global competencies for students who do not engage in mobility programs. Practices of internationalization at home also more purposefully engage incoming foreign students. One of the most direct and impactful mechanisms of internationalization at home is through teaching; specifically, through emphasizing international perspectives and contents in course teaching. In this chapter, we analyze international dimensions in teaching and learning by comparing survey data from academics’ self-reported behaviors and perceptions. This study is guided by two research questions: (1) How do countries compare according to academics’ emphasizing international perspectives and contents in teaching? and (2) How do the internationalization practices impact the internationalization of the curriculum across countries? Academics’ insights are relevant since they are one of the key agents of internationalization. The chapter utilizes the survey data of academic staff acquired within the global research network APIKS (Academic Profession in Knowledge-based Society) with a geographic focus involving 20 countries from three world regions. Our findings point to notable differences between countries and world regions in academics’ implementation of international perspectives or contents in their course teaching. We also find that the greatest impact on academics’ emphasizing international content in their teaching comes from their institutions having a clear internationalization strategy and encouraging the recruitment of foreign academics.

**Keywords**: APIKS, internationalization of the curriculum, internationalization strategy, outcomes of internationalization

# Biographies

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Edgar Oswaldo González-Bello is a professor-researcher at the University of Sonora (Mexico) in the Department of Psychology and Communication Sciences. His performance is in the area of Education and postgraduate degrees in Educational Innovation. He is a member of the National System of Researchers (CONACyT-Mexico) and of the Mexican Research Council. Research topics of interest are innovation and educational change, higher education, and academics, teaching and the processes of internationalization of the curriculum, as well as digital technology and distance education.

# Introduction

Internationalization of higher education is seen as one of the key markers of quality higher education. Student mobility, recruitment of international students and staff, and international research collaboration have long been held as important aims and key indicators of internationalization of higher education (Huang, 2014). Other themes have also emerged, such as academic mobility, and international knowledge transfer (Huang, 2014). With the spread of globalization, the need to equip *all* students with international, intercultural, and global competencies have become more pronounced. This is to fulfill one of the purposes of higher education as “as the key engines of human resource development and ultimately their economic competitiveness” (Huang, 2014, p.1). Despite the continuous increase in international education, both in terms of mobile degree students and short-time mobile students, the limits to student mobility are undisputed. It is unlikely that most of the student population in any country will benefit from study abroad opportunities despite increases in funding and increased offers of mobility programs. This is how internationalization at home became a policy priority. Internationalization at home enables the development of international, intercultural, and global competencies for students who do not engage in mobility programs. Practices of internationalization at home also more purposefully engage incoming foreign students.

Internationalization at home is an umbrella term to describe the variety of instruments and activities to enable all students, regardless of whether they participate in study abroad programs or not, to develop international, intercultural, and global competencies (Leask, Beelen, & Kaunda, 2013). One of such instruments of internationalization at home is the internationalization of the curriculum. Internationalization of curriculum too has several dimensions, including and especially the measures whereby the academics emphasize international perspectives and contents in course teaching. Another practice includes international modules as part of study programs offered by the departments.

In this chapter, we focus specifically on international dimensions in teaching as the most direct measure of internationalization of the curriculum and thus of internationalization at home. We are interested in academics’ behaviors in terms of their emphasizing international perspectives and contents in teaching and comparing these behaviors across countries in different world regions. We also compare the academics’ observations of the two indirect indicators of the internationalization of the curriculum: the increase in the number of incoming international undergraduate students, and the presence of international graduate students. Furthermore, we are interested in understanding how different internationalization practices at a higher education institution influence the international dimension in teaching. Especially, does a clear internationalization strategy at an institution positively impact academics’ propensity to emphasize international perspectives and contents in teaching? Our research is guided by two research questions: (1) How do countries compare according to academics’ emphasizing international perspectives and contents in teaching? and (2) How do the internationalization practices impact the internationalization of the curriculum across countries? We utilize survey data of academic staff acquired within the global research network APIKS (Academic Profession in Knowledge Societies) with the geographic focus involving 20 countries from three world regions (APIKS – IDB, 2021).

Academics’ insights on this topic are relevant since academic staff are one of the key agents of internationalization (Brotherhood, Hammond & Kim, 2020). Academics have the capabilities to drive internationalization by directly implementing the desired policy measures, such as emphasizing international perspectives and contents in teaching. Academics can also stall internationalization processes if they lack capabilities to implement the policy measures or are otherwise unwilling to do so. The existing studies of the internationalization of curriculum focus mostly on the analysis of policies and practices at the national, institutional, or study-program level (Childress, 2010; Jones & Killick, 2013). The approach taken in our study aligns with the work conducted by Coates, Dobson, Goedegebuure, & Meek (2014) included in the edited volume *The Internationalization of the Academy: Changes, Realities and Prospects* (Huang, Finkelstein & Rostan, 2014). The survey data from the country studies conducted within the global research network APIKS (Academic Profession in Knowledge-based Society) offers first-hand reports from academic staff on their actual behavior, i.e., how likely they are to include international perspectives or contents into course teaching, as well as their perceptions of internationalization practices, such as incoming student mobility and presence of international graduate students. The APIKS data we utilize in our study also has a unique geographic reach involving survey data from 20 countries from three world regions: Americas, Asia, and Europe.

In the remainder of the chapter, we first review the literature on the internationalization of the curriculum and international dimensions in teaching to locate our research within broader scholarly conversations. Next, we describe the methodology of our study which focuses on academics’ agentic behavior with respect to international dimensions in teaching, and their perceptions of other internationalization practices. In the section on findings, we present data from international comparative analysis on the two research questions. Our conclusion summarizes the main findings of this international comparative research on the academics’ perspectives on the internationalization of the curriculum.

# Review of literature

Internationalization of the curriculum has come to the forefront of the internationalization efforts in the report by the Organization for Economic Cooperation and Development (OECD) (van der Wende, 1996). Over time it has become one of the central concepts and an essential component of “internationalization at home” which is part of the internationalization of higher education (Leask, Beelen, & Kaunda, 2013; Leask, 2015). Beelen and Leask (2011, p.5) define internationalization at home not as an aim or a didactic concept, but rather as a set of instruments and activities at a home institution that aims to develop international, intercultural, and global competencies in all students enrolled at that institution regardless of if they engage in mobility programs abroad or not. Internationalization of curriculum can thus be considered as one of the instruments of internationalization at home specifically and of internationalization of higher education more broadly. Practices of internationalization at home also more purposefully engage incoming foreign students and international graduate students. Hence the presence of such students can help reinforce the objectives of internationalization at home.

Internationalization of the curriculum refers to international, intercultural, and global dimensions in higher education curricula. It encompasses, first and foremost, the practices of curriculum development inclusive of international, intercultural, and global perspectives both in content and in teaching and learning strategies (Clifford, 2013). These practices as well as the student learning outcomes that show improved international, intercultural, and global competencies are rather difficult to measure. However, there has been pressure on higher education institutions to measure and quantify the inputs and outputs of internationalization (Brandenburg in de Wit, 2011 in Aškerc Zadravec, 2021). Therefore, more quantifiable measures have been introduced to determine the extent of internationalization of the curriculum in a specific institution or its department or study program (Aškerc Zadravec, 2021). The markers of internationalization of the curriculum nowadays include not only curricular contents and teaching and learning approaches inclusive of international, intercultural, and global perspectives, but also other indicators. Such indicators include the presence of international visiting professors offering courses, recruitment of academic staff from foreign countries, number of courses taught in foreign languages, and enrollment of international visiting students or international degree students (Aškerc Zadravec, 2021; Çalikoglu 2018). Still, the most conclusive and decisive indicator of internationalization of the curriculum remains the academics’ emphasis on international perspectives and contents in their course teaching. Therefore, in this study, academics’ emphasis on international perspectives and contents in their course teaching is our prime dependent variable, but we also consider the observed increases in foreign students and recruitment of foreign academic staff as dependent variables.[[2]](#footnote-2)

What are the drivers and rationales of the internationalization of the curriculum? How is the internationalization of the curriculum achieved at a higher education institution? Leask and Bridge (2013) suggest that internationalization of the curriculum is highly “context dependent” and varies across study programs and disciplines, institutions, and countries (cited in Leask, Beelen, & Kaunda, 2013, p. 188). This means that there is likely a variety in the presence of the markers of internationalization of the curriculum mentioned earlier, and that differences can exist within institutions (based on disciplinary differences and priorities), and between institutions (based on political, economic, cultural influences).[[3]](#footnote-3) Some institutions or study programs will emphasize more or less curriculum development, other institutions or study programs might put a greater or lesser emphasis on recruitment of foreign teaching staff (visiting or permanent) or recruitment of international students (visiting or degree). The institutional rationales and goals for internationalization are recorded in institutional strategies, in particular institutional strategies on internationalization.

Having a clear institutional strategy for internationalization may create enabling conditions for internationalization of the curriculum. However, we must consider academics’ agentic capabilities in implementing these institutional policies and guidelines or not (Gopaul et al 2016). Osakwe (2017) highlights that administrative support is needed to ensure the professional development of academics to be prepared to integrate international perspectives in their courses. There is ample research that reports difficulties in engaging academic staff in the processes of internationalization of the curriculum (Childress, 2010; Egron-Polak & Hudson, 2010; Leask & Beelen, 2010; Leask, 2015, Osakwe, 2017; Stohl, 2007). Additional challenges are posed by the established pedagogical traditions in the different disciplines. Disciplines have different approaches, indeed different academic cultures when it comes to internationalization, international cooperation, and/or including international contents and perspectives in course teachings (Osakwe, 2017; Stohl, 2007). Part of the problem is a lack of understanding by the academics about what internationalization of the curriculum means within their disciplinary and institutional contexts or not feeling responsible or having the capabilities to implement internationalization in their courses (Stohl, 2007).

Hence, the institutional policies and strategies on the internationalization of teaching may have positive effects but cannot guarantee implementation by academics. The policy might or might not develop specific support measures or incentives for academics to do so. Even if there are explicit goals for the internationalization of the curriculum stated in an institutional strategy, the implementation might now be fully followed by all academics, or it might be followed by more academics in some study programs than others. The discrepancy between institutional strategies and the actual implementation of these strategies is a common feature in higher education (as it is in other social institutions). The main explanation lies in the agentic capabilities of key actors responsible for implementation, especially academics as in the case of implementation of international dimensions in teaching and learning.

Nevertheless, we can hypothesize that a presence of a clear institutional strategy on internationalization increases the likelihood of seeing the outcomes of internationalization in the emphasis on international contents and perspectives in course teaching as measured in this study; as well as other outcomes of internationalization, such as an increased presence of international students and international academics. We test this hypothesis in the analysis below and measure how other institutional conditions, such as presence of international mobile students or international graduate (degree) students (independent variables) impact the internationalization of the curriculum. We understand that the institutional strategies continue to evolve following the changes in the rationales for internationalization and specific goals that the institutions set for themselves. For example, the rationales for internationalization of the curriculum can be “preparing graduates for a globalized world” or “developing intercultural competence” in students (Leask, Beelen, & Kaunda, 2013; Leask, 2015). The prioritized measures to achieve this can be internationally diverse student body, internationalized academic staff, international modules in study programs, international content and perspectives in teaching, or some combination of these.

The institutional priorities for the internationalization of teaching and learning are reflected in the broader goals for the internationalization of higher education in a specific country. Huang (2014) reports that the internationalization of the academic profession has reflected the rationales for internationalization in a country: in countries that seek to become internationalization centers, it is more closely linked to commercial activities, while in peripheral countries, it is more linked to improving academic quality through internationalization of teaching and research. Countries can be categorized into centers and peripheries based on their civilizational and economic attraction (Klemenčič, 2017). Language, especially in English-speaking and non-English-speaking countries also play a role, especially in the internationalization of teaching and learning (Coates et al, 2014; Lee, Davis & Li, 2021).

Finally, this study contributes to the growing literature on academic profession by comparing the behaviors and experiences of academics across countries and world regions and explaining the changes in the academic profession and conditions of academic work. We focus on the issue of internationalization of the academic profession which is the focus of the present volume to which our study contributes. Our findings can be also compared to the studies which were based on the CAP (Changing Academic Profession) project conducted in 2007 which is a predecessor to the APIKS project (Coates, Dobson, Goedegebuure, & Meek, 2014; Dobson, & Pekkola, 2014; Huang, 2015; Kwiek, 2014; Aarrevaara, McGinn, Ratković, & Wolhuter, 2013), and other related studies. Through the analysis of these two-survey data, we can understand the changes in higher education in the process of internationalization of teaching and learning, as well as its impact and relevance on academics' professional development.

Specifically analyzing data on the question “in your courses, you emphasize international perspectives or content”, Coates et al (2014, p. 112) found the highest responses (approximately two-thirds and higher) from academics in seven countries: “Highest rates of response was from Portugal (where 81 % of academics strongly agreed or agreed that they emphasized international perspectives), with Mexico, Korea, Hong Kong, Australia, Norway, and the United Kingdom also having at least 67 % of their academics strongly agreeing or agreeing. The lowest responses came from Japan and Finland (51 %), the United States and Brazil (53 %), and Argentina (58 %).” Coates et al (2014, p. 112) sought to distinguish between the trends among English-speaking and non-English-speaking countries, but they also suggested that the interpretation of the result was “not straightforward”; especially when a country, such as Portugal, a non-English-speaking country scored so high.

In a comparison between countries in Europe (Austria, Finland, Germany, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Switzerland, and the United Kingdom), Kwiek (2014) reported that 64% of full-time academics emphasize international perspectives or content in their courses. Higher percentages were achieved in countries such as Ireland and Portugal, unlike Poland and Germany where this perspective was least developed. In Finland, only half of the teachers emphasized this perspective (Aarrevaara, Dobson, & Pekkola, 2014). In the Asian continent, more Korean academics reported having integrated international perspectives and contents into their teaching than in China or Japan (Huang, 2015). In the Americas, especially considering México, Brazil, Chile, and excluding the United States and Canada, the internationalization of the curriculum has had heterogeneous results and the main actions have been shared programs and degrees, and co-tutorials between academics (Didou, 2017).

Researchers point to different factors having a positive influence on academics’ emphasizing international perspectives and contents in their courses. In the European context, Locke (2009) suggests that the higher education institutions in England where research activities are carried out with greater intensity are more likely to emphasize international perspectives or content in their courses. The emphasis on international contents and perspectives was also more frequently reported among academics from the departments of engineering and technology (Locke, 2009). In the case of Poland, Kwiek (2017) found that internationalized teaching was more pronounced by full-time professors in contrast to junior academics. McGinn, Ratković, and Wolhuter (2013), who analyzed a sample of academics from 19 countries participating in CAP, found that there were significant differences between national and immigrant academics; the latter were more likely to emphasize international perspectives and contents.

# Methodology and methods

Addressing the research question of how countries compare according to academics’ emphasizing international perspectives and contents in teaching, we investigate the occurrences in the internationalization of the curriculum as self-reported behaviors by academic staff in different countries. We focus here specifically on the academics’ reported behavior responding to the APIKS survey question “In your courses, you emphasize international perspectives or content”.

We also measure two indirect indicators of the internationalization of the curriculum: 1) the increase in the number of international students (survey question “Since you started teaching, the number of international students has increased”, and 2) the presence of international graduate students (survey question “Currently, most of your graduate students are international”). As discussed earlier, the presence of international students in the classroom can reinforce internationalization at home. As such, these two variables have also been identified in the literature as indirect indicators of the internationalization of the curriculum. When having international students in the classroom, academics can draw on their specific knowledge and experiences from their home countries as a resource to emphasize international perspectives. Having international students present in the classroom can also serve as a “living laboratory” for all students developing international and intercultural competencies. This happens especially in-class activities that include collaborative (team) assignments. It should be emphasized, however, that in our study two variables reflect academics’ subjective perception of the situation, not objective measures of international students’ enrollment at their institution. It is possible that such subjective perceptions don’t align with actual institutional measures.

Second, we explore which internationalization practices have a positive impact on the internationalization of the curriculum. Specifically, we measure the correlation between six internationalization practices as independent variables and the academics’ reported behaviors emphasizing international perspectives and contents in course teaching as the dependent variable. We measures academics’ perception on the following six internationalization practices: 1) existence of a clear institutional internationalization strategy (survey question: “Your institution has a clear strategy for internationalization:); 2) exchange programs for students (survey question: “Your institution provides various international exchange programs for students”); 3) funding and opportunities for research abroad (survey questions: “Your institution provides various opportunities/funding for faculty members to undertake research abroad”); 4) funding and opportunities for visiting international students (survey question “Your institution provides various opportunities/funding for visiting international students”); 5) funding and opportunities for visiting international scholars (survey question “Your institution provides various opportunities/funding for visiting international scholars”; and 6) recruitment of faculty members from abroad (survey questions “Your institution encourages the recruitment of faculty members from foreign countries”).

Furthermore, we also investigate the correlation between the six internationalization practices and all three dependent variables that, in our view, indicate internationalization of the curriculum: academic staff emphasizing international perspectives or contents in teaching; observed increase in the number of international students; and observed the high presence of international graduate students. Based on the existing literature, our working hypothesis here is that a presence of a clear institutional strategy on internationalization increases the likelihood of the outcomes of internationalization in terms of the emphasis on international contents and perspectives in course teaching as measured in this study, but also other outcomes of internationalization, such as an increased presence of international students and international academics in the respective institution.

To verify the research hypotheses, we utilized the scale developed by the Academic Profession in the Knowledge-based Society (APIKS) survey to measure the perception of selected variables by university academics in 20 countries (APIKS-IBD 2021). APIKS is an international and comparative study, which is the third wave after Changing Academic Profession (CAP) 2007 and Carnegie 1992 projects (Höhle & Teichler 2013; Teichler, Arimoto, & Cummings 2013), aiming to understand the creation and emergence of the knowledge society, comparing academics’ changing working conditions across the world. The subjects of this study are academics working at higher education institutions in 20 countries, including Canada, Chile, Argentina, Mexico, Croatia, Estonia, Finland, Germany, Portugal, Russia, Slovenia, Sweden, Switzerland, Turkey, Lithuania, Taiwan, Japan, South Korea, Malaysia, and Kazakhstan. A total of 42,413 samples are analyzed. In this study, we first use descriptive statistical analysis to analyze and compare the international dimensions in 20 participating countries and find out the factors that influence university internationalization in teaching and curriculum. Then Pearson product-moment correlation and multiple stepwise regression are adopted to clarify the relationship between these factors and explain the relevant factors that most affect internationalization while academics’ courses emphasize international perspectives or content. We have also utilized the 2007 CAP data set for conducting the longitudinal comparison. However, we could not perform longitudinal analysis for all countries since not all countries were included in both CAP and APIKS studies.

# Findings

In this section we present data and findings on the research questions. First, we present the findings on the occurrences in internationalization of the curriculum through analysis of data on the academics’ reported behavior emphasizing international perspectives and contents in teaching which is a direct measure of internationalization of the curriculum. We also compare data on the two indirect indicators of the internationalization of the curriculum: the increase in the number of international students and the presence of international graduate students. Second, we explore how internationalization practices correlate with the internationalization of the curriculum. We first compare the observed internationalization practices among the countries. Then, we measure the correlation between the six internationalization practices and the internationalization of the curriculum.

## International comparison of internationalization of the curriculum

Our data on the occurrences of internationalization of the curriculum as reported behavior by academic staff to emphasize international perspectives or contents in teaching points to notable differences between the 20 countries. The highest reported emphasis on international contents or perspectives in course teaching is among academic staff from Turkey, Kazakhstan, Portugal, Mexico, and Chile, and the lowest from Germany and Japan (see Figure 1).



## Figure 1. Emphasize international perspectives or content in teaching activities by countries.

In terms of regional differences, the Americas scored above the global average with Mexico and Chile above the regional and global average. The Asian countries’ average score is just slightly below the global average and Kazakhstan and Malaysia scored above the global average. An Asian country with a very low reported score is Japan. The average score among the European countries is the lowest among the three world regions. Among the European countries, five scored above the global average: Turkey, Portugal, Slovenia, Estonia, and Croatia. Also, some of the countries with the lowest reported behavior of including international content and perspectives in teaching are from Europe, most notably Germany, Finland, and Switzerland.

Comparing APIKS data to the CAP international dataset from 2011, we observe some continuity.[[4]](#footnote-4) In Europe, Portugal continues to stand out for highly reported behavior that emphasizes international perspectives and contents. Germany’s position worsened compared to the CAP survey, and the reported behavior of Finish academics remains low but higher than German. In the Americas, Mexican, Argentinian, and Canadian situations remain about the same. Among Asian countries, Korean academics reported behavior lowered compared to the CAP survey, and Malaysian increased. Japanese academics’ reported behavior remains low and among the lowest globally.

Next, there are also notable differences between countries regarding the observed increase in the number of international students by the academic staff. On this indirect indicator of the internationalization of the curriculum, the highest observed increases were in Portugal, followed by Slovenia, Russian Federation, Canada, Finland, and Lithuania. In the Americas, on this measure, Canada and Argentina score higher than Chile and Mexico, but only the former is above the global average (3.30). European countries’ average is above the global score; however, it also includes Croatia which scores significantly lower than other countries. Among the Asian countries, Malaysia scored the highest.



Figure 2. Perception of an increase in the number of international students by region.

Regarding the observed number of international graduate students, Kazakhstan and Croatia clearly stand out and Sweden, Canada and Malaysia are above the global average. Among the world regions, Asian countries on average report the highest presence of international graduate students, and the four countries in the Americas, the lowest. As reported by Didou (2107), student mobility is the internationalization activity that is mostly carried out in higher education institutions in countries such as Latin America (Chile, Argentina México, etc.), although it is reduced in global terms (less than 1% of enrollment). Brazil and Mexico are the countries with the highest international mobility, with the United States as the predominant place of arrival (Didou, 2017).



Figure 3. Comparison by country about which currently, most of its graduate students are international.

In sum, the occurrences in internationalization of the curriculum vary significantly between the 20 countries included in the study reflecting the differences in internationalization priorities or academics’ willingness and capabilities to implement these priorities. What is clear from the data is that Kazakhstan prioritizes indicators of the internationalization of the curriculum measured in our study; emphasizing international contents and perspectives as a direct indicator and increase in international students and presence of international graduate students as indirect measures. This country is Kazakhstan. Portugal scores above the global average on the former two, but below average on the presence of international graduate students. The situation in Croatia is somewhat complex. While academics report an emphasis on international perspectives or contents for teaching activities slightly below the global average, the situation of international students is presented in opposite routes: higher in graduate students and lower for the increase in the number of students. Germany also stands out as a country that presents indices below the European average and below the global average for all three indicators of the internationalization of the curriculum: emphasis on international perspectives and contents, graduate international students and increase in the number of international students. At the global level there are shared trends: America shows a higher index in emphasizing international perspectives or contents in teaching, Europe in the increase in the number of international students, and Asia in the perception that graduate students are international.

## Correlation of internationalization practices on internationalization of the curriculum

We investigated the impact that internationalization practices have on the internationalization of the curriculum. In Table 1, we compared first the institutional support for internationalization in different countries as observed by the academic staff in respect to six specific internationalization practices. APIKS questionnaire uses the Likert five-point scale to represent 1 for “strongly disagree” to 5 for “strongly agree”.

Table 1. Average score of internationalization strategies of higher education institutions by countries and regions

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Region | Countries | Existence of a clear strategy for internationalization | Exchange programs for students | Funding and opportunities for research abroad | Funding and opportunities for visiting international students | Funding and opportunities for visiting international scholars | Recruitment of faculty members from foreign countries | Average for each item |
| Americas | Argentina | 3.10 | 3.38 | 2.71 | 2.82 | 2.82 | 2.01 | 2.81 |
| Canada | 2.98 | 3.73 | 2.52 | 2.78 | 2.54 | 2.53 | 2.85 |
| Chile | 3.39 | 3.71 | 2.79 | 3.00 | 2.86 | 2.79 | 3.09 |
| México | 3.54 | 3.76 | 3.12 | 3.09 | 2.91 | 2.78 | 3.20 |
| Average of participating countries  | 3.25 | 3.65 | 2.79 | 2.92 | 2.78 | 2.53 | 2.99 |
| Europe | Croatia | 2.94 | 3.67 | 2.63 | 2.67 | 2.64 | 2.07 | 2.77 |
| Estonia | 3.17 | 3.94 | 3.22 | 3.48 | 3.45 | 3.26 | 3.42 |
| Finland | 3.39 | 4.09 | 3.64 | 3.91 | 3.69 | 3.04 | 3.63 |
| Germany | 2.70 | 3.34 | 2.56 | 2.62 | 2.33 | 2.12 | 2.61 |
| Portugal | 3.24 | 3.92 | 2.54 | 2.80 | 2.51 | 2.17 | 2.86 |
| Russian Federation | 3.38 | 3.62 | 2.65 | 3.09 | 3.04 | 3.01 | 3.13 |
| Slovenia | 3.03 | 3.31 | 2.50 | 2.68 | 2.68 | 2.34 | 2.76 |
| Sweden | 3.26 | 3.43 | 2.81 | 3.03 | 2.90 | 3.12 | 3.09 |
| Switzerland | 3.36 | 4.10 | 3.24 | 3.37 | 3.18 | 3.27 | 3.42 |
| Turkey | 3.00 | 3.40 | 2.57 | 2.90 | 2.78 | 2.33 | 2.83 |
| Average of participating countries | 3.15 | 3.68 | 2.84 | 3.06 | 2.92 | 2.67 | 3.05 |
| Asia | Kazakhstan | 4.43 | 4.46 | 3.68 | 3.88 | 4.03 | 4.09 | 4.10 |
| Korea | 3.95 | 3.52 | 2.68 | 3.28 | 2.71 | 2.79 | 3.16 |
| Japan | 3.39 | 4.09 | 3.32 | 3.88 | 3.60 | 3.23 | 3.59 |
| Malaysia | 3.76 | 3.86 | 3.11 | 3.08 | 3.15 | 3.35 | 3.39 |
| Taiwan | 3.78 | 3.64 | 3.33 | 3.46 | 3.29 | 3.85 | 3.56 |
| Average of participating countries | 3.86 | 3.91 | 3.22 | 3.52 | 3.36 | 3.46 | 3.56 |

As shown in the table above, the higher the average score of each item, the greater the support for internationalization by the higher education institutions. Regardless of the continent, the countries with the highest average scores are Kazakhstan (4.1), Finland (3.63), and Japan (3.59); the countries with the lowest average scores are Germany (2.61), Slovenia (2.76), and Croatia (2.77). We then analyze by continent and find that the country with the highest average score in the Americas is Mexico (3.20), the lowest average score is Argentina (2.81); the country with the highest average score in Europe is Finland (3.63), and the lowest average score is Germany (2.61); the highest average score in the Asian region is Kazakhstan (4.10), and the lowest average score is Korea (3.16). Overall, the Asian region has the highest average score (3.56), followed by Europe Region (3.05), while the Americas has the lowest average score (2.99). Higher education institutions in Asia are more supportive of internationalization than ones in Europe and the Americas.

On the six indicators, academic staff from Kazakhstan report the highest occurrence, while Korea presents the lowest indices, except for the existence of a clear internationalization strategy and funding and opportunities for visiting international students. Among the countries in the Americas, Mexico’s academic staff reports high or the highest occurrence on all indicators (with higher indexes in exchange programs for students), except for the recruitment of teachers from foreign countries where Chile is higher. Canada has the lowest index in four indicators, and Argentina takes its place in the remaining two: exchange programs for students and recruitment of faculty members from foreign countries. Among the European countries, the comparative picture is more complex, although Finland stands out in most indicators, alternating with Switzerland. The lowest rates are between Germany and Slovenia, and Croatia with the issue of recruitment of faculty members from foreign countries.

Finally, we measured the correlation between the 9 internationalization practices as independent variables:

* In your courses you emphasize international perspectives or content
* Since you started teaching, the number of international students has increased
* Currently, most of your graduate students are international
* Your institution has a clear strategy for internationalization
* Your institution provides various international exchange programs for students
* Your institution provides various opportunities/funding for faculty members to undertake research abroad
* Your institution provides various opportunities/funding for visiting international students
* Your institution provides various opportunities/funding for visiting international scholars
* Your institution encourages the recruitment of faculty members from foreign countries

And the scores of the following 9 internationalization achievements are added up and named as the outcome of internationalization as dependent variables:

* Enhanced prestige
* Enhanced academic quality
* Increased revenue
* Enhanced research networks
* Increased mobility of students
* Increased mobility of faculty
* Weakening cultural identity
* Increased brain gain
* Increased costs associated with internationalization

We find that all internationalization practices included in the survey, i.e., all independent variables have a correlation with the dependent variables. The respective variables have 38.5% explanatory power for the dependent variables (see Table 2). The existence of a clear institutional internationalization strategy followed by the encouragement of recruitment of faculty members from abroad has the greatest correlation among the three aspects of the internationalization of the curriculum. This data confirms our hypothesis that having an institutional strategy on internationalization increases the likelihood for academics to also emphasize international contents and perspectives in courses. Interestingly, we find that opportunities/funding for visiting international students has a negative correlation on the dependent variable. This could be explained as institutional internationalization strategies that prioritize study abroad programs, including programs for incoming international visiting students, tend to pursue internationalization of the curriculum to a lesser extent.

Table 2. Multiple regression analysis with dependent variables: F5\_1“Enhanced prestige”; F5\_2“Enhanced academic quality”; F5\_3“Increased revenue”; F5\_4“Enhanced research networks”; F5\_5“Increased mobility of students”; F5\_6“Increased mobility of faculty”; F5\_7“Weakening cultural identity”; F5\_8“Increased brain gain” and F5\_9 “Increased costs associated with internationalization”.

|  |
| --- |
| Model summary |
| Model | R | R square | Adjusted R square | Std. error of the estimate |
| 9 | 0.621a | 0.385 | 0.385 | 0.609 |
| a. Predictors: (Constant), F6\_1, F6\_6, F6\_3, C4\_9, C4\_5, F6\_2, C4\_10, F6\_5, F6\_4 |

The respective variables have 38.5% explanatory power for the dependent variables

|  |
| --- |
| ANOVA**a** |
| Model | Sum of squares | df | Mean square | *F* | Sig. |
| 9 | Regression | 6045.048 | 9 | 671.672 | 1811.171 | <.001**j** |
| Residual | 9641.719 | 25999 | 0.371 |  |  |
| Total | 15686.767 | 26008 | 　 | 　 | 　 |
| a. Dependent Variable: Outcome of internationalization |
| j. Predictors: (Constant), F6\_1, F6\_6, F6\_3, C4\_9, C4\_5, F6\_2, C4\_10, F6\_5, F6\_4 |

|  |
| --- |
| Coefficients**a** |
| Model | Unstandardized Coefficients | Standardized Coefficients | T | Sig. | Collinearity statistics |
| B | Std. Error | β | Tolerance | VIF |
| 9 | （Constant） | 1.212 | 0.020 | 　 | 59.221 | <.001 | 　 | 　 |
| F6\_1 | 0.209 | 0.004 | 0.311 | 48.215 | <.001 | 0.570 | 1.756 |
| F6\_6 | 0.113 | 0.004 | 0.180 | 28.984 | <.001 | 0.616 | 1.624 |
| F6\_3 | 0.084 | 0.005 | 0.131 | 18.561 | <.001 | 0.471 | 2.122 |
| C4\_9 | 0.044 | 0.003 | 0.083 | 16.049 | <.001 | 0.893 | 1.120 |
| C4\_5 | 0.068 | 0.004 | 0.091 | 18.502 | <.001 | 0.974 | 1.026 |
| F6\_2 | 0.049 | 0.005 | 0.067 | 10.345 | <.001 | 0.562 | 1.779 |
| C4\_10 | 0.030 | 0.003 | 0.049 | 9.649 | <.001 | 0.926 | 1.080 |
| F6\_5 | 0.038 | 0.005 | 0.057 | 7.067 | <.001 | 0.365 | 2.740 |
| F6\_4 | -0.014 | 0.005 | -0.020 | -2.670 | 0.008 | 0.405 | 2.468 |
| **a**. Dependent Variable: Outcome of internationalization |

## Discussion

In our research, we find notable differences between countries. For one, we find a compelling account of some countries, such as Kazakhstan, which are purposefully pursuing internationalization of the curriculum in every respect, mainly to enhance the quality of teaching and learning in the international classroom (Gregersen-Hermans & Lauridsen, 2021). In contrast, most countries focus only on some aspects of the internationalization of the curriculum but not others. While in some countries the introduction of international content and perspectives has been prioritized, in other countries, institutions have placed an emphasis on increasing the number of international undergraduate students or on attracting international postgraduate students. Many countries where English is not a native language are establishing programs and courses in other foreign languages with the purpose of increasing the enrolment of foreign students (Huo, 2020). Therefore, the behavior of internationalization varies from one country to another and between regions, although there are shared trends worldwide.

The countries of the Americas show a higher rate of emphasizing international perspectives or content in teaching than perceive incoming international students. However, as shown by Gacel-Ávila (2020), these countries are also experiencing a lag in terms of organizational (strategic planning and design; quality assurance and monitoring, etc.) and programmatic structures (collaborative international degrees; foreign language proficiency, etc.) supporting internationalization. Furthermore, student mobility is reported at less than 1% of total enrolment, and mostly at private universities (Didou, 2017). In Asian countries, academics observe a growing number of international graduate students, and in Europe an increase in the number of international undergraduate students. The emphasis in these two regions appears to be more on recruitment of students, graduate students in the case of Asia, and enabling undergraduate mobility in the case of Europe, what de Wit (2020) terms an “elitist approach to internationalization”. The emphasis appears to be less on the promotion of internationalization competencies more broadly and on building more tolerant, cosmopolitan societies (ibid.).

Our findings also point to an unequivocal positive correlation between an institution having a clear internationalization strategy and the pursuit of curriculum internationalization. Although the definition of a clear internationalization strategy is necessary, it is not a sufficient condition for the internationalization of the curriculum to occur. The way that international perspectives are included in the study programs and course syllabi will continue to be relevant. Ultimately, the internationalization of curriculum continues to depend on academic-teaching staff as agents of internationalization along with the institutional support they receive (Barbosa, Santos & Prado, 2020).

We also find a positive correlation between the institutions that promote the internationalization of the curriculum and the hiring of foreign professors. The hiring of foreign professors is considered an important factor in the evaluation of the quality of universities (Huo, 2020). Furthermore, in countries where institutions encourage the recruitment of international scholars, scholars also see an increase in international students and more international graduate students and are more likely to emphasize international perspectives and content in teaching.

# Conclusion

In brief, our findings point to notable differences between countries and world regions in academics’ implementation of international perspectives or contents in their course teaching. The highest reported such behavior was among academics from Turkey, Kazakhstan, Portugal, Mexico, and Chile, and the lowest from Germany and Japan. We also find that the greatest impact on academics’ emphasizing international content in their teaching comes from an institution having a clear internationalization strategy and if the institution encourages recruitment of foreign academics. Finally, we also found that funding and other opportunities for international visiting students negatively correlate with the internationalization of the curriculum.

Higher education institutions worldwide have different preferences for international dimensions in teaching and learning, as well as different rationales for and expectations of the internationalization outcomes. National and institutional approaches may be driven by aspirations to recruit (fee-paying) foreign students, to signal quality in international rankings, to equip their national students with international competitions, or a combination of these or something else. Although the rationales of internationalization outcomes are not mutually exclusive, there are differences between institutions and countries, and these rationales may change over time (de Wit, 2013, p. 17). Furthermore, institutional approaches to internationalization vary from a focus on student and staff mobility in the context of commercialization and increased cross-border provision of higher education, to the internationalization of the curriculum as part of developing students' international competencies at home (de Wit, 2013, p. 14).

The different cultural, political, or economic rationales that countries have adopted to internationalize higher education are reflected in these countries' approaches to internationalization at home, internationalization of the curriculum, and specifically the international dimensions of teaching and learning. The study presented in this chapter employs survey data from the academic staff teaching at institutions around the world to capture, compare, and analyze their reported behaviors on the internationalization of the curriculum, specifically on the emphasis on international perspectives or contents in course teaching.

The measures we employ – reported inclusion of international perspectives and content in course teaching, presence of international graduate students, and increase in international students - are, indeed, "rudimentary proxies" for assessing internationalization at home since they do not necessarily guarantee that students will gain international results, intercultural and global competencies (Knight, 2011). However, the analysis of these measures, especially from the perspective of academics as key agents of internationalization, offers important insights into internationalization practices in teaching and learning from an international comparative perspective.

In addition, the academics’ observations on institutional support for internationalization add an important perspective on whether the academics' home institutions prioritize internationalization and what type of activities related to the internationalization of teaching they support. It is the combination of these independent variables that have possible effects on the internationalization of the curriculum. The international data set enables us to discern patterns of reported and observed internationalization outcomes across different countries and determine how they relate to institutionalization practices. In sum, the global comparison of academics’ reported behaviors and observations enables us to cluster the APIKS countries according to their current practices and institutional support for including international dimensions in teaching.

Globally, the internationalization of the curriculum and the different behaviors of the academics are mathematically presented in a "fractal" way. The same efforts are replicated internationally: more than 90% of higher education institutions members of the International Association of Universities mention internationalization in their mission statement or strategic plan (Knight, 2021). However, as mentioned throughout this chapter, the internationalization efforts vary significantly between regions, countries, and institutions. International comparative analyses are important since they help us discern the similarities and differences across countries, as well as the different rationales behind internationalization efforts (Knight, 2021). International comparisons also contribute to practice discerning the most effective approaches to foster internationalization, but also the different realities of academics on whose shoulders lie internationalization tasks (Filippov, 2021).

## References

Aarrevaara, T., Dobson, Ian. & Pekkola, E. (2014). Finland: CAPtive Academics – An Examination of the Binary Divide. In, W. Locke, W. Cummings & D. Fisher (eds), C*hanging Governance and Management in Higher Education* (243-262). Springer.

APIKS-IDB. (2021). Academic profession in the Knowledge-based Society (APIKS). International Database version 1.2 (APIKS-IDB 1.2). 16 May 2021. <https://www.ulapland.fi/APIKS>.

Askers Zadravec, K. (2021). *Mednarodna razsežnost kurikuluma v visokošolskih študijskih programih* [The international dimension of the curriculum in higher education study programmes]. Doctoral dissertation. Faculty of Education, University of Ljubljana.

Barbosa, B., Santos, C., & Prado, C. (2021). There is no one way to internationalization at home: Virtual mobility and student engagement through formal and informal approaches to curricula. *Revista Lusófona de Educação*, 47, 85-98. doi: 10.24140/issn.1645-7250.rle47.06

Beelen, J., & B. Leask (2011). Internationalisation at home on the move. In *Handbook of Internationalisation of Higher Education*. Berlin: Raabe Academic Publishers.

Brandenburg, U. & H. de Wit (2011). The end of internationalization. In Trends, Issues and Challenges in Internationalisation of Higher Education, ed. H. de Wit, 27–29. Amsterdam: Centre for Applied Research on Economics & Management.

Brotherhood, T., Hammond, C.D. & Kim, Y. (2020) Towards an actor-centered typology of internationalization: a study of junior international faculty in Japanese universities. Higher Education 79, 497–514.

Çalikoglu, A. (2018). International Student Experiences in Non-Native-English-Speaking Countries: Postgraduate Motivations and Realities from Finland. *Research in Comparative and International Education*, 13(3), 439–456. https://doi.org/10.1177/1745499918791362

Childress, L. K. (2010). *The Twenty-first Century University: Developing Faculty Engagement in Internationalization*. New York: Peter Lang Publishing.

Clifford, V. A. (2013). The Elusive Concept of Internationalisation of the Curriculum. Oxford: Oxford Center for Staff and Learning Development. <https://www.brookes.ac.uk/services/cci/definitions.html>.

Coates, H., Dobson, I., Goedegebuure, L. & Lynn, V. (2014). The International Dimension of Teaching and Learning. In F. Huang., M. Finkelstein & M Rostan (Eds.), The Internationalization of the academy changes, realities and prospects (105-118). Springer.

de Wit, H. (2013) Internationalisation of higher education, an introduction on the why, how and what. In de Wit, H. (ed), *An Introduction to Higher Education Internationalization* (pp. 13-46). Centre for Higher Education Internationalisation (CHEI), Universita Cattolica del Sacro Cuore, Milan, Italy.

de Wit, H. (2020).  The future of internationalization of higher education in challenging global contexts. *Campinas,* *22*(3), 538-545. [Doi: 10.20396/etd.v22i3.8659471](https://doi.org/10.20396/etd.v22i3.8659471)

Egron-Polak, E. & R. Hudson. (2010). *Internationalization of Higher Education: Global Trends, Regional Perspectives - IAU 3rd Global Survey Report*. Paris. IAU.

Filippov, V. (2021). Internationalization of Universities: 70 Years of Experience. In H. van’t Land, A. Corcoran & D. Iancu, *The Promise of Higher Education. Essays in Honour of 70 Years of IAU* (pp. 113-118). Paris, Springer.

Gacel-Ávila, J. (2020). Internationalisation of Higher Education in Latin America and the Caribbean. *International Journal of African Higher Education*, 7(2). Retrieved from <https://ejournals.bc.edu/index.php/ijahe/article/view/13237>

Gregersen-Hermans, J & Lauridsen, K. (2021). *Internationalising Programmes in Higher Education. An Educational Development Perspective.* New York: Routledge.

Gopaul, Bryan; Jones, Glen A.; Weinrib, Julian; Metcalfe, Amy; Fisher, Donald; Gingras, Yves; & Rubenson, Kjell (2016) The Academic Profession in Canada: Perceptions of Canadian University Faculty about Research and Teaching. *Canadian Journal of Higher Education* 46(2): 55-77.

Höhle E.A., & Teichler U. (2013) The Academic Profession in the Light of Comparative Surveys. In: Kehm B., Teichler U. (eds) The Academic Profession in Europe: New Tasks and New Challenges. The Changing Academy – The Changing Academic Profession in International Comparative Perspective, vol 5. Springer, Dordrecht. Doi: 10.1007/978-94-007-4614-5\_3

Huang, F. (2014). The Internationalisation of the academic profession. In F. Huang., M. Finkelstein & M Rostan (Eds.) The Internationalization of the academy. Changes, realities and prospects (1-22). Springer.

Huang, F. (2015). The internationalization of the academy in East Asia. In, U. Teichler and W. Cummings, *Forming, Recruiting and Managing the Academic Profession* (pp. 259-270). Dordrecht: Springer.

Huo, X. (2020). *Higher Education Internationalizationand English Language Instruction.* Intersectionality of Race and Language in Canadian Universities. Switzerland: Springer.

Jones, E., & Killick, D. (2013). Graduate Attributes and the Internationalized Curriculum: Embedding a Global Outlook in Disciplinary Learning Outcomes. *Journal of Studies in International Education*, 17(2), 165-182. doi: 10.1177/1028315312473655

Klemenčič, M. (2017). Internationalisation of Higher Education in the Peripheries: The ‘gear effect’ of integrated international engagements. In H. de Wit, J. Gacel-Ávila, E. Jones, N. Jooste (Eds.) *The Globalization of Internationalization: Emerging Voices and perspectives* (Chapter 9, pp. 99-109). London: Routledge

Knight, J. (2011). Five Myths about Internationalization. *International Higher Education*, 64, 14-15.

Knight, J. (2021). Higher education internationalization: Concepts, rationales, and frameworks. *Revista Redalint*, 1(1), 65-88.

Kwiek, M. (2014). The Internationalization of the Polish Academic Profession. A comparative European approach. Zeitschrift für Pädagogik, 60(5), 681-695.

Kwiek, M. (2017). A generational divide in the academic profession: A mixed quantitative and qualitative approach to the Polish case. *European Educational Research Journal*, 16(5), 645-669. Doi: 10.1177/1474904116689684

Leask, B. (2009). Using Formal and Informal Curricula to Improve Interactions between Home and International Students. *Journal of Studies in International Education*, 13(2), 205–221. doi: 10.1177/1028315308329786

Leask, B., J. Beelen & L. Kaunda (2013). Internationalisation of the curriculum: International approaches and perspectives. In *Possible futures; The next 25 years of the internationalisation of higher education*, eds. H. de Wit, F. Hunter, L. Johnson in H. G van Liempd, 188–204. Amsterdam: European Association for International Education.

Leask, B., & Bridge, C. (2013). Comparing internationalisation of the curriculum in action across disciplines: theoretical and practical perspectives. *Compare: A Journal of Comparative and International Education*, 43(1), 79-101. doi:10.1080/03057925.2013.746566

Leask, B. (2015). *Internationalizing the Curriculum.* London and New York: Routledge.

Locke, W. (2013). Teaching and research in English higher education: the fragmentation, diversification and reorganisation of academic work, 1992-2007. In J. Shin, A. Arimoto, W. Cummings and U. Teichler, *Teaching and Research in Contemporary Higher Education: Systems, Activities and Rewards* (pp. 319-334). Dordrecht: Springer.

Lee, Y., Davis, R. & Li, Y. (2021). International Graduate Students’ Experiences of English as a Medium of Instruction (EMI) Courses in a Korean University. *International Journal of Learning, Teaching and Educational Research,* 20(9), 38-51. [Doi: 10.26803/ijlter.20.9.3](https://doi.org/10.26803/ijlter.20.9.3)

McGinn, M., Rarković, S. & Wolhuter, C. (2013). Global Connectedness and Global Migration: Insights from the International Changing Academic Profession Survey. Brock Education 22(2), 56-68. <https://files.eric.ed.gov/fulltext/EJ1054059.pdf>

Osakwe, N. (2017). Internationalizing Courses: A Faculty Development Process. *International Research and Review*, 6(2), 1-31.

Stohl, M. (2007). We have met the enemy and he is us: the role of the faculty in the internationalization of higher education in the coming decade. *Journal of Studies in International Education*, 11(3), 359–372.

Teichler, Ulrich, Arimoto, Akira, & Cummings, William. (2013). The Changing Academic Profession: Major Findings of a Comparative Survey.

van der Wende, M. (1996). Internationalizing the curriculum in higher education. *Tertiary Education and Management*, 2: 186–195.

1. Using CRediT - Contributor Roles Taxonomy, the co-authors of this chapter performed the following roles: Sophia Shi-Huei Ho was the primary responsible for formal analysis of data, contributed to methodology, data interpretation, and to writing of the original draft, editing, and proofreading. Manja Klemenčič was the primary responsible for writing the original draft, review and editing, and contributed to methodology and to interpretation of findings. Edgar Oswaldo González Bello was the primary responsible for the interpretation of findings and contributed to writing and to methodology. All co-authors jointly conceptualized the chapter. The division of intellectual property rights on authorship is equal among the three co-authors with Sophia Shi-Huei Ho as first author. [↑](#footnote-ref-1)
2. Another relevant measure on international dimensions in teaching and learning would be students’ reported course learning and transcripts from higher education institutions in participating countries. However, these data belong to students' privacy and are not easily obtained in the academic databases of HEIs. Therefore, given the size of the survey population, we have not included this measure in our analysis. [↑](#footnote-ref-2)
3. In our study we focus exclusively on intercountry comparisons and do not account for interdisciplinary variations. [↑](#footnote-ref-3)
4. Please note that we could not compare longitudinally data for some European countries, Asian countries, and countries in the Americas since different countries were included in the dataset. [↑](#footnote-ref-4)