

Global competence development at higher education institutions

A practical guidebook



UNIVERSITÀ
DI TRENTO



**Tools for Enhancing and Assessing the
Value of International Experience for
Engineers**



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Erasmus+



Global competence development at higher education institutions

A practical guidebook



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About this guidebook

This guidebook was developed as part of the 2018-2021 Erasmus+ project TA VIE (Tools for enhancing and assessing the value of international experiences for engineers), a collaboration between KTH Royal Institute of Technology, Polytechnic University of Madrid, École Centrale de Nantes, Budapest University of Technology and Economics, and University of Trento (<https://blogs.upm.es/tavie>). The guidebook provides an approach to enhancing global competence at higher education institutions, grounded in theory, research, and best practice examples. To ensure that these suggestions are both theoretically sound and practically applicable, we collected insights from three primary sources:



- An interdisciplinary literature review, focusing on internationalization strategies, global competence development, and learning theories for intercultural competence,
- Semi-structured in-depths interviews with key staff at European HEIs, working with internationalization,
- Surveys focusing on students and university staff's experiences with international mobility.

Audience and purpose

This guidebook has been designed primarily for higher education management, faculty, and staff. While the project team is based at European engineering institutions, we are confident that the findings as presented are equally applicable to other disciplines, locations, and educational settings, including, e.g., university networks and educational collaborations.

Structure

The guidebook starts with a brief **background** section, presenting a practical framework for global competence development for engineers and our vision for enhancing global competence education at HEIs. This part also briefly outlines major insights from current scholarship on internationalization, global competence development, and learning theory, which have informed our recommendations. The second part of the guidebook provides **recommendations** for enhancing global competence building at HEIs. To make our guidebook easy to follow for a variety of audiences, we have structured the strategies into three levels:

- 1) **Institutional strategies**, focusing on institutional management and leadership,
- 2) **Faculty and staff strategies**, focusing on both teaching and administrative personnel,
- 3) **Student learning strategies**, focusing specifically on students

How to use the guidebook

Start with the background section to see what we mean by global competence development. In the recommendation section, read the descriptions, and use the quick self-assessment tools to get a general understanding of your institutions' strength, weaknesses and areas in need of development. The recommendations will provide tips and strategies when working to develop each level, with the context of your own institution providing the input needed for you to work out how this will look like in practice.

Part 1: Background to global competence development

What do we mean when we talk about global competence?

The concept of global competence emerged only recently as development from earlier work on intercultural competence, which it still shares many similarities with. However, what differentiates it from the intercultural competence field, and what makes it particularly relevant today, is a newfound connection with sustainability and the importance of a sustainable mindset. Our work was originally guided by the widely recognized OECD definition of global competence as a multidimensional capacity, describing it as follows:

Global competence is the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development. [18]

This definition inspired several conceptualizations of sub-competencies, such as for example open-mindedness, self-awareness, flexibility, communication and collaboration skills, and many others that can lead to an individual being globally competent. While we believe that global competence is a continuum with no endpoint, rather than a have/have not quality, to be considered globally competent individuals should be particularly skilled in both intercultural communication and collaboration, and have a sustainability mindset.

Why is global competence important?

The need for higher education institutions' graduates and staff to have competencies that go beyond their disciplinary knowledge is not a new one, but has arguably never been greater. Our world and its inhabitants get evermore interconnected, technology and science advance, and the global flows of goods, people, ideas, and services intensify. However, it would seem understanding, compassion, and respect grow no faster than do misunderstanding, disagreements, and social, economic, political, and cultural divides. And this to the background of an unprecedented environmental challenges to sustainable development affecting us all. At higher education institutions, internationalization is often thought of as providing a vital key to developing many of these extra-disciplinary skills needed to not only survive, but to thrive harmoniously in a world like this. Global competence is an emerging key paradigm for this, supporting people to not only live, but thrive in our diverse, highly interconnected world. In the spirit of comprehensive internationalization, we strive for an inclusive comprehensive global competence development, as everyone should be able to develop the competencies, and be able to support others in doing the same.

Where can you learn more about the topic?

This guidebook will quickly summarize the most important basics, and provide some valuable tips for global competence development. Some recommendations for general literature:

Introductory readings:

- ✓ Asia Society/OECD (2018). *Teaching for global competence in a rapidly changing world*. Paris: OECD Publishing.
- ✓ Engel, L., Rutkowski, D. & Thompson, G. (2019). Toward an international measure of global competence? A critical look at the PISA 2018 framework. *Globalisation, Societies and Education*, 17(2), 117-131.
- ✓ de Wit, H., & Hunter, F. (2015). The future of internationalization of higher education in Europe. *International Higher Education*, 83, 2-3.

Designing and assessing global learning activities:

- ✓ Berdrow, I. (2009). Designing effective global competence development opportunities. *International Journal for Management in Education*, 3(3-4), 335-345.
- ✓ Mullins, A., & Wood, A. (2019). Global competence and learning standards: Designing engaging units that incorporate both. In W. B. James, & C. Cobanoglu, C. (Eds.), *Advances in Global Education and Research, Volume 3* (pp. 37-43). Sarasota: Anahei Publishing.
- ✓ Deardorff, D. K. (2015). *Demystifying outcomes assessment for international educators*. Sterling: Stylus.

You will find more readings and literature suggestions in the recommendation section of the guidebook.

Part 2: Recommendations for global competence development

Our guidebook and its suggestions are inspired by the concept of comprehensive internationalization, an idea popularized by internationalization expert John K. Hudzik, which fits well together with global competence development and a focus on cultural diversity issues.

Comprehensive internationalization is a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education. It shapes institutional ethos and values and touches the entire higher education enterprise. It is essential that it be embraced by institutional leadership, governance, faculty, students, and all academic service and support units. It is an institutional imperative, not just a desirable possibility. [19]

Following the spirit of this definition, it is clear that we need a holistic approach in order to develop global competence. This has several important implications:

- ✓ For a truly holistic approach, everyone – institutional management, faculty and staff, and students – needs to be included.
- ✓ Internationalization needs to be strategic and planned; “quick fixes” seldom come with sustainable desired results. An important, yet often neglected factor, is the assessment of the desired outcomes.
- ✓ Internationalization neither does automatically, nor only, happen abroad. Home campuses and diverse student bodies have immense potential for sustainable global learning, but any activity need to be well thought-trough and provide for meaningful and manageable learning.
- ✓ An activity, e.g., a workshop or a course, might be a good start for learning, but to truly foster the competencies students – and everyone else – need(s), we have to make sure that global competence is thoroughly integrated in university curricula and everyday praxis, not something offered “on the side”, and that there are ample opportunities for global learning in various ways.

While internationalization – and global competence development – need to be interwoven throughout the university, we differentiated between three interconnected levels for global competence development (see Figure 1), which we use below to structure our recommendations.

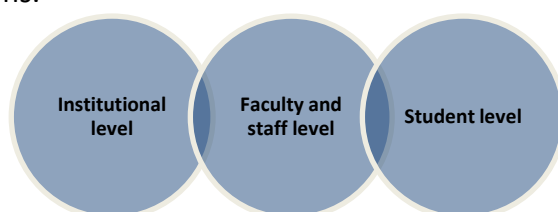


Figure 1. Levels of institutional global competence development

In the following pages, we will look closer at the different levels, and show how institutional decisions affect faculty and staff, and in turn also students and their global competence development.

1. Institutional strategies for global competence development

Institutional management plays an important role for internationalization and global competence development. The management is responsible for the overall vision and its achievement, and has to make sure the institutions' individual parts work together towards comprehensive internationalization. Overall, its responsibilities can be differentiated into four interdependent categories, namely, institutional clarity about internationalization, assessment to monitor progress, institutional diversity, and global competence training for everyone (see Figure 2). The following pages will explain these categories in more detail, and provide some tips and recommendations for how to improve on the individual aspects and get the most out of institutional strategy.



Figure 2. Institutional strategies for global competence development

1.1. Recommendations for enhancing institutional strategies

A. Institutional clarity about internationalization

For universities wishing to prepare their students for the globalized world, internationalization and global competence development appear to be clear objectives. Unfortunately, it is often less clear what *exactly* is meant by terms like internationalization or global competence, a confusion which might lead to ineffectiveness or poor outcomes and hinder the realization of such efforts [20-23]. To ensure institutional clarity, we suggest considering the following points:



USEFUL TIP:

Deardorff (2015) has straightforward **step-by-step guidelines** covering everything from creating institutional guidelines to effective outcomes assessment.

✓ Establishing an **institutional guideline** with clearly defined key concepts and their practical implications, so those having less background knowledge can easily understand what is to be expected. To ensure your institutional guideline has wide acceptance and effect, make sure it must align with the visions and needs of stakeholders, such as industry, partners, and also student associations. This can be achieved by involving key stakeholders in the process of setting up the document. Furthermore, it is also advised to include intermediate, medium, and long term goals in your internationalization strategy. When setting up the document, you should be:

○ **Deciding on definitions** allowing for SMART¹ objectives and fitting your context. You can follow recent research to ensure you are up-to-date on scholarly developments, but make sure to pick definitions that are detailed enough to have practical value. It is also advisable to create clear indicators for the individual goals that match your context.

○ **Ensuring that the practical implications** of your internationalization strategy fit your context. It is easy to get inspired by what other universities are doing in this regard, but always critically examine their descriptions and ensure they are also relevant for your situation. It is also good to keep in mind that other universities' policy documents have a positive bias and scientific journals rarely depict failing efforts, which might lead to a slightly distorted image they present.

○ **Ensuring all employees and other stakeholders are aware** of this guideline and where to find it. Also make clear who to contact for more information or clarifications.

HANDS-ON EXPERIENCES



An internationalization expert's thoughts on internationalization:

"Internationalization should be totally at 360° including teaching, research, the relationship with the alumni, the relationship with the companies."

USEFUL TIP:



Griffith and colleagues (2016) provide a **comprehensive collection** of different assessment instruments and their advantages.

¹ Specific, Measurable, Achievable, Relevant, and Time-bound. Learn more [here](#).

B. Institutional diversity

A culturally diverse institution, in terms of faculty, staff, and students, is another important factor helping to *enable* global competence development. Research has shown that a home campus filled with people from different backgrounds and with different perspectives can provide fertile grounds for intercultural interactions, which is why inclusive recruitment strategies are an important starting point for internationalized universities, especially considering that typically only a small number of students participates in international mobilities [2, 24-27]. To ensure institutional diversity, we suggest strengthening recruitment practices on both the employee (i.e., faculty and staff) and student side by:

HANDS-ON EXPERIENCES



An internationalization expert's considerations on the importance of international rankings:

“We have to maintain a strong international position. Reputation brings faculty, brings good students, and attract students to get educated.”

- ✓ **Ensuring cultural diversity among faculty and staff**, by means of, e.g., considerate recruitment practices, wide-reaching recruitment strategies, attractive relocation packages and relocation support (e.g., housing arrangement, language and culture training).
- ✓ **Ensuring cultural diversity among students** by marketing efforts reaching students worldwide, scholarship support for fee-paying students, expanded international mobility, and support in the new environment (e.g. language and culture training and buddy initiatives), as well as looking into ways of widening participation from local communities traditionally underrepresented.
- ✓ **Inviting guest speakers, researchers, or lecturers** from a broad variety of backgrounds to the university.
- ✓ **Creating an inclusive, open, and supporting environment** that enables sustainable institutional diversity. Attracting a culturally diverse staff and student body is a first step, but measures are needed to support these once they have arrived. Persons not having a positive sense of belonging tend either to disappear, to cluster in their own small communities, or to stop contributing in an effort to “fit into” the established order of things. A good way to foster such an environment are both active encouragement of interactions of diverse groups of people to create positive experiences, examples being different events, activities, or interest groups bringing people together that usually would not meet. Additionally, the importance of actively contributing to such an environment could – and should – be taken up in workshops and training opportunities.

C. Global competence training for everyone

When internationalization efforts are clear and culturally diverse campuses provide fruitful grounds for intercultural learning, the ground for the international university is laid. However,

it would be wrong to assume intercultural learning to happen automatically, instead, the full potential for learning can only be realized by providing meaningful global competence training for everyone, which entails:

- ✓ Encouraging **faculty and staff global competence development** in courses, workshops or through mobility experiences (more in [part 2](#)).
- ✓ Fostering **students' global competence development** through curricular/co-curricular/extra-curricular activities, or virtual or physical mobility (more in [part 3](#)).
- ✓ Providing **language classes for students and staff** to reduce linguistic barriers to interaction and foster global competence development [3, 15, 16, 28].

D. Assessment to monitor progress

Once there exists a clear and communicated institutional strategy, assessment is needed to help monitor progress, identify strengths and weaknesses, and potentially correct the course to achieve overall goals. Once learning activities aligned to the strategy are designed and implemented, it is important to assess them and make sure they do deliver the desired outcomes. Assessment of internationalization efforts is usually a complex endeavor that often requires much time, consideration, and resources. Nevertheless, assessment is an invaluable part of any internationalization initiative [20, 29-31]. A straightforward way to do this is by collecting and analyzing data about:

- ✓ **Outputs** of strategies and activities. This will give a good first overview about participation spread, numbers and trends. These numbers are typically also valuable for universities rankings in terms of internationalization, which is why they are often routinely collected. However, an additional analysis in the popularity and trends of certain initiatives can, and should, also be used to see which efforts are popular, which groups are reached, and which ones lack interest – and why that could be.
- ✓ **Outcomes** of strategies and activities. This will gauge the competencies developed by participants. Possibly due both to its lesser relevance for international rankings, and to being comparatively more complex and difficult to do, most universities put less focus on qualitative outcome assessment. However, without knowing if and how learning activities really benefit the development of global competencies, it is difficult to achieve meaningful internationalization, and impossible to know if objectives have been reached. As international and global learning are extraordinarily complex, assessment experts suggest combining several methods, with a focus on critical reflection.

USEFUL TIP:



The TA VIE project (2021) developed an **innovative assessment instrument** for global competence through mobility.

1.2. Checklist: Institutional strategies

Find out how well your institution is doing and where you can improve.

Dimensions and strategies	Level of implementation		
A. Institutional clarity about internationalization	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<ul style="list-style-type: none"> ✓ Establishing an institutional guideline including key definitions and practical implications ✓ Ensuring all employees and other stakeholders are aware of the guideline 			
B. Institutional cultural diversity ²	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<ul style="list-style-type: none"> ✓ Ensuring cultural diversity among faculty and staff ✓ Ensuring cultural diversity among students ✓ Inviting diverse guest speakers, researchers, or lecturers ✓ Creating an inclusive, open and supporting environment 			
C. Global competence training for everyone	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<ul style="list-style-type: none"> ✓ Encouraging faculty and staff global competence development ✓ Fostering student global competence development ✓ Providing language classes for students and staff 			
D. Assessment to monitor progress	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<ul style="list-style-type: none"> ✓ Collecting and analyzing quantitative insights about global learning activities ✓ Collecting and analyzing quantitative insights about global learning activities 			

² Cultural diversity includes factors such as nationality, ethnicity, religion, gender, age, language, social, educational or professional background.

2. Faculty and staff strategies for global competence development

Faculty and staff play a crucial role for an institution's level of internationalization and global competence development. Not only are they teaching students and/or constitute their major contact point to the university, but their own behavior also has a certain role model effect. Many faculty and staff members have important research obligations or work in intercultural collaborations, both of which greatly benefit from globally competent individuals, which in turn positively affects the internationalization level of a university. We will now describe the four dimensions in which faculty and staff, and an institution's level of internationalization and opportunities for global competence development are connected, namely: a common definition of internationalization rationale and implementation, faculty and staff global competence development, seeking opportunities for global learning, and supporting others' global competence development (see Figure 3).

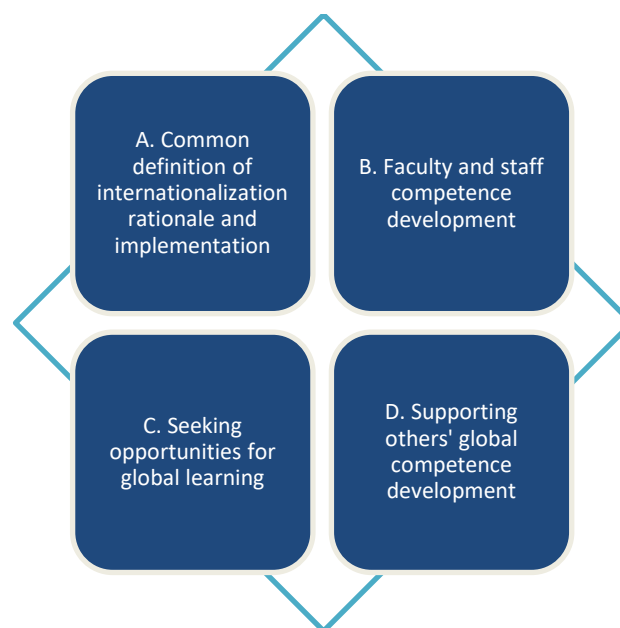


Figure 3. Faculty and staff strategies for global competence development

2.1. Recommendations for enhancing faculty and staff strategies

A. Common definition of internationalization rationale and implementation

Faculty play an important role for internationalization and global competence development. Therefore, it is important to define internationalization rationale and desired global competence learning outcomes to ensure faculty are aware of the institutional vision, and the means to work towards it. Ideally, a systematic plan for global competence, covering whole program curricula, is developed so the competencies can be developed in an integrated way. To ensure that the institution's internationalization rationale is comprehensive and fits the institution and its individual programs' context, it is suggested to:

- ✓ Discuss the **common internationalization rationale**, defining global competence learning outcomes, and designing a systematic plan for its development [27]. This is best done with a team of experts from various levels and departments of the institution. By including the perspectives of institutional leadership, faculty from various departments, internationalization experts (e.g. international office), as well as student representatives, it can be ensured to find a definition that works for all matches the requirements of individual programs. If such an overarching discussion is not possible and/or the institution already implemented an internationalization rationale to work with, it is still advised to have a discussion on a smaller scale, such as on the department or program level. This ensures faculty members can make sure their courses match the overall goal and the competencies throughout programs build up on each other.
- ✓ **Revisit the plan periodically**, to ensure that its content, and identified stakeholders, are up to date. While the overarching vision and rationale for internationalization might be quite stable, some ways to foster global competence might change. With the rapid developments in our globalized world, new challenges and opportunities might emerge quite quickly, and there must be a level of flexibility and adaptability to the plan. Technological developments open new forms of education, such as distance learning or virtual collaborations, and the future will certainly bring more innovative opportunities. Therefore, it is advisable to periodically revisit the internationalization and global competency strategy plans to evaluate whether revisions or updates need to be made. This could also be connected with institution-wide initiatives that allow people to exchange and learn from each other's experiences.

B. Faculty and staff global competence development

Individuals' personal global competence is important for both collaboration in international or interdisciplinary projects or research groups, and for supporting others in their global competence development. Moreover, faculty is/are not only disciplinarian teachers, but also role models and an important point of contact for students, so they will play a crucial role for students and their development. The following tips aid in faculty's own and others' global competence development:

- ✓ **Provide opportunities for faculty and staffs' global competence development.** There are numerous ways to foster this process of global competence development, everything that opens new perspectives and leads to self-reflection has the potential to increase global competence: intercultural or interdisciplinary collaborations,

USEFUL TIPS!

[Erasmus+](#) offers several mobility options for faculty and staff.

[IMOTION](#) collects various Erasmus trainings for staff.

[The SUCTI Project](#) provides tips for staff internationalization.



specific courses or workshops, or mobility experiences provide great opportunities to widen one's horizon and gain important competencies [1, 16, 32, 33]s.

- ✓ **Encourage faculty and staff to engage in their own global competence development** and to reflect on how culture affects their interactions and teaching. Culture – in all its forms – affects how people think and behave, and it is important that we become aware of the factors affecting ourselves. Some individuals are already interested in such issues, but for others such “soft skills” may seem unnecessary, especially in “hard sciences” such as engineering and the natural sciences. To provide large-scale encouragement for global competence, universities can allot resources (time, finances, or other support) for such endeavors, and put value on a well-rounded professional and personal profile during developmental or salary negotiation talks. While such efforts are often more pronounced on the faculty level, it is important to also put value on the administrative staffs' global competence development.

C. Novel opportunities for global learning

While university offers for global learning are great opportunities to personal development, it is important that faculty and staff take advantage of all kinds of opportunities, beyond those offered by their university. Simple ways to do so are:

- ✓ **Create or join initiatives** for intercultural or transdisciplinary collaborations or projects. Closely connected to the encouragement of global competence development described earlier, it is also important to encourage faculty and staff to put their competencies in practice, to seek out new opportunities and thereby strengthen their universities' internationalization profile. New initiatives could be internal (e.g., experience or skill exchanges through workshops or internal conferences) or external (e.g., establishment of collaborative courses or professional networks, virtually or face-to-face).



HANDS-ON EXPERIENCES

Our TA VIE survey of faculty and staff mobility experiences showed that many faculty members described other obligations, such as teaching responsibilities and lack of temporal replacements, a major hindrance to mobility.

Administrative staff was least likely to participate in mobility experiences, in contrast to educators or researcher, who participated at least occasionally in international conferences.

D. Support of others' global competence development

Globally competent individuals are able to support others, whether that be colleagues, collaboration partners, or students, in their global competence development. Three easy ways to do that are:

- ✓ **Respect diversity and drawing on diverse perspectives:** Context always plays a role and things are done differently in different places. It is important to familiarize students with many different perspectives, something that can be done through carefully selecting course materials representing a variety of viewpoints, or having students present their own perspectives and experiences relating to certain issues. This does not only have the advantage of widening horizons, but also provide fertile grounds for innovative ideas to problematize – a staple of state-of-the-art education [3, 21, 22, 33].
- ✓ **Address barriers to intercultural learning:** Marginalization or isolation of individual students or groups, and/or stereotyping, are common dangers that the majority of faculty will experience in their classrooms at some point. Research has found that, e.g., especially minority groups, such as women, international students, older students, and those identifying as LGBT+ are likely to face social isolation in engineering classrooms. Group exercises with diverse students are a great approach to have students interact and prevent social isolation. However, they also carry the risk of disagreements that could stay unresolved and will affect future interactions among those students. The best way to address those barriers to intercultural learning are by preventative measures. Discussions and reflections, e.g. having groups set up group roles and having them check in on those periodically can avoid miscommunications to escalate into conflicts. The fear of group work negatively affecting one's grades can be countered by assigning individual grades to students in group projects. Nevertheless, if preventative measures are not enough and conflicts arise, it has been shown that many students expect their teachers take an active role in resolving such group conflicts and talk with unresponsive or "lazy" group members [17, 34].

Faculty can specifically support students' global competence development through:

- Putting students and their learning in focus: There is a saying that global competence is learnt, not taught. To foster students' learning, the students, and not the teachers, should be in focus. This means that faculty should act as facilitators in creating opportunities, meaning, and by possessing the necessary curriculum flexibility to support the different academic and cultural needs of their diverse students [4, 21, 30, 35].
- Designing relevant learning activities for students: Careful consideration is required to find learning activities that convey both the specific technical course knowledge and global competencies. Depending on the context, this can mean many things, and there is no one-size-fits-all approach. While substantial curricular changes certainly require time, effort, and commitment, sometimes small changes might already help in supporting students' global competence development. There are some characteristics

of “good” learning activities that can easily be transferred to different contexts (more details in [part 3](#)). Ideally, learning activities would connect as many of these characteristics as possible.

- ✓ Staff can specifically support students’ global competence development through:
 - **Encouraging, preparing and supporting students for international mobility.** International mobility is a great way to familiarize students with other cultures and perspectives. However, it is important to ensure students are not only properly prepared for potential issues such as homesickness or culture shock, but also receive continuous support from home and host university. For students venturing to a foreign environment, small issues can easily be amplified and create stress, which might negatively affect the whole experience (more details in [part 3](#)).
 - **Encourage meaningful interactions among diverse students on the home campus.** By using the term internationalization, international students are often at focus of activities, while the vast diversity on most home campuses is often neglected and its potentials untapped. All students are diverse in that they have different backgrounds affecting their interactions and behaviors. While international students might need a bit more support to find their way in a new environment, we suggest that all students should be encouraged to participate in activities that have the potential to lead to interactions and foster informal, peer-to-peer learning for global competence (more details in [part 3](#)).

2.2. Checklist: Faculty and staff strategies

Find out how well your institution is doing and where you can improve.

Dimensions and strategies	Level of implementation		
<p>A. Common definition of internationalization rationale and implementation</p> <ul style="list-style-type: none"> ✓ Discuss a common internationalization rationale, including global competence learning outcomes and a systematic plan for its development. ✓ Revisit the plan to ensure it is up-to-date. 	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<p>B. Faculty and staff global competence development</p> <ul style="list-style-type: none"> ✓ Provide opportunities for faculty and staff global competence development ✓ Encourage faculty and staff to engage in own global competence development 	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<p>C. Novel opportunities for global learning</p> <ul style="list-style-type: none"> ✓ Encourage faculty and staff to seek further opportunities for global learning 	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
<p>D. Support of others' global competence development</p> <ul style="list-style-type: none"> ✓ Respect diversity and drawing on diverse perspectives ✓ Address barriers to intercultural learning ✓ Faculty supporting student global competence development ✓ Staff supporting student global competence development 	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented

3. Student learning strategies for global competence development

Students *need* global competence if they want to succeed in the globalized workplaces of the 21st century. In a world characterized by a high level of interconnection and diverse work environments, competencies to handle such situations appropriately and effectively are fundamental. This is perhaps especially true for the engineering sector, which requires a high level of interdisciplinary thinking to tackle the challenges of sustainable development, but it is true for most professions dealing with people from different backgrounds. As already mentioned at the beginning of this guidebook, the best way to instill these necessary global competencies is through an integrated, holistic approach sustained throughout the students' time at university, so that they continually have the chance to develop their competence. In this regard, we differentiated among four major dimensions for student global competence learning: curricular global learning, co-curricular global learning, extra-curricular global learning, and the additional opportunities for international mobility (see Figure 4).

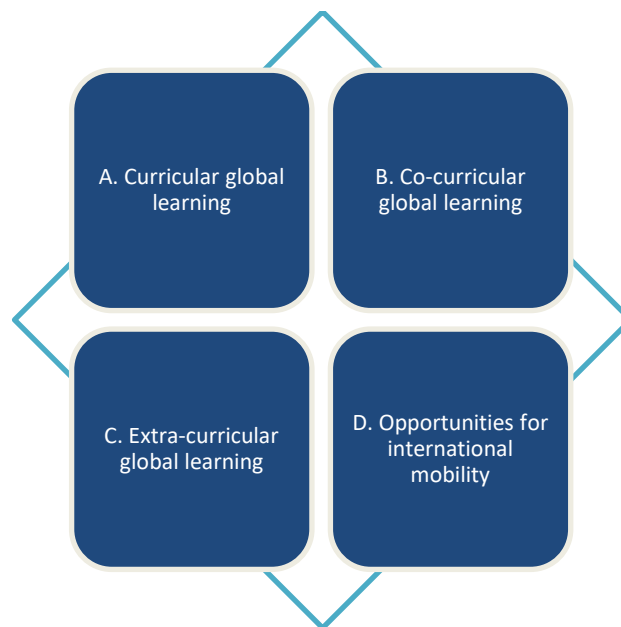


Figure 4. Student learning strategies for global competence development

3.1. Recommendations for enhancing student learning strategies

A. Curricular global learning

Curricular learning refers to formal classroom experiences students will go through during their time at university. Ideally, learning for global competence is integrated throughout the curriculum, so students have time to develop their competences throughout their time at university. This can be difficult and resource-intensive task to manage, especially in engineering which tends to already suffer from full-packed curricula. The main ways curricular learning for global competence are specific courses for intercultural/sustainability or global competence, the integration global competence learning in normal courses, for example through specific modules or lectures, or the integration of informal global competence learning as by-product of well thought out course activities.

HANDS-ON EXPERIENCES



An internationalization expert's tips for global competence courses:

“We should explain to these students the relevance of these courses. Even because in their path, in their career these competencies become more relevant compared to the technical competencies. I understand that a 20-year-old student does not have a clear idea of the relevance of these skills.”

- ✓ Provide **specific global competence courses** (or related intercultural or sustainability competence) for students. Here it is important to ensure the courses fit students' disciplinary needs and provide ample opportunities for students to draw the connections to their future professional environment.
- ✓ Integrate **global competence leaning in normal curricular courses**. With full curricula, not all students have the chance – or desire – to participate in specific global competence courses. To ensure they can nevertheless acquire these important competencies, it is important to make sure to provide additional opportunities for such learning in their program courses. This has the additional advantage of clarifying their relevance to students by providing specific disciplinary connections to the competencies and teaching them in an integrated way. The USEFUL TIP below provides some important insights of the factors that should be considered to design good learning activities.



USEFUL TIP: Characteristics of (curricular) learning activities for global competence

- ✓ Activities contain **collaborative elements of diverse students**, such as group work, leading to intercultural engagement. Ideally, groups are assigned based on student diversity, so students who usually do not work together have a chance to collaborate [4, 5].
- ✓ Activities help students to **learn about others and reflect on own backgrounds** [6-8].
- ✓ Activities present **authentic real-world problems/situations** [2, 9], and connect theory and practical experience [10] in a safe environment [9, 11]
- ✓ The **meaning and significance** of contents/activities for the students' future life are clear and explicitly stated.
- ✓ Contents are designed in a way that the students will be able to **further hone their learnt competencies** after finishing the course.

B. Co-curricular global learning

Co-curricular activities are those complementing the formal curriculum of students. While a campus-wide holistic integration of global competence throughout every student's curriculum would be the ideal, several practical challenges exist. Common challenges are the resource-intensity of such a curriculum change, (institutional/departmental/individual) resistance to such

changes, or students "switching" programs and potentially missing out on certain contents due to the different programs not aligning in competencies and their development. Therefore, it is advisable to provide co-curricular offers for global learning in which students of all programs can participate. This has the additional advantage to connect students from different programs and disciplines, allowing for interdisciplinary interactions and providing potential for informal peer-to-peer learning.

- ✓ Provide co-curricular activities such as seminars, guest speakers, workshops or trainings, or certification programs available to all students.

C. Extra-curricular global learning

Extra-curricular activities are activities in addition to students' curricula. While these are typically less related to program and course-related activities, the university has the chance to support those opportunities that bring diverse students together, and thereby encourage intercultural interactions and indirectly foster global competence through informal or peer-to-peer learning opportunities.

USEFUL TIP:



Kjellgren and Richter (2019) describe an engineering university's approach for a **global competence certification program**.

- ✓ Provide, support, and encourage **extra-curricular opportunities for informal global learning**. Examples are provided in the USEFUL TIP below.



USEFUL TIP: Examples of extra-curricular learning opportunities for global competence

- ✓ Events and workshops that **provide opportunities for interactions**, which could take the form of campus events, culture nights, lunch lectures, etc. [1-3].
- ✓ Events and workshops with **specific cultural focus** [1]
- ✓ **Student-led activities, clubs, or associations** [12]
- ✓ **Shared residential facilities** [13-15]

NOTE: To get the most of these opportunities, it is crucial to also encourage local students to seek interactions with diverse others and participate in such events and activities! [3, 13, 15-17]

D. Opportunities for international mobility

Opportunities for international mobility, both physically (e.g., studies, internships, conferences or study trips abroad) and virtually (e.g., virtual courses, collaborations or exchanges), are another important dimension for students' global competence development. While usually the first things thought of in relation to internationalization, usually only a minority of students participates in such mobility, by choice or lack of means. Nonetheless, carefully prepared programs offering students first-hand experiences while immersed in an unfamiliar environment may be one of the most powerful opportunities for global competence development, which is why universities need to ensure students have the chance to participate in them.

- ✓ **Provide various opportunities for international mobility**, such as studies or internships abroad and **encouraging and motivate students to participate** by providing ample information about opportunities, financial support, curriculum flexibility, and minimization of bureaucratic hurdles.
- ✓ **Provide virtual mobility experiences**, such as virtual courses, collaborations, or exchanges. This does not only a great chance for intercultural exchange for students unable to participate in physical mobility, but also includes valuable skills for virtual collaborations.

- ✓ **Ensure mobility experiences are well thought-through and really foster global learning.** To get the most of international mobilities, it is advised to incorporate reflective activities throughout and one final reflection a bit after the mobility experience [30, 36, 37]. Furthermore, it is important to ensure the quality of these activities global learning outcomes through assessment (assessment was discussed in the [first chapter](#)).



HANDS-ON EXPERIENCES

Our TA VIE student survey asked what universities could do to improve mobility experiences. Common answers revolved around bureaucratic hurdles with courses and their transcription, wishes for better preparation for mobilities and hearing experiences from students who already participated in mobility, and more opportunities for financial support and scholarships. Another important issue was a perceived lack of social integration – many wished for more local students to participate in (intercultural) campus activities.

3.2. Checklist: Student learning strategies

Find out how well your institution is doing and where you can improve.

Dimensions and strategies	Level of implementation		
A. Curricular global learning ✓ Providing specific global competence courses ✓ Integrating global competence leaning in normal curricular courses	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
B. Co-curricular global learning ✓ Providing co-curricular activities such as seminars, guest speakers, workshops or trainings, or certification programs	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
C. Extra-curricular global learning ✓ Providing, supporting, and encouraging extra-curricular opportunities for informal global learning	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented
D. Opportunities for international mobility ✓ Providing various opportunities for international mobility and encourage and motivate students to participate ✓ Providing virtual mobility experiences ✓ Ensuring mobility experiences are well thought-through and really foster global learning	<input type="checkbox"/> Not implemented	<input type="checkbox"/> Somewhat implemented	<input type="checkbox"/> Well implemented

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