

## Global Competence and Sustainable Development in Teacher Training: Preparing for a Changing World

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### Abstract

This cross-cultural study examines the inclusion of global competences (GCs) in the curriculum of teacher education programs across three Baltic Sea countries: Latvia, Lithuania, and Poland. Using van den Akker's (2003) substantive approach to curriculum analysis, the researchers analyzed official documents and course descriptions of Daugavpils University (Latvia), Vilnius University Šiauliai Academy (Lithuania), and Jan Kochanowski University of Kielce (Poland). Employing Rapley's (2007) document analysis method, the study focused on both explicit content and implicit gaps to assess how well GCs are integrated into teacher training programs for primary and preschool education. The research involved a detailed examination of 262

syllabi, comprising 63 from Latvia, 61 from Lithuania, and 138 from Poland. The researchers used a template based on the PISA 2018 Global Competence Framework to identify which competences and sub-competences were included in the syllabi. The study aimed to answer the question: *How are all the dimensions of global competences included in the syllabi of courses taught at the primary and preschool education levels in three Baltic Sea countries?* The findings reveal that the Lithuanian curriculum includes the most GC-focused courses (92 courses, 276 ECTS), followed by Poland (44 courses, 99 ECTS), and Latvia (30 courses, 161 ECTS). The analysis was conducted in four steps: comparing the total number of courses and ECTS credits, ranking the development level of each GC dimension, characterizing the development of each dimension, and analyzing the general approach towards incorporating GCs into the curricula. The results indicate a significant variation in how GCs are integrated across the three countries, with Lithuania demonstrating the most comprehensive incorporation. The study highlights the need for a more sustainable, systematic and consistent inclusion of global competences in teacher education to better prepare educators for a globalized world.

*Keywords:* Comparative research, global competences, interculturality, syllabus study, teacher training.

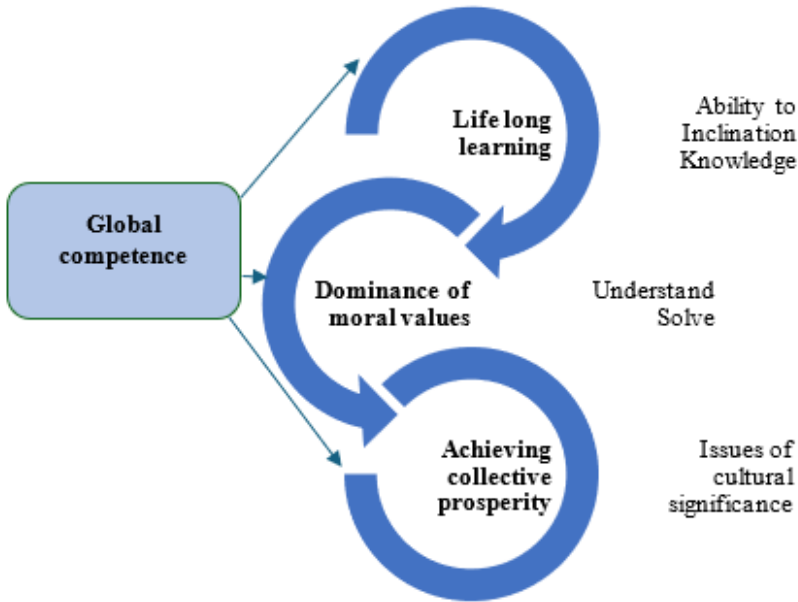
### **Introduction: Characteristics of Global Competence**

There is no single definition of Global Competence (GC) in the scientific literature. The first meaning of the word 'global' is mainly associated with global affairs, processes that take place on the largest possible scale, involving the maximum number of countries and people. The word 'competence' reflects the particular skills and behaviors that characterize those who possess those competences. According to Parkhouse et al. (2016), GC encompasses not only an understanding of world regions, different local knowledge and cultures, and global issues, but also a set of relevant skills and dispositions to engage responsibly in globalizing contexts (cited in Wu, 2023). On this basis, several aspects of the definition are highlighted: understanding global phenomena and acting on them in a specific context: the assumption of glocalization and the realization of the conditions for it are brought to the fore. The meaningfulness of GC is assumed within the framework of glocalized solutions (Kerckhoff, 2017), as real-life scenarios are re-created and adapted.

More recently, the OECD (OECD, 2018) has highlighted the importance of GCs in the education of students, with a focus on the knowledge and free expression of democratic culture and cultural differences. Scholars believe (Salzer & Roczen, 2018; Jang et al., 2023) that the OECD's stance could fuse global citizenship and intercultural competences into the idea of GC, while embracing global sustainability and human rights. In some cases, GC is identified as global citizenship (the ability to feel comfortable anywhere in the world when you understand a culture, and are able to act and fulfill yourself regardless of your nationality); internationalization (when you integrate the traits of other cultures to embrace diverse experiences). In all these concepts, GC is fragmented (Aktas et al., 2017, cited in Han & Zhu, 2022), requiring a deeper discussion and a systematic approach.

**Figure 1**

*The Concept of Global Competence (Source: Compiled by the authors based on Sokal & Parmigiani, 2022)*



Finally (Figure 1), since the GC focuses on global issues and actions to improve conditions, learning must have a clear connection to students and the world. When relevance is taken into account, GC curricula become a call for authenticity, looking closely at the contemporary world for the topics that matter most (Sokal & Parmigiani, 2022). Preparing young people for the modern world does not mean adding more continents or rivers to an already full curriculum. Rather, it means promoting learning in, about and for the world that is deep, relevant and lasting. In this context, GC is the capacity and inclination, developed over a lifetime, to understand the issues of the world’s diverse countries and cultural significance for the sake of collective well-being and sustainable development.

In summary, the definition of GC is not fully purified and systematized, as the concept of GC continues to expand with the growing number of global challenges, research and humanity’s increasing responsibility for the creation and sustainability of global prosperity.

Figure 2 shows the seven criteria used in the PISA student surveys to measure the expression of GC.

**Figure 2**

*PISA Dimensions of Global Competence (Source: Compiled by the authors on the basis of the PISA surveys)*



Figure 2 presents seven criteria relevant to students' global competencies according to PISA (Lee & Stankov, 2023). The first dimension of GC reveals the autonomy needed to deal with global issues. It is associated with self-confidence in dealing with global issues. This means that individuals need to have other qualities and knowledge to feel confident and competent in the context of global challenges, which may manifest themselves at the local level. The second dimension is awareness of a range of global issues: climate change, migration, war, poverty, inequality, resource depletion, etc. This knowledge should contribute to solving problems or adapting them to local contexts, designing for the future, etc. The third dimension is attitudes towards emigrants. Migration is an ongoing phenomenon in the world, and it is, therefore, essential that both those who leave have the opportunity to keep their cultural roots in mind and those who arrive are able to adapt, acclimatize and act to create value. Knowing migrants is necessary to be able to integrate them successfully into society.

The fourth dimension is interest in other cultures. In order to learn about other cultures, it is important to develop an inclusive worldview so that we can fully embrace the other person with their inner and outer worlds – to understand thoughts, feelings, emotions, cultural traits, similarities and differences, etc. The fifth dimension is respect for people from other cultures. When a person knows other cultures, their artefacts, symbols, traditions and stereotypes, historical origins and genesis, it is easier to accept the other person as unique and distinctive, formed in a different environment. Respect for other cultures means respect for other people's way of life and beliefs.

The sixth dimension is intercultural communication, which has been mentioned many times as a key part of the GC concept. This dimension can be facilitated by knowledge of foreign languages and a deeper understanding of other cultures. The last dimension, the seventh, is the global mindset, defined by Boix Mansilla (2016), Boix

Mansilla and Schleicher (2020), OECD (2020, cited in Lee & Stankov, 2023) as a worldview in which a person sees himself or herself as connected to the global community and feels responsibility for its members. This statement is closest to the concept of sustainability, as it would imply that the individual experiences discomfort with other individuals who are experiencing greater difficulties and, on this basis, takes concrete actions to address global challenges.

The number of dimensions of GC varies from three to seven. The version of the GC with the highest number of dimensions dominates in educational management, as it is more in line with educational objectives. The dimensions of GC show that a person should learn to think globally and critically throughout life, make independent decisions based on intercultural and global insights and facts, communicate with different groups of people, accept and respect other cultures and immigrants, help integrate and achieve the common good and sustainability through their own and others' actions.

### **The Importance of Developing Global Competence in the Training of Educators**

GC is not only relevant today, but also tomorrow (Rensink, 2020). Most research in the field has focused on the development of teachers' global competences (Parmigiani et al., 2023, 2022; Kerkhoff, 2017; Kerkhoff & Cloud, 2020; Kerkhoff et al. 2019), teachers' interest in global phenomena (Wu, 2023), actualization in schools (Tamerat, 2020), and foreign language education(s) (Semaan & Yamazaki, 2015) since there are attempts to prepare teachers to critically assess the future in the context of global processes (O'Connor & Zeichner, 2016). The ultimate goal is for teachers to prepare students for a changing world with social equity and realization (Engel, Göhlich, & Möller, 2019; Engel, Rutkowski, & Greg, 2019), integrated (Ferguson-Patrick et al., 2018), and intercultural (Krebs, 2020; Ledger et al., 2019) content. The issue of global competences in higher education is also being explored in the training of multidisciplinary professionals (AlMaamari, 2020; Anoshkova, 2015; Meng et al., 2018; Robertson, 2021), as professionals will be working at specific institutions and will be able to apply global competences to change situations and manage change.

The scientific literature focuses on the development, refinement and enhancement of GC in the pupil, student (undergraduate and postgraduate) and teacher populations. It is suggested that it may be useful to incorporate GC into students' formal education, e.g., by teaching students traditional subjects, by including reading material on different cultures, or by using examples from different cultures to solve mathematical problems. GC can be taught as a separate subject, with students investigating global problems and developing projects proposing solutions (Lee & Stankov, 2023).

According to researchers (Almeida et al., 2016; Moskal & Schweisfurth, 2017), higher education institutions (HEIs) recognize the importance of GC and are, therefore, focusing on their internationalization strategies, in particular, international mobility, which has been identified as a key factor for GC development. However, there is a lack of scientific evidence that HEI internationalization efforts lead to the production of globally competent students: it is argued that GC has no end point, is not finite, and, therefore, it is not accurate to identify whether or not an individual has this competence, as it is developed throughout the lifespan (Kjellgren & Richter, 2021).

GC has become very important for postgraduate students because of the growing need to communicate and collaborate internationally, e.g., by working at international

institutions, presenting activities in international communities and conferences (Liu et al., 2020), and intercultural components can contribute to the development of GC through the support of tutors and peers (Griffith-Jones, 2016). Dimitrov et al. (2014) suggested that in an academic setting, graduate students should have intercultural skills to present research, facilitate cross-cultural learning, expose complex concepts to people who are not familiar with specific terminology, and collaborate with international research teams. Unlike undergraduate studies, Master students further develop their academic ability to conduct research (Liu et al., 2020).

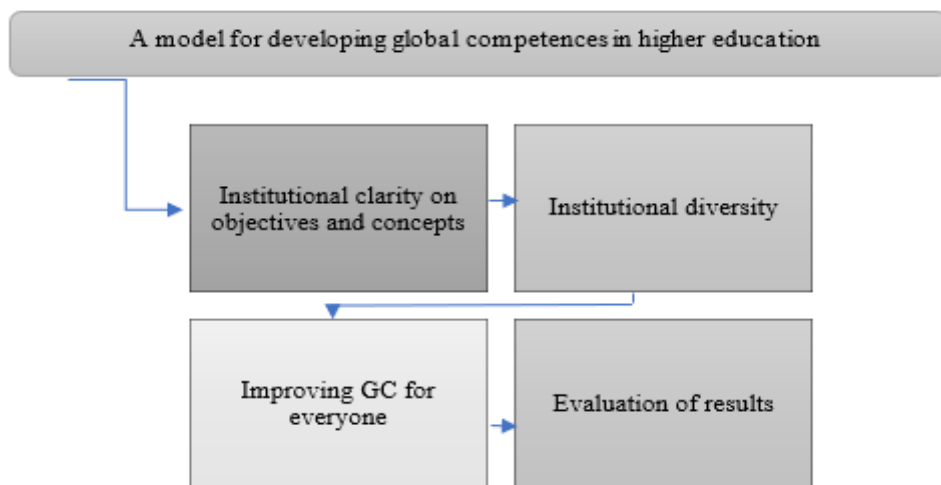
Universities around the world are under pressure to produce global citizens who can cope with the social, political and economic demands of the 21st century life (Hammond & Keating, 2018, cited in Sakamoto, 2022). However, despite the inherently 'global' nature of the global sciences, most frameworks have been built on Western cultural norms (Arasaratnam-Smith, 2017, 2020; Chong & Grzymała-Moszczyńska, 2015; Deardorff, 2015a, 2015b; Sakamoto, 2022). The lack of culturally specific models means that researchers and educators often adopt models without sufficient evidence that they are appropriate in the local context. A further problem is the tendency for such models to be developed based on the opinion of 'experts' and to ignore the views of key stakeholders in the day-to-day activities of GC education and application (Sakamoto, 2022). On this basis, the most common solution is to use internationality as the main tool for the development of GC in studies, which is difficult to apply due to financial and other barriers (Sakamoto, 2022), e.g., family, work, volunteering, etc.

It is believed that individual courses and topics within subjects will not have the necessary effect to make students from different programs highly GC-oriented, and that in this area, there is a need for a substantially deeper reconfiguration of the content between the different institutions and parties in order to ensure a systematic development of GC in students. Emphasis should be placed on a holistic approach rather than a fragmented aspect (Kjellgren & Richter, 2021). Creating or highlighting diversity contexts is not a sufficient factor for the development of GC, as it does not automatically guarantee positive outcomes (Coelen, 2016; Yu & Moskal, 2019; Lantz-Deaton, 2017; Gregersen-Hermans, 2016; cited in Kjellgren & Richter, 2021). The success of GC development can be assured by the involvement of all stakeholders in the process – HEI leaders, faculty, staff and students. The strategic selection and application of approaches to make GC development systematic and coherent can be influential. It can also be diversified by supporting and adapting the environment, e.g., art and sports teams, which not only help develop a specific skill but also create the conditions for the development of GC (Kjellgren & Richter, 2021).

Figure 3 demonstrates that for the development of the GC there should be an institutional solution, clarity, a strategic goal and a concept to do so. It is important that the initial guidelines are clearly defined, understandable for all stakeholders, especially students. Information must be easy and quick to find because in the age of technological progress, kismet obliges institutions to provide flexible access to information for all users (Kjellgren & Richter, 2021). The issue of improving the GC needs to be regularly reviewed, taking into account international and national changes, circumstances and strategic insights. The environment could be inclusive, open, and supportive of the sustainable diversity of the institution: this could include culturally diverse staff and students who share common activities rather than operating in separate small groups (cited in Kjellgren & Richter, 2021).

**Figure 3**

*A Model for Developing Global Competences in Higher Education (Source: Compiled by the authors based on Kjellgren & Richter, 2021)*



The integration of English into curricula is quite common and produces good results (Hamid et al., 2014; Oh & Wha Han, 2022), and institutionally it can make a very significant contribution to the improvement of GC. Incorporating international, intercultural and global perspectives into the educational process (Hudzik, 2011) and ensuring internationalization are seen as consistent actions that create the conditions for students to be global citizens (Auld & Morris, 2019). This is particularly important in undergraduate studies for international coursework, second language acquisition and broadening international experience (Lohmann et al., 2006, cited in Han et al., 2022).

There is one more GC description structure checked by PISA in 2018 (OECD, 2018). This framework contains four dimensions. The first of them is the capacity to examine issues in local, global and cultural meanings. Having this capacity, it is possible to evaluate various cultural situations and circumstances in a cultural context. The second dimension is the capacity to understand and appreciate different perspectives and worldviews, i.e., the ability to understand the others having in mind not only cultural and local differences but also world views. The third dimension is the capacity to create relations with people having different backgrounds – national, ethical, religious, racial, gender, cultural, etc. To have this capacity means to be open minded to various interactions. The last dimension is the capacity to construct sustainable actions, to be involved in these processes and to create wellbeing for self and others. All dimensions contain values, knowledge, attitudes and skills. These dimensions are the most popular at the school level where some results have been examined, discussed and explained to teachers and education policy providers.

Based on the aforementioned, GC has no finite expression and should be developed throughout life in a holistic manner in response to emerging global challenges, and it is best learned at different levels of study at HEIs, which need to ensure international and

cultural acceptance of the diversity of different social groups, and the ability to communicate and act together.

### **Methodology**

This study is based on cross-cultural research, including three Baltic Sea countries: Latvia, Lithuania, and Poland. The analysis focused on the intended curriculum (van den Akker, 2003) and the researchers analyzed the documents that showed the vision of three universities referring to the teacher global competences that student teachers are supposed to develop during their curriculum and course syllabi. The researchers used the substantive approach to curriculum study and focused on “question about what knowledge is of most worth for inclusion in teaching and learning” (van den Akker, 2003, p. 3).

The researchers used the document analysis method of Rapley (2007) to analyze the teacher education curriculum for the full-cycle studies in the fields of Primary and Preschool Education at three Baltic universities: Daugavpils University (Latvia), Vilnius University Šiauliai Academy (Lithuania) and Jan Kochanowski University of Kielce (Poland).

The choice of the text analysis method for research means that the focus is “as much on what is said (i.e. on the mechanisms of constructing the arguments, ideas or concepts contained therein) as on what is not said (i.e. silences, omissions and omissions)” (Rapley, 2007, p. 194). The sources of knowledge, i.e., the curricula, were, therefore, analyzed in terms of achieving the goal, i.e., identifying the main dimensions of global competence in the reviewed documents. The main problem was stated in the question: How are all the dimensions of global competences included in the syllabi of courses taught at the primary and preschool education in three Baltic countries?

The researchers from the Baltic countries examined 262 syllabi (63 from Latvia, 61 from Lithuania, and 138 from Poland). The research procedure consisted of three stages. In the preparatory stage, the researchers created a template that was used for data collection. It was decided to use the global competence description prepared by PISA in 2018. It is important to recognize that the model of GCs is constantly evolving and now the newest version of it is well-recognized. However, the curricula and syllabi were prepared a few years ago, and the universities followed the PISA description of four dimensions. The template was used in the second stage of the research and allowed the researchers to indicate which global competences and sub-competences were planned in the syllabus, together with the information about the course (title and code). The researchers noted down the aims, contents, knowledge outcomes, skills and social competences described in the university syllabi. In the final stage of the research, the comparative study was carried out.

### **Results**

The research aimed to explore how the GCs dimensions were included in the curricula of the three Baltic universities. The researchers planned the comparative study analysis in four steps:

1. the total number of courses, together with the ECTS granted, was compared;
2. rankings showed the level of development of each GC dimension in the curricula;



3. development of each dimension was characterized separately;
4. the general approach towards incorporating GCs into the curricula was analyzed.

The total number of courses incorporating GCs into three curricula – in Poland, Latvia, and Lithuania, was 166 (536 ECTS) (Table 1). The Lithuanian curriculum has the biggest number of courses (92 with 276 ECTS), the next is the Polish curriculum with 44 courses (99 ECTS) and, at last, the Latvian curriculum – with 30 courses (161 ECTS). The Lithuanian university has twice as many courses as the Polish one and three times more than the Latvian university.

**Table 1**

*Total Number of the Courses and Credits Referring to the Global Competences in Poland, Latvia, and Lithuania (Source: Developed by the authors of the paper)*

Dimensions	Poland		Latvia		Lithuania	
	Course	ECTS	Course	ECTS	Course	ECTS
1 <sup>st</sup> dimension	14	35	9	35	27	81
2 <sup>nd</sup> dimension	11	25	7	33	19	57
3 <sup>rd</sup> dimension	8	17	7	39	21	63
4 <sup>th</sup> dimension	11	22	7	54	25	75
<b>Total</b>	<b>44 courses</b>	<b>99 ECTS</b>	<b>30 courses</b>	<b>161 ECTS</b>	<b>92 courses</b>	<b>276 ECTS</b>

The second mode of analysis focused on rankings. All the dimensions were ranked according to the level of inclusion of GC dimensions in the curricula. Position number one suggests that the dimension is well-developed in the national syllabi, position 4 – the least-developed. The indicator is the number of courses in which their learning objectives refer to GCs. Tables 2–5 show the rankings prepared for three countries.

What is seen in Table 2 is that in the Polish curriculum the most important is the first dimension of global competences that describes the local, global and cultural issues. It is allocated 35 ECTS credits (35 % of the total number of the ECTS). The second and the fourth dimensions are almost of the same importance, having 25 and 23 ECTS, respectively, with a little difference in two credits only. They two together make almost a half of the total credits (48 %). Finally, the last position in the ranking is taken by the third dimension with only 17 ECTS, being just a half of the credits given to the first dimension (35, having the first position in the ranking). We can understand that building effective interactions across cultures is considered by the Polish university being a competence of minor significance.

**Table 2**

*Ranking of GC Dimension Inclusion in the Polish Curriculum (Source: Developed by the authors of the paper)*

Ranking	Dimensions	Poland	
Position		Course	ECTS
1	1 <sup>st</sup> dimension	14	35
2	2 <sup>nd</sup> dimension	11	25
3	4 <sup>th</sup> dimension	12	23
4	3 <sup>rd</sup> dimension	8	17
	<b>Total</b>	<b>45 courses</b>	<b>100 ECTS</b>

**Table 3**

*Ranking of GC Dimension Inclusion in the Latvian Curriculum (Source: Developed by the authors of the paper)*

Ranking	Dimensions	Latvia	
Position		Course	ECTS
1	4 <sup>th</sup> dimension	7	54
2	3 <sup>rd</sup> dimension	7	39
3	1 <sup>st</sup> dimension	9	35
4	2 <sup>nd</sup> dimension	7	33
	<b>Total</b>	<b>30 courses</b>	<b>161 ECTS</b>

The analysis of the Latvian curriculum shows a relatively uniform distribution of ECTS for three dimensions and a domination of one only. Teacher education is strongly focused on the fourth dimension (given 54 ECTS, i.e., 34 % of the total number of credits), and pre-service teachers are well-taught how to work for collective well-being and sustainable development. This dimension is given 15 more credits than the next dimension put in the ranking (3<sup>rd</sup>, having 39 ECTS). All other dimensions are treated equally, as they are given much fewer credits: 39 (the third dimension), 35 (the first one) and 33 (the second one). Such distribution of ECTS credits indicates a high level of stability in the content related to global competences throughout the entire teacher training education.

**Table 4**

*Ranking of GC Dimension Inclusion in the Lithuanian Curriculum (Source: Developed by the authors of the paper)*

Ranking	Dimensions	Lithuania	
Position		Course	ECTS
1	1 <sup>st</sup> dimension	27	81
2	4 <sup>th</sup> dimension	25	75
3	3 <sup>rd</sup> dimension	21	63
4	2 <sup>nd</sup> dimension	19	57
	<b>Total</b>	<b>92 courses</b>	<b>276 ECTS</b>

The Lithuanian curriculum is generally much more based on global competences than all other curricula. It gives 276 credits that are distributed into four dimensions in unequal way. The first position in the ranking is given to the first dimension of GCs. We can assume that local, global and cultural issues are considered to be the most important content for future teachers. The dimension is allocated 81 ECTS credits that is almost 30 % of all credits. The next position in the ranking is taken by the fourth dimension (75 ECTS) that is slightly less important than the previous one (only 6 ECTS fewer). The third dimension of the GCs has the third position with 63 ECTS (12 credits fewer than the previous one). Finally, the lowest position in the ranking is given to the second dimension of GCs with 57 ECTS credits, 6 credits fewer than the previous one. This dimension is given around 70 % of credits assigned for the first dimension of GCs. To sum up, we can state that there is no credit distribution pattern that might be seen in the curriculum.

The first dimension of the GCs is well developed (has the first position) in Poland and Lithuania, and less developed (the third position) in Latvia. The second dimension is the poorest – it has the last position in Latvia and Lithuania, but strong, the second, position in Poland. The third and fourth dimensions are differently developed in three countries. The third dimension has the second position in ranking in Latvia, the third – in Lithuania and the fourth – in Poland. Similarly, the fourth dimension is differently developed in all the three countries. It has the first position in Latvia, the second – in Lithuania and the third – in Poland.

The analysis shows various approaches to the development of global competences in the teacher education process in the Baltic universities. There is no similarity in distribution of the ECTS credits among the dimensions, and the positions of all of the dimensions in the rankings are different.

**The first dimension** of the global competences is described as follows: It examines issues of local, global and cultural significance (e.g., poverty, economic interdependence, migration, inequality, environmental risks, conflicts, cultural differences and stereotypes) and includes four main sub-competences (PISA, 2018). The first dimension is the only one that make the researchers explore the courses with specific focus on the sub-competences separately. In all other dimensions, the

descriptors of the sub-competences were so overlapping that the researchers could not see any dominant features of one sub-competence.

The outcomes that refer to the first dimension of the global competences are seen in many syllabi in the three Baltic countries. The biggest number of the courses referring to the first dimension of GCs is seen in the Lithuanian curriculum (27) giving in total 81 ECTS. Polish studies are based on 14 courses with 35 ECTS and the Latvian university runs 9 courses with a total number of 35 ECTS. The Lithuanian university focuses much more intensely on the GCs in comparison with the other Baltic countries, as the number of ECTS granted by the university is more than twice the ECTS at Polish and Latvian universities.

The two sub-competences being referred to together are “combining knowledge about the world and critical reasoning” and “developing a position concerning a local, global or cultural issue”. There are 23 courses (69 ECTS) in Lithuania, 7 courses (29 ECTS) in Latvia and 7 (14 ECTS) in Poland that refer to them. There are some specific fields in which the researchers found many descriptors of the concept of GCs. The courses that refer to the general pedagogical education are “Fundamentals of a Teacher’s Professional Activity” in Latvia, “Theoretical Foundations of Upbringing” and “Pedagogical Systems” in Poland, and “Pedagogy”, “Preschool Basics”, and “Formal Education Modeling” in Lithuania. There are also some more specific pedagogical courses such as “Game Pedagogy”, “Pedagogical Observation of the Child”, “Organization of Non-formal Education”, “Management of Educational Institutions”, “Special Educational Needs”, “Theory and Practice of Parenting” and “Family Pedagogy” in Lithuania, as well as “Personalized Approach in the Context of Diversity Pedagogy” in Latvia and “Social Pedagogy” in Poland.

The second general group of courses that include the development of GCs in their syllabi refers to sociology and human social and cultural life. There are such courses as “Sociology of Education”, “Cultural Anthropology”, and “Introduction to Social Education” (in Poland), “Multicultural and Ethnocultural Education”, “Ethnocultural Education” and “Cultural Education” (in Lithuania).

Only in Lithuania there are psychology-based courses such as “Psychology” and “Child’s Creativity Development” that refer to the first dimension of GCs. However, in two countries – Latvia and Lithuania – there are courses especially designed to focus on global issues and safety: State, civil and environmental protection and General biology – “Introduction to Ecology” (in Latvia), and “Human Safety” (in Lithuania). The Latvian and Lithuanian curricula designers expand their students’ GCs within language education. Thus, there appear such courses as “English Teaching Methodology” (Latvia), “Preschool Mother Tongue Education”, and “Lithuanian Language Didactics” (Lithuania).

In all three countries, the universities offer some practical courses in which the concept of GCs is developed. In Lithuania, the university runs some didactic courses (“Ethics Didactics” and “Physical Education Didactics”), Latvians include descriptors of GCs in “Practice and Research in Education”, and in Poland students develop their communication skills (“Training of Teacher’s Communication Skills”). In Lithuania, there is also a very specific course “Development of Visual Resolution” during which some GCs are developed.

The third sub-competence (asking questions and analyzing) of the first dimension is strongly related to logical thinking, and, thus, all three teacher education programs associate it with mathematical education. There are four courses granting 17 credits in

Poland (“Foundations of Mathematics”, “Supporting Children’s Mathematical Thinking”, “Methodology of Mathematical Education in Preschool Education” and “Methodology of Mathematical Education in Primary Education”), two courses with 6 ECTS together in Lithuania (“Mathematics Didactics” and “Preschool Mathematical Education”) and only one course in Latvia with 3 ECTS (“Elements of Mathematical Logic and Set Theory”). The finding suggests a stronger emphasis on mathematics and logical thinking in Poland.

At the same time, media literacy is developed mainly in the courses related to “Information Technologies”; there are no differences among the national approaches to media education. The number of courses differs among the three universities (three in Poland, two in Lithuania, and one in Latvia), but the number of credits granted is almost identical in case of Poland and Latvia (4 ECTS – Poland, 3 ECTS – Latvia). The credits are higher in case of the Lithuanian university that grants 6 ECTS for its two courses (“Development of Early Digital Literacy” and “Educational Information Technologies”). Latvian students learn “Information Technology in Education”, and Polish students – “Media Pedagogy”, “New Information Technologies” and “Information and Communication Techniques”.

**The second dimension** of the global competences *“highlights that globally competent people are willing and capable of considering global problems and other people’s perspectives and behaviors from multiple viewpoints”* (PISA, 2018, p. 9). The studies of the syllabi from the three Baltic countries revealed much overlapping among the learning outcomes referring to the second dimension; thus, the presentation of the courses based on it does not differentiate the sub-competences. All the descriptors from the syllabi that form the second dimension are analyzed together.

Similarly to the first dimension, we can see that the Lithuanian university offers the greatest number of courses (19 with granting 57 ECTS) that are based on the concept of GCs. In case of Latvia, Daugavpils University proposes 7 courses with the total number of 33 ECTS, and at the Polish university there are 11 courses (25 ECTS).

The courses that expand students’ global competences, thus building the second dimension, can be again grouped into several fields. They are:

1. Pedagogical education: Five courses in Poland – “Theoretical Foundations of Upbringing”, “Pedagogy”, “Comparative Pedagogy”, “Pedagogy of Play”, and “Special Pedagogy;” and nine courses in Lithuania – “Pedagogy”, “Preschool Pedagogy”, “Preschool Education”, “Preschool Basics”, “Pedagogy Theory and Practice”, “Game Pedagogy”, “Special Educational Needs”, “Pedagogical Observation of the Child”, and “Family Pedagogy”. There is no course of general pedagogical education in Latvia that expands students’ GCs referring to the second dimension.
2. Sociology and human social and cultural life: Four courses in Poland – “Sociology of Education”, “Cultural Anthropology”, “Multiculturalism in Preschool and Grades 1–3”, and “Introduction to Social Education”; one course in Lithuania – “Multicultural and Ethnocultural Education”, and two courses in Latvia – “Transversal Competences in the Field of Cultural Awareness and Self-expression in Arts” and “Social and Civic Studies”. It is worth emphasizing that in two countries there is a special course focusing on multiculturalism that seems to be the course especially designed to expand students’ respect for other cultures that is defined in the second dimension of the GC model.

3. Psychology-based courses are designed only in Latvia (“Psychology for Teachers”) and Lithuania (“Psychology”, “Psychology of Child Development”, and “Development of Child’s Creativity”).
4. Language education that provides some references to GCs is provided in Lithuania only, in a course “Preschool Mother Tongue Education”.
5. Practical courses expanding GCs are found only in Lithuania. They are: “General Didactics”, “Education of Visual Expression”, “Physical Education Didactics”, and “Educational Information Technologies”.

With reference to the second dimension, the universities also offer some courses concerning ethical, legal, economical and safety issues. They are: one course (“Human Safety”) delivered by the Lithuanian university, two courses in Poland (“Professional Ethics” and “Child’s Rights”), and two courses for Latvian students (“Legal Aspects of the Pedagogical Process” and “Educational Economics and Project Development”).

**The third dimension** of the global competences focuses on engagement in open, appropriate and effective interactions across cultures that demands establishing positive interactions with people of different national, ethnic, religious, social or cultural backgrounds or gender. There are five sub-competences relevant to students’ GCs according to PISA (2018). They have been defined previously in the paper.

The biggest number of the courses referring to the third dimension of GCs is seen in the Lithuanian curriculum (21, 63 ECTS). The Lithuanian university outnumber the other two universities, as in Latvia there are seven courses granting 39 ECTS, and in Poland – eight courses and 17 ECTS only. What is interesting, however, is that in Lithuania almost all courses have already been mentioned as the ones building the first and the second dimensions of GCs as well. There is just one course – “Pedagogical Practice” – in the Lithuanian curriculum that has not appeared earlier in the analysis of the first and second dimensions.

The third dimension is incorporated into students’ formal education in 36 courses altogether. They can be divided into several theme-based groups. The first is a group of courses on general and specific pedagogical issues. There are two courses provided in Poland (“Comparative Pedagogy” and “SEN Children in the School System”), three courses in Latvia (“Fundamentals of a Teacher’s Professional Activity”, “Organization of the Educational Process in Primary School”, and “Inclusive and Special Needs Education”), and 10 courses in Lithuania (all of them refer also to the first and second dimensions): “Pedagogy”, “Pedagogical Practice”, “Preschool Education”, “Preschool Basics”, “Preschool Pedagogy”, “Pedagogical Observation of the Child”, “Family Pedagogy”, “Pedagogy Theory and Practice”, “Game Pedagogy”, and “Special Educational Needs”.

What can be seen is that all three universities offer courses focusing on special educational needs. Two of them in Poland and Lithuania have been already mentioned. In Latvia, students can take a course “Inclusive Support System and Multiculturalism in Preschool” that is partly devoted to the same theme. Its second component (multiculturalism) is also developed in all three national study programs: in Poland, there is a course “Multiculturalism in Preschool and Grades 1–3” and in Lithuania – “Multicultural and Ethnocultural Education”. Those two themes seem to have great significance for development of the sub-competences assigned to the third dimension of GCs.

The other courses referring to social and cultural life are “Introduction to Social Education” and “Cultural Anthropology” in Poland, and “Social Studies” in Latvia. There

are no specific sociology-based courses in Lithuania that refer to the third dimension of GCs. We can find, however, two Lithuanian courses based on psychology: “Psychology” and “Development of Child’s Creativity” that accompany three other courses in the neighboring countries: “Development of Language and Communication Skills and its Disorders”, and “Aesthetics and Ethics of Verbal Communication” in Poland, and “Social-Emotional Learning” in Latvia.

In Lithuania, there is a set of courses referring to GCs that can be called practical. They are: “General Didactics”, “Educational Information Technologies”, “Education of Visual Expression”, “Mathematics Didactics”, and “Preschool Mathematical Education”. There is no element of this kind in two other universities.

Both Latvian and Lithuanian universities offer the language education component that promotes the coherent development of the third dimension of students’ GCs: the former implements the course “English Teaching Methodology”, and the latter one – “Preschool Mother Tongue Education” and “Lithuanian Language Didactics”. What is more, the Polish university provides the course “Foundations of Organization and Education Management”, and the Lithuanian HEI – “Human Safety” that also refers to the first and second dimensions.

**The fourth dimension** of the global competences emphasizes the ability to take action for collective well-being and sustainable development. There are four statements describing the competences within this dimension. In total, there are 44 courses giving 152 credits to students. As before, the Lithuanian curriculum includes more courses and gives more ECTS than both other countries. There are 25 courses (75 ECTS) in this curriculum, seven courses (54 ECTS) in the curriculum of the Latvian HEI and the Polish studies are based on 11 courses with 22 ECTS.

This dimension is facilitated by the outcomes of the following courses:

1. Pedagogical education: There are 13 courses in Lithuania – “Pedagogy”, “Preschool Pedagogy”, “Preschool Education”, “Preschool Basics”, “Pedagogy Theory and Practice”, “Pedagogical Practice”, “Game Pedagogy”, “Special Educational Needs”, “Pedagogical Observation of the Child”, “Family Pedagogy”, and three courses in which syllabi there only descriptors referring to the fourth dimension: “Special Education Basics”, “Integrated Education”, and “Creating Educational Environments”. In the neighboring countries, the dimension is referred to in five courses in Poland (“Comparative Pedagogy”, “Organization of Pedagogical and Psychological Support in Educational Institution”, “Programs of Child’s Adaptation to Preschool and School”, “SEN Children in the School System”, and “Methodology of Corrective and Compensatory Work in Preschool and Grades 1–3”) and in one course in Latvia (“Teaching and Learning”) that expands students’ GCs referring to the fourth dimension.
2. Sociology and human social and cultural life: Four courses in Poland – “Introduction to Social Education”, “Cultural Anthropology”, “Multiculturalism in Preschool and Grades 1–3”, and “Methodology of Socio-Axiological Education in Preschool”; one course in Lithuania – “Multicultural and Ethnocultural Education”, and three courses in Latvia – “Health and Physical Communication Skills Activity”, “Human and Environmental Resources”, and “Introduction to Education for Sustainable Development”.
3. Psychology-based courses are designed only in Poland (two courses: “Training of Teacher’s Communication Skills” and “Relaxation Training for

- Teachers”) and Lithuania (three courses: “Psychology”, “Psychology of Child Development”, and “Development of Child’s Creativity”).
4. Language education expanding GCs is found only in Lithuania, in a course “Preschool Mother Tongue Education”.
  5. Practical courses that provide some references to GCs are provided in Lithuania only (six courses). They are: “General Didactics”, “Mathematics Didactics”, “Preschool Mathematical Education”, “Education of Visual Expression”, “Physical Education Didactics”, and “Educational Information Technologies”.

The Latvian university also provides three other courses referring to the fourth dimension of GCs. It offers courses “Natural Science”, “Educational Management”, and “Elaboration of Bachelor’s Thesis”. In Lithuania, the fourth dimension is also developed in the course “Human Safety”.

The analysis of the four dimensions separately enabled the researchers to observe different approaches to development of students’ GCs. The Lithuanian curriculum designers incorporated GCs into many courses and, at the same time, planned many courses (12) that support development of all the dimensions of GCs. There are seven courses that promote development of three dimensions simultaneously, four courses incorporate two dimensions at the same time, and 14 courses refer to one dimension only. This approach goes in line with the opinion of Kjellgren and Richter (2021) and might be called the holistic approach.

The approach found in the Latvian and Polish curricula is more fragmented. In both universities, we see a domination of courses that incorporate only one dimension. In Latvia, almost all courses are focused on one dimension only (24), and three courses incorporate two dimensions simultaneously. In Poland, there are 23 courses referring to one dimension of GCs, four courses develop sub-competences relevant to two dimensions at the same time, and only two courses are associated with four and three dimensions (Table 5).

**Table 5**

*Number of Courses Incorporating a Specific Number of Dimensions in Poland, Latvia and Lithuania (Source: Developed by the authors of the paper)*

Number of courses	Poland	Latvia	Lithuania
Incorporating 4 dimensions of GCs	2	-	12
Incorporating 3 dimensions of GCs	2	-	7
Incorporating 2 dimensions of GCs	4	3	4
Incorporating only 1 dimension of GCs	23	24	14

All the dimensions are integrated into the curricula provided by the three Baltic universities. However, the Lithuanian curriculum offers much more courses designed with a consideration of the concept of global competences. At the same time, all the sub-competences are much better developed and carefully included in the Lithuanian teacher education program. In Poland and Latvia, there are much fewer courses and



credits granted that can guarantee development of global competences of their students. However, all the dimensions are facilitated by the content of the Baltic countries' curricula.

In all dimensions, the Lithuanian university outnumbered the other two Baltic universities in the field of the number of courses and credits incorporating GCs. What is more, its approach to attribute global competences in its curriculum for teacher education studies is more holistic and complex.

### **Discussion and Further Implications**

Introduction of global competences into the higher education curriculum is a great challenge. It is significant to bear in mind that too fully packed curricula cause students to be overloaded, feel great exhaustion and strong tension that, finally, lower their achievements. That is why to enhance global competences, it is also important to consider the correlation between global competences and student achievement.

What needs to be stated clearly is that providing a curriculum is not enough to develop students' GCs. The universities should provide meaningful global competence training (also for their staff), extra-curricular activities and students' mobility ensuring study abroad experiences, cross-cultural communication, and contact with people from foreign cultures.

Universities may use two different approaches to implement GC in their curricula. The first approach is creating new courses and adding new content. The other approach is integrating selected aspects of global competence development with subjects already taught at the university. The latter one is implemented in the three Baltic countries. All of them include the GC-based content in several courses. Three Baltic universities develop their students' global competence in an integrated way. It means that GCs are deployed throughout the curriculum, and students train their GCs throughout their whole time at the university, during various modules or lectures and course activities. The offered courses fit students' disciplinary needs and provide connections to students' future professional environment. There are, however, specific courses focused on GCs, such as courses on multiculturalism, ethnocultural education, or social pedagogy. In the three Baltic countries, there are also language classes to reduce linguistic barriers to interaction and foster global competence development.

The research shows the clear institutional vision of GC and strong emphasis on making the courses match the overall goal and the competences throughout the curriculum build up on each other. All the GC dimensions and the sub-competences mentioned in the PISA model (2018) are promoted. However, the findings show a huge difference between the Lithuanian university and the remaining two universities (Latvian and Polish) in the number of courses and ECTS. The indicators show the national specificities of the learning culture. The literature review shows that theoretical models of GCs promote a one-size-fits-all solution to be applied to all countries; however, various approaches to them can be recognized. Thus, the researchers understand a great necessity to conduct more research that focuses on exploring global competence in different cultural and national contexts.

The paper highlights several areas for further research. The limitation of the study of the designed curricula is getting an impression of the assumed GC development. This research should be followed by the study of the implemented curriculum. To provide a full vision of the GC improvement, the researchers should not only investigate an

institutional strategy communicated in the curricula, but also learning activities aligned to and implemented that can contribute to a higher-level global competence. The further research should monitor and assess GC development process, identify strengths and weaknesses of the curricula, and, finally, help improve the curriculum to achieve overall goals.

Moreover, it is important to explore teaching practices to find out how effective integration of global competence into the teacher education curriculum is. To get a full view of the realities of GC development at universities, there is also a need for investigating teaching practice and the way of delivering the desired outcomes in the three Baltic universities.

The other questions are whether there is a continuum of GC improvement or a back-and-forth movement, what problems and challenges are encountered during the curricula implementation, and how universities revisit their study program periodically. What is also interesting is the level of flexibility and adaptability of the curricula to the new challenges and opportunities caused by a rapid development of the world.

## **Conclusions**

The definition and dimensions of the GC are not fully theorized. While the definition of GC is mainly related to glocalization and interculturality, a broader version of GC encompasses a set of skills and attitudes developed over a lifetime, leading to morally acceptable solutions to a wide range of glocalized problems in the pursuit of global sustainability and well-being. The dimensions of GC include glocalized and idiosyncratic activities, attitudes and values that are realized when the subject is knowledgeable about global issues, positive about migration, self-reliant, respectful, culturally sensitive, globally minded, interacts with a wide range of people, and builds a global wellbeing based on sustainability. “A high-quality, pro-actively inclusive, and digitally accessible education is essential in the nurturing of global citizens who can assume an active role, on both local and global levels, in building a more inclusive, tolerant, and safe society” and higher education institutions have an important role in educating “global citizens who have knowledge and skills to participate in not just their local communities but global ones too” (Kravale-Pauliņa et al., 2023, pp. 420–421).

Teachers are a key link in the development of GC in educational institutions, as they initiate the development of students’ GC. Educational leaders are responsible for the quality of change and the impact of its expression locally through teachers, so the greatest changes can be made by empowering leaders’ own GC, then leaders will initiate the development of teachers’ GC through international mobility, projects, solving various global problems, sharing activities in working groups, promoting teachers’ collaboration and collective responsibility and sense of purpose for the impact of the changes they are making, locally and globally. GC has no finite limit and cannot be developed in a specific phase of learning, study or work, so for educational leaders addressing global challenges, empowering GC will be a long-term lifelong learning endeavor.

This article is a contribution to find “the link to sustainability” that “is seen both in broader perspectives and in the specific issues of school and university education” (Salīte et al., 2023, p. 1) and provides valuable insights into global competence in higher education.

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