Action Dimension of Global Competence in Future Teacher Education Programs: A Comparative Analysis of Lithuania, Latvia, and Poland

Renata Bilbokaitė
https://orcid.org/0000-0001-5423-6738
Vilnius University Šiauliai Academy, Šiauliai, Lithuania

Ieva Bilbokaitė-Skiauterienė
https://orcid.org/0000-0003-1328-616X
Vilnius University Šiauliai Academy, Šiauliai, Lithuania

Agnieszka Szplit
https://orcid.org/0000-0002-5756-6393
Jan Kochanowski University of Kielce, Kielce, Poland

Zuzanna Zbróg
https://orcid.org/0000-0002-4088-626X
Jan Kochanowski University of Kielce, Kielce, Poland

Ilona Fjodorova
https://orcid.org/0000-0001-8387-4982
Daugavpils University, Daugavpils, Latvia

Mārīte Kravale-Pauliņa
ttps://orcid.org/0000-0001-6200-1066
Daugavpils University, Daugavpils, Latvia

Eridiana Oļehnoviča
https://orcid.org/0000-0002-9731-1360
Daugavpils University, Daugavpils, Latvia

Abstract

Global competence (GC) is a key prerequisite for achieving sustainability in contemporary societies, as it enables learners not only to understand global processes, cultural diversity, and values, but also to act responsibly at the local level. A central role within GC is played by its fourth dimension – action – which can be conceptualized as action competence (AC). AC enables the practical enactment of knowledge, values, and attitudes in support of sustainable development. In teacher education, AC is particularly crucial, as teachers shape learners' motivation, sense of responsibility, and ability to transform global challenges into meaningful local action. The paper presents an in-depth comparative analysis of teacher education programs at three universities – Vilnius University Šiauliai Academy (Lithuania), Daugavpils University (Latvia), and Jan Kochanowski University of Kielce (Poland). The study explores how each national system conceptualizes the action dimension of global competence as action competence, and how it is embedded within multicultural education, reflective practice, and education for sustainability. The analysis aims to identify similarities, divergences, and underlying pedagogical philosophies shaping teacher preparation in three Baltic Sea region countries. The findings indicate that all three programs acknowledge action as an essential component of global competence, yet they operationalize it in distinct ways. In Latvia, action is institutionalized through structured processes of planning, management, and evaluation. In Lithuania, action is framed as an iterative cycle of implementation, reflection, and improvement, closely linked to the formation of professional identity. In Poland, action is primarily understood as socially and ethically grounded civic engagement, emphasizing diagnosis, prevention, and responsibility for collective well-being. The study concludes that strengthening action competence in teacher education is necessary to bridge the gap between theoretical understanding and sustainable, value-based action in educational practice.

Keywords: Action competence, action dimension, global competence, sustainability.

Introduction

Global competence (GC) is one of the most critical competences for achieving sustainability in today's world. One of the main reasons is that GC can help learners who will form future societies not only understand the diverse world, cultures, and values, but also act at the local level (Kerkhoff, 2017) so that global development is as balanced as possible. Sustainability goals are achieved by taking responsibility (Wu, 2023). Even though the concept of GC is fragmented (Han & Zhu, 2022), the competence itself is essential for teacher training (Kerkhoff, 2017; Kerkhoff et al., 2019; Kerkhoff & Cloud, 2020; Parmigiani et al., 2022, 2023), as teachers will help implement it in schools (Engel, Göhlich, & Möller, 2019; Engel, Rutkowski, & Greg, 2019; Tamerat, 2020). This is particularly true of the fourth dimension of GC – activity (reflection, ethics-based action, project-based activities, evidence-based decisions, analysis, data collection, etc.). Educators need both specific knowledge in sustainability and pedagogical skills adaptable to diverse cultural contexts (Vidal & Kuckuck, 2025).

Deficiencies in any of these areas can undermine efforts: a teacher who is confident in their knowledge but lacks facilitation experience may convey information without encouraging student engagement; conversely, teachers with participatory methods skills but insufficient knowledge of global systems may be unable to connect activities to broader challenges. Professional development programs that explicitly address principles of education for sustainable development (ESD) alongside global competence frameworks help fill these gaps (Cebrián & Junyent, 2015). Teacher training also involves strengthening their diagnostic skills to determine whether students need more support in understanding concepts, motivation to act, or confidence in the effectiveness of their actions (Sass et al., 2021). Assessment tools tailored to adolescents can shed light on these aspects at the classroom level, allowing teaching to be adjusted based on evidence rather than assumptions. Thus, the assessment results provide practical guidelines for improving future priority areas, rather than static snapshots of the evaluation. The inclusion of interdisciplinary projects in the formal learning sequence is another helpful way of integration (Cebrián & Junyent, 2015).

This reflects how sustainability issues manifest across ecological, social, and economic spheres and ensures that abstract concepts such as systems thinking are reinforced through practical tasks (Ramirez & Paderna, 2024). Educators can reinforce these cycles by incorporating reflection stages in which students analyze what worked, what did not work, and why; this fosters adaptive thinking, aligned with the requirements of strategic competence (Giangrande et al., 2019).

Theoretical Background: Action Competence as Part of Global Competence (as the Fourth Dimension)

According to the Organisation for Economic Co-operation and Development (OECD) (2018, pp. 9–10), there are four dimensions of GC. These include (1) examining issues of local, global, and cultural significance; (2) understanding and appreciating the perspectives and world views of others; (3) engaging in open, appropriate, and effective interactions across cultures; (4) taking action for collective well-being and sustainable development. The OECD explains that the fourth dimension concerns an active role in daily life, taking responsibility as a member of society, and the ability to respond in line with one's values. This dimension of GC should foster young people's decision-making at the local level within the global context, ensuring a more peaceful and sustainable environment (OECD, 2018).

The action dimension could be explained in more detail and independently identified as an action competence, not just a dimension. There are signs that both GC and AC are multidimensional. The OECD (2018) identifies that GC has cognitive, socio-emotional, and behavioral aspects that foster intercultural connection and a broader worldview. It is important to note that GC should be essential in this world because it helps function in international, multidimensional, interdependent environments and contexts, serving as a transversal background for a future sustainable lifestyle with attitudes, habits, and reflective experience. There is no specific discipline for teaching GC, which is why it should be integrated across various subjects and could link to environmental awareness,

decision-making skills across local-to-global scales, scenario thinking, and fostering a sense of belonging to one's environment (Cebrián & Junyent, 2015).

Figure 1

Similarities and Differences of GC and AC (created by the authors according to Cong & Ironsi, 2025; Feraco et al., 2025; Kadji-Beltrán, 2024; Lohmann et al., 2021; Ramirez & Paderna, 2024)
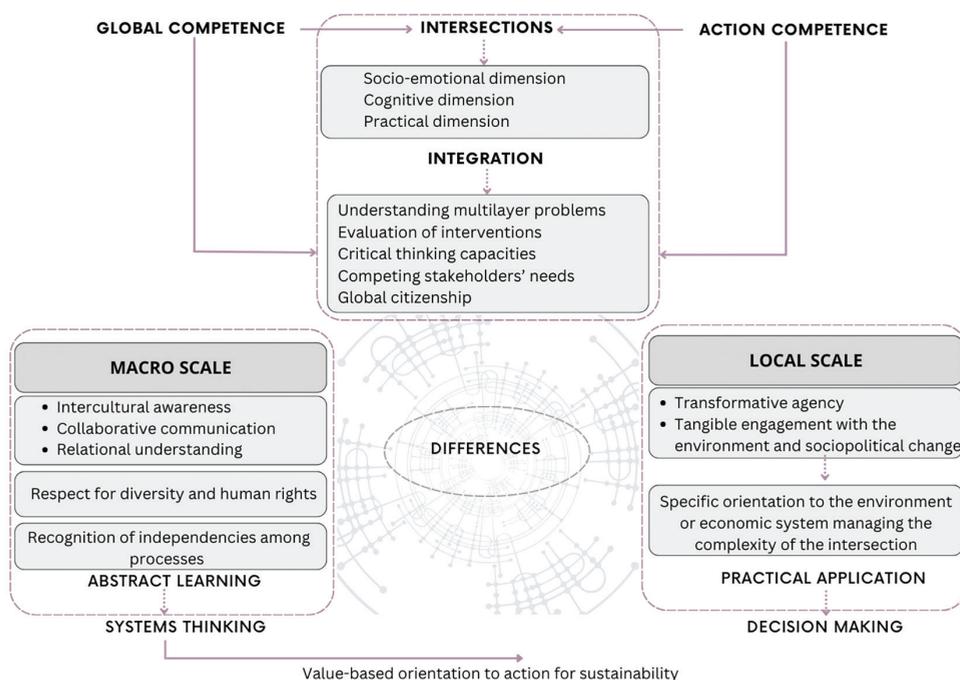
It is essential to analyze the similarities between GC and AC (Figure 1). Both competences are oriented toward integrating cognitive, socio-emotional, and practical dimensions. All this should help students understand multi-layered problems, evaluate possible interventions, and take ethically informed action (Feraco et al., 2025). It is believed that GC places a stronger emphasis on intercultural knowledge and understanding, as well as on communication that fosters cooperation with different people to understand not only them but also their culture and identity. AC is more oriented toward changeable practices, transformative activities, and specific actions related to environmental and social processes (Lohmann et al., 2021). Consequently, it can be inferred that GC prioritizes global and macro-level qualities that a person should possess to function harmoniously in society. At the same time, AC focuses more on the local level, i.e., how to use what is known from the global context in one's immediate environment to bring about change. Thus, even if we do not rely on the OECD (2018), the

factors analyzed by the aforementioned researchers indicate that AC is part of GK, but, given its specific practical application, it can also be studied separately. The necessity of these competences is particularly evident in our age, as we seek to navigate the fields of information and social cognition, assess the reliability of information, competition, and culturally diverse perspectives, while balancing stakeholder needs (Cong & Ironsi, 2025). An individual's actions are driven by perceived relevance and personal connection to the problem (Schönstein & Budke, 2024).

GC emphasizes respect for society, people, and their rights, but does not provide clear guidelines for action in specific circumstances, and values are not specifically named; they are more general – respecting diversity universally and interacting with it harmoniously to achieve sustainability worldwide. It is believed that if we used only the abstract characteristics of GC in education without the fourth dimension (without action), it would be incomplete, as learners would eventually lose motivation. For GC to take on a fundamental role, it is necessary to have AC, which will then provide a basis for community projects, interdisciplinary problem-solving, etc. (Ramirez & Paderna, 2024). GC emphasizes systems thinking, the ability to recognize global processes and interacting institutions. Meanwhile, AC is more oriented toward local solutions in an undefined context (Lohmann et al., 2021).

When updating the topic of sustainability, GC is increasingly essential for developing knowledge of intercultural environments and for functioning effectively within them during international negotiations. At the same time, AC is more essential as a direct intervention for achieving sustainability. It is believed that living laboratories can improve both GC and AC by addressing specific global problems (e.g., plant extinction) at the local level and fostering intercultural cooperation through environmental activities (Kadji-Beltrán, 2024). In pursuit of sustainability, AC is critical because it can be measured through indicators and outcomes (Sass et al., 2024). It is important to note that, in pursuit of sustainability, GC and AC are characterized by a value-based approach to assessing situations and acting accordingly, grounded in the natural and social sciences, culture, and ethics (Ramirez & Paderna, 2024). The analysis shows that students can learn to act by practicing to act (Sinakou et al., 2019, as cited in Torsdottir et al., 2024).

Interdisciplinarity and perspective-taking are more characteristic of GC, which develops as it grows. At the same time, anticipating specific sustainability solutions and conducting risk assessments in the local environment are integral to AC (Vidal & Kuckuck, 2025), as is applying general systems thinking when urgent environmental risks require an immediate response (Feraco et al., 2025). The scientific literature states that fostering GC and AC in education is essential, as this will encourage open, multifaceted dialogue, which is limited by a lack of intercultural exchange (Kowzan, 2025). Little attention is paid to improving action competence in education in the context of sustainable education because teachers are not prepared, so it is essential to update the training of this competence throughout their training period (Schönstein & Budke, 2024).

Figure 2

Similarities and Differences of GC and AC (created by the authors according to literature review)
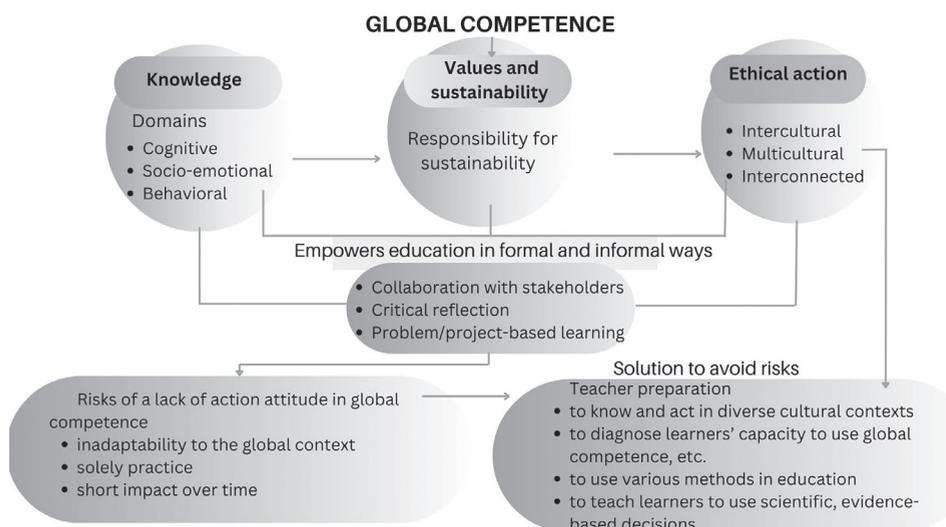
In summary (Figure 2), global competence in the context of sustainability education comprises three main aspects: (1) knowledge that is expressed in cognitive, socio-emotional, and behavioral ways; (2) values related to sustainability that are manifested as responsibility for sustainability and (3) ethical action in intercultural, multicultural, and networked environments. Taken together, these elements enable teachers to collaborate with local communities and social partners, both formally and informally, through various projects and other activities, to reflect critically on situations and solve problems by involving all interested parties. The most crucial emphasis is on AC, which extends beyond observation, analysis, and proposing solutions in the local environment to encompass concrete action.

GC improvement is necessary already during studies, when preparing future teachers, because GC and AC are developed over time, and current teachers lack them because they were not included in the training modules (Schönstein & Budke, 2024). When assessing the risks, it should be emphasized that if GC is discussed only in theory, to broaden learners' thinking and field of vision, it will not help solve the problem and will be dominated by isolated practices or short-term measures. Therefore, the teacher training stage becomes particularly important. By paying greater attention to the context of AC sustainability, it is possible to prepare teachers who will be able to operate in multicultural and multidimensional spaces, identify students' GC abilities, and determine where and how much they need to improve, be able to use the necessary methods, and make evidence-based decisions on improvement.

Methodology

The study is based on continuous cross-cultural research (as presented in previous publications in 2024), 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 teachers' global competences that student teachers are expected to develop across their curriculum and course syllabi. The researchers used the substantive approach to the 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 universities: Daugavpils University (Latvia), Vilnius University Šiauliai Academy (Lithuania), and Jan Kochanowski University of Kielce (Poland).

The researchers from the Baltic Sea countries examined 262 syllabi (63 from Latvia, 61 from Lithuania, and 138 from Poland). The research procedure consisted of several stages. The first stage comprised the analysis of GC indicators according to the template developed by the researchers (PISA 2018 model, OCED, 2018 GC description), and it was presented in an earlier publication (Bilbokaite et al., 2024). The research was prolonged, and in the second stage, smaller indicators of each GC dimension were analyzed. For this analysis, AC was selected as a sub-competence of GC.

Results

Structure of the Programs

The Lithuanian university organizes teacher education through modular competences. Each domain includes cognitive, affective, and reflexive elements. Students are expected to "evaluate colleagues' performance and own progress" and complete a Report on Performance of Reflective Practice. Such features illustrate how Lithuanian programs see assessment and reflection as intertwined learning processes. The structural emphasis on analyzing pedagogical experience positions the Lithuanian model between constructivist and reflective paradigms.

The Latvian program is the most explicitly outcome-based, reflecting Bologna Process principles. Each field of study specifies aims, contents, learning outcomes, skills, and social competences. For example, in the Natural Sciences field, students engage in "the acquisition of methodology... with a focus on the research approach, cooperation and acquisition of transversal skills". The Education Management module connects pedagogy with leadership training, emphasizing "Managing change" and "Quality management of education". This indicates that Latvian teacher education integrates professional, managerial, and sustainability dimensions into a coherent whole.

The Polish program is more thematic and discursive, emphasizing philosophical, sociological, and moral themes. The "Introduction to Social Education" module develops

analytical skills to "describe the transformation of social environments relevant to human development" and to "analyze selected social problems from a variety of perspectives". Methodology is conceptual rather than procedural, expecting students to "use philosophical, psychological, social, and pedagogical knowledge" to design activities fostering children's values.

The Lithuanian and Latvian programs are structured according to competence-based learning, while the Polish document integrates more civic and social dimensions. The comparison is based on thematic coding across categories:

- general philosophy for action;
- sustainability;
- multicultural inclusion;
- reflective and research competence and action.

Quotations from the documents are presented in their original phrasing to illustrate key national approaches.

Pedagogical Philosophy

The Lithuanian program embodies a reflective and child-centered philosophy of education. It defines the teacher as an ethical and reflexive practitioner capable of acting in diverse cultural and educational settings. Repeated learning outcomes manifested through the acquired skills and competences such as "Able to design multicultural education processes in culturally mixed groups" and "Able to create a safe environment that meets the needs of the child" demonstrate the integration of inclusion, safety, and cultural awareness within pedagogical identity. The Lithuanian approach merges professional ethics with personal reflection, underlining that teachers must "reflect on available and acquired competences" and "apply methods of self-reflection". The recurring use of 'reflection' signals a commitment to the self-analytical educator model that aligns with European competence-based approach toward teacher education.

The Latvian university shows a systemic, research-informed orientation, combining education for sustainable development, inquiry, and management competences. Its module "Introduction to Education for Sustainable Development" aims "to integrate sustainable development into the learning process and into the daily life of the local community" and emphasizes the "responsibility of education and teachers in recognizing, preventing and solving sustainability challenges". The inclusion of strategic management, project work, and evaluation practices demonstrates the transition of the Latvian university to a managerial-professional model of teaching. The Bachelor's Thesis module further enhances this orientation by developing "critical thinking, digital, and scientific writing skills in collecting, analyzing, evaluating and interpreting data".

The Polish program, by contrast, is grounded in humanistic and axiological traditions, seeking to form "active and responsible members of society" capable of "taking informed, reflective action and having their voices heard… to build a more just, peaceful, inclusive and environmentally sustainable world". The moral and civic focus is explicit in modules such as "Introduction to Social Education" and "Methodology of Socio-Axiological

Education", which describe "the child as the supreme subject of education" and emphasize "the moral development of the young child". Polish philosophical and ethical emphasis positions education as a tool for personal moral growth and community formation rather than institutional innovation.

While all three national programs link global competence to social and ethical awareness, their orientations differ. The Lithuanian approach emphasizes personal reflection, the Latvian focuses on systemic innovation, and the Polish approach adopts moral-humanistic formation.

Sustainable Development

Sustainability emerges as a cross-cutting but differently articulated theme. The Latvian program most explicitly embeds ESD principles. The dedicated module includes topics such as "Sustainable development: Challenges, achievements and topicalities in education", "Global goals for sustainable development", and "Good practice experiences and pedagogical activities for a sustainable local and global future". These formulations reflect the Latvian national commitment to integrating global citizenship within teacher education.

References of the Lithuanian program to sustainability are implicit, framed through well-being, safety, and cultural harmony: "ability to create and maintain a sustainable environment," "safe behavior at home, road traffic, natural environment," and "encouraging children's interest in folk art and traditions, developing attitudes of tolerance for otherness". The Lithuanian concept of sustainability therefore emerges from ethical and interpersonal dimensions rather than from environmental management or global governance discourses.

In Poland, sustainability is subsumed under civic engagement and moral responsibility: teachers are encouraged to "take informed, reflective action" and "improve living conditions in their own communities". The framework views sustainability primarily as social justice and civic participation rather than ecological transformation. This approach echoes Polish long-standing educational emphasis on personal ethics and social solidarity.

To sum up, across those three Baltic countries sustainability serves as a shared educational concern in all the teacher education programs. However, there are some differences. The Latvian university presents the most explicit and structured approach, embedding ESD within a clear global and environmental framework that connects classroom practice with community and planetary well-being. The Lithuanian program, by contrast, treats sustainability more interpersonally, linking it to well-being, safety, and cultural harmony rather than to environmental management. In Poland, in the university program, sustainability takes on a moral and civic character, grounded in social justice, ethical action, and community development.

Multicultural and Inclusive Education

The three national programs – Lithuanian, Latvian, and Polish – share a concern for inclusion and multicultural understanding, yet they frame these goals through different educational logics. The Lithuanian program gives multiculturalism a bit more pedagogical and reflective form. It stresses the ability to "plan and implement multicultural and ethnocultural activities for preschool and younger school-aged children" and to "analyze and reflect on foreign countries' experience in the preschool education sector". References to alternative systems such as Montessori and Waldorf emphasize openness to comparative pedagogy. Inclusion is achieved thanks to environmental design – teachers must "create a safe environment that meets the needs of the child" and identify "self-protection methods and measures for children".

The program from Latvia defines inclusion more institutionally and strategically. In "Human and Environmental Resources", future teachers acquire "skills for building strategic partnerships" and the "ability to strategically plan aspects of the educational change process... in a diverse environment". The orientation of the program toward management of diversity aligns with the European Union recommendations for inclusive education.

The Polish program involves inclusion within diagnostic and cooperative competences. Teachers are expected to "recognize the problems of children and youth related to the existence of multi-ethnic and multicultural societies" and "use information obtained from specialists (psychologist, speech therapist, educator, doctor) and parents" when designing inclusive educational activities. This practical approach integrates interprofessional collaboration but does not extend to systemic multicultural education or intercultural pedagogy.

The research has revealed that the Lithuanian approach toward teacher education emphasizes reflective pedagogy and cultural openness, while Latvians promote strategic management of diversity, and the program from Poland prioritizes diagnostic cooperation and individualized care. All three endorse inclusion, but they differ in scope and depth: from Lithuania's pedagogical reflection via Latvia's institutional strategy to Poland's practical intervention.

Competences for Reflection, Research, and Action

In the analysis, we refer to action defined as the fourth dimension of Global Competence, understood as "taking action for collective well-being and sustainable development" and acting responsibly in daily life, especially at the local level. Table 1 presents the number of courses with explicit action components. Courses were counted as "including ACTION" only when learning outcomes or course descriptions explicitly required students to do something in the world (individual, institutional, or social), not merely to analyze or discuss.

Table 1

Courses Explicitly Including "Action" in Three Baltic Sea Countries (the authors' own analysis)

Country	Total courses analyzed	Courses with explicit ACTION component*	% of courses with ACTION	Titles of the courses
Latvia	28	**5**	~17.9%	Teaching and Learning; Education Management; Introduction to Education for Sustainable Development; Inclusive and Special Needs Education, Field of Health and Physical Activity II
Lithuania	61	8	~13.1%	Pedagogy; Educational Information Technologies; Organization of Non-formal Education; Management of Educational Institutions; Multicultural and Ethnocultural Education; Pedagogical Observation of the Child; Preschool Mathematical Education; Development of Early Digital Literacy
Poland	28	4	~14.3%	Introduction to Social Education; Cultural Anthropology; Multiculturalism in Preschool and Grades 1–3; SEN Children in the School System

Action is explicitly operationalized in the course descriptions and learning outcomes of all the Baltic Sea countries under discussion. However, each country applies a different approach to action:

1. In Latvia, action is planned, managed, and evaluated, embedded in institutional processes and quality frameworks (courses such as Teaching and Learning, and Education Management).

2. In the Lithuanian teacher education program, action is implementation-focused and iterative, combining practice, reflection, and improvement (courses such as Educational Information Technologies, Organization of Non-formal Education, and Pedagogical Observation of the Child).

3. In Poland, action is primarily social, preventive, and value-driven, grounded in diagnosis and inclusion (courses such as Introduction to Social Education, Cultural

Anthropology, and Multiculturalism in Preschool and Grades 1–3).

Table 2

Courses Explicitly Including "Action" in Three Baltic Sea Countries (the authors' own analysis)

Type of action	Latvia	Lithuania	Poland
Planned pedagogical action (plan–implement–evaluate)	High	Medium	Low
Institutional/managerial action	High	Medium–High	Low
Practice-based implementation (doing in real settings)	Medium	High	Medium
Iterative action (action–reflection–improvement)	Low–Medium	High	Medium
Social/community-oriented action	Medium	Medium	High
Preventive/diagnostic action	Low	Medium	High

Table 2 presents how action is framed, not only how often it appears. Table 2 demonstrates that all systems include action, but Latvia institutionalizes it, Lithuania iterates it, and Poland socializes it. Labels such as high, medium, and low used in Table 2 are not meant as rankings or value judgments. Instead, they describe how strongly "action" is built into the courses and programs, based on what students are actually expected to do. It reflects how central action is to learning: whether it is a core, repeated practice (high), an important but context-bound element (medium), or a secondary feature that appears only from time to time (low).

In the Latvian program, action is expressed through structured sequences of planning, implementation, and evaluation. In the study course "Teaching and Learning", students are expected to "plan and evaluate a purposeful teaching process, choosing resources, methods and learning activities". Action here is not spontaneous; it is organized and assessed. The study course "Education Management" provides even clearer evidence. Students must be able to "assess the current situation, select quality management tools and prepare a group educational project". Action is therefore framed as managerial and procedural, where assessment precedes action and evaluation follows it. Sustainability education reinforces this approach. In the study course "Introduction to Education for Sustainable Development", learners are expected to "identify, prevent and solve sustainability-related problems" and to "co-create methodical solutions". The sequence identify–solve–co-create shows action as a problem-solving process, grounded in analysis and cooperation.

Action is also visible in inclusion-related courses, where students are required to "create a safe and supportive learning environment independently or in cooperation with others" (the study course "Inclusive and Special Needs Education"). This wording places action at the level of environment-building rather than individual behavior. Latvia

approaches action as planned and evaluated teaching (the study course "Teaching and Learning"), organized group and institutional action (the study course "Education Management"), structured problem-solving for sustainability (the study course "Introduction to Education for Sustainable Development"), and cooperative creation of supportive environments (the study course "Inclusive and Special Needs Education").

In the Lithuanian program, action is articulated most strongly through implementation verbs and iterative practice. One course explicitly requires students to "organize educational practice and apply ICT, creating new educational content" (the study course "Educational Information Technologies"). Action here clearly means doing and producing, not only planning. Non-formal education courses further highlight action as a cycle. Students are expected to "design, analyze and evaluate the organization of non-formal education activities" and to "improve their own activities" (the study course "Organization of Non-formal Education"). The inclusion of improvement shows action as an ongoing process, closely aligned with the theoretical description of action–reflection cycles. Management-oriented action is also explicit. Learners must "identify and analyze management problems and plan, organize and model the management process of an institution" (the study course "Management of Educational Institutions"). This frames action as organizational problem-solving based on analysis.

A distinctive Lithuanian feature is the explicit treatment of reflection as action. Students are required to "reflect on (...) acquired competences" (the study course "Multicultural and Ethnocultural Education"), "observe, and analyze practical pedagogical situations and experiences" (the study course "Pedagogy"), and "apply self-reflection methods in professional activity" (the study course "Pedagogical Observation of the Child"). Reflection here is not separate from action; it produces evidence that guides further action. The Lithuanian teacher education program frames action as implementation and innovation (the study course "Educational Information Technologies"), iterative design–evaluation–improvement cycles (the study course "Organization of Non-formal Education"), organizational problem-solving (the study course "Management of Educational Institutions"), and reflection-based adjustment of practice (the study courses "Multicultural and Ethnocultural Education" and "Pedagogical Observation of the Child").

In the Polish teacher program, action is most clearly articulated through explicit verbs of doing linked to social responsibility. The learning outcome "to take informed, reflective action and have their voices heard" (the study course "Multiculturalism in Preschool and Grades 1–3") directly echoes the OECD definition of action ("Take action for collective well-being and sustainable development") and positions acting – not only understanding – as a core educational goal. Action here is tied to being "active and responsible members of society" (the study course "Introduction to Social Education") and to responding to "local, global and intercultural problems" (the study course "Multiculturalism in Preschool and Grades 1–3"). Action in Poland is strongly connected with diagnosis followed by intervention. One course explicitly requires students to "plan and implement the diagnosis of a selected social problem and analyze their involvement in the team's work" (the study course "Introduction to Social Education"). This formulation shows action as a process, beginning with diagnosis and leading to collective action, not as a single act. Preventive action is another clear empirical strand. Students are expected to "know how

to prevent symptoms of social exclusion" (the study course "Cultural Anthropology"). The use of the word "symptoms" implies recognition, interpretation, and response – key elements of evidence-informed action. This is reinforced in inclusive education outcomes, where students "use information from assistants, specialists and parents when designing activities" (the study course "SEN Children in the School System"). Here, action is explicitly based on multi-source information and collaboration.

To sum up, the Polish program shows action as diagnosing social problems (the study course "Introduction to Social Education"), designing and implementing preventive measures (the study course "Cultural Anthropology"), acting collaboratively for inclusion (the study course "SEN Children in the School System"), and engaging in value-driven social action (the study course "Multiculturalism in Preschool and Grades 1–3").

Across the three Baltic Sea countries, action is not presented as a slogan but as observable doing: planning, implementing, designing learning situations, collaborating, solving problems, and evaluating outcomes.

In the Lithuanian university program, action is repeatedly operationalized through verbs like *organize educational practice* (the study course "Educational Information Technologies"), *design multicultural education processes* (the study course "Multicultural and Ethnocultural Education"), and *prepare to act proactively and creatively* (the study course "Preschool Mathematical Education"), *prioritize acting to manage the educational process* (the study course "Management of Educational Institutions"), and *perform digital operations* (the study course "Development of Early Digital Literacy"). In the Lithuanian approach, teachers "reflect on available and acquired competences" "evaluate oneself through reflection" and "report on performance of reflective practice". Reflection is strongly tied with professional identity, because teachers must "predict and analyze the goals, content, process and results of education". This approach mirrors Schön's model of the reflective practitioner, where reflection serves as a tool for continuous professional growth and self-directed improvement within complex teaching contexts.

In the Latvian program, action is framed as competence-oriented: students learn to plan and evaluate a purposeful teaching process and to plan, organize and implement learning activities, including interdisciplinary links (e.g., the study course "Teaching and Learning" and "Field of Health and Physical Activity II"). The Latvian teacher education program integrates reflection into a research-based and analytical framework. The Bachelor's Thesis II module cultivates "critical thinking, digital and scientific writing skills in collecting, analyzing, evaluating, and interpreting data". Reflection prepares teachers to generate knowledge about their own practice. Additionally, students "plan and evaluate a purposeful teaching process," linking reflection to pedagogical design and quality assurance. Such an approach toward teacher education connects reflection with knowledge production and research competence.

Finally, in the Polish program, action is explicitly framed as "take action for collective well-being and sustainable development" and links action to being active/responsible members of society and to creating opportunities for informed, reflective action (the study curse "Multiculturalism in Preschool and Grades 1–3"). The Polish concept of reflection is rooted in humanistic and philosophical inquiry. Teachers "analyze selected social problems referring to contemporary theoretical concepts and personal experiences",

blending sociological reasoning with moral reflection. The teacher's reflective stance is mainly ethical and strongly connected with responsibility and value transmission. In this program, reflection underpins the teacher's role as a moral guide and agent of social change.

Discussion and Conclusions

Conceptualizing the Action Dimension

The study illustrates that while all three universities under discussion acknowledge the importance of global competence, they diverge in how they operationalize its fourth dimension – taking action. This alignment with the OECD framework confirms that GC is not merely a set of skills but a capacity to engage in "open, appropriate and effective interactions" and to act for collective well-being (Kerkhoff, 2017; OECD, 2018). The Lithuanian modular approach and the Latvian outcome-based model mirror the Professional Action Competence (PAC) model, which suggests that professional teaching practice results from the interplay of knowledge, beliefs, motivation, and self-regulation (Lohmann et al., 2021). However, the Polish program's humanistic-axiological tradition positions action as a moral duty, aligning with communitarian orientations that emphasize social attachments and shared interests over individualistic neoliberal skills.

Bridging the Knowledge-Action Gap

A significant theme across the programs is the challenge of moving from theoretical knowledge to concrete implementation. This study corroborates the findings of Vidal and Kuckuck (2025), who noted that empirical research on pre-service teachers consistently leaves action competence underrepresented compared to cognitive and motivational dimensions. While Latvian students engage in research-informed action and Lithuanian students focus on designing multicultural environments, there remains a risk that GC stays "solely practice" without long-term impact. This "gap" is further illuminated by Schönstein and Budke (2024), who found that although teachers are motivated to teach action competence, they often feel overwhelmed by its complexity and lack the specific training to move beyond "subject knowledge" toward participatory or creative actions.

Reflection and Professional Identity

The emphasis on reflection – particularly strong in the Lithuanian Report on Performance of Reflective Practice – serves as a critical mechanism for developing a pre-professional identity. This supports the view that work-integrated learning through reflection helps students connect with the core values and motivations of their future practice (Kadji-Beltrán, 2024; Kerkhoff, 2017; Parmigiani et al., 2023). Furthermore, the addition of intrapersonal competences, such as the ability to hold contradictory thoughts

and manage stress, is essential for sustaining action without burnout (Giangrande et al., 2019). The Latvian focus on strategic management also aligns with the need for diagnostic skills, enabling future teachers to assess whether their students need more support in understanding sustainability concepts or the confidence to act effectively.

Implications for Teacher Training

The results suggest that teacher preparation must be updated to include more explicit training in action competence to avoid "short-term measures" (Schönstein & Budke, 2024). Programs should leverage "funds of knowledge" – the unique, home-based practices students bring to the classroom – to scaffold global competence instruction effectively (Tamerat, 2020). For example, a teacher's ability to diagnose a student's "willingness to act" or "confidence in their influence" is as crucial as their subject knowledge in chemistry or geography (Ramirez & Paderna, 2024). Ultimately, the complementary strengths of these three national models – Lithuania's reflective pedagogy, Latvia's systemic management, and Poland's ethical tradition – suggest a holistic regional framework for preparing teachers to navigate the "wicked problems" of our century.

If global competence is a compass providing direction and a broad understanding of the landscape, action competence is the actual walking of the path; one provides the vision of a sustainable future, while the other provides the specialized gear and resilience needed to cross the difficult terrain.

GC is a multidimensional and multimodal competence with four dimensions. Three dimensions are oriented toward the conscious mind to understand the variety of the world and to include multicultural values in political, social, and cultural sustainability. The fourth dimension can be called AC because it helps realize global matters at the local level, acting within ethical conditions and strong values. Action is an essential part of GC in future teachers' study programs because it not only motivates and fosters a sustainable belief system among learners but also promotes the right value-based actions for sustainability.

Despite differences in structure and emphasis, the programs of the three Baltic Sea countries share fundamental orientations consistent with European teacher education frameworks. All build the teacher as an active citizen and ethical professional who fosters social justice, peace, and inclusion. The Lithuanian and Latvian models use explicit competence mapping, while the Polish one is a humanistic-philosophical model that emphasizes identity and moral education. Reflection and professional ethics unify all three systems as markers of teacher professionalism.

Key differences among the three approaches lie in understanding sustainability and research competences. The Latvian program integrates ESD and project-based inquiry, the Lithuanian framework mixes sustainability with ethical and intercultural awareness, and the Poland program defines it in moral-civic terms. The Lithuanian program stands out for its strong focus on multiculturalism and safe environments, whereas the Latvian program excels in research training and systemic management. The enduring strength

of the Polish program lies in cultivating ethical awareness and civic identity.

The Lithuanian, Latvian, and Polish programs collectively illustrate the diversity of educational modernization in the Baltic Sea countries. In Latvia, the Europeanization of teacher education through competence-based ESD and managerial professionalism is easily observed. The Lithuanian university implements a reflective-humanistic model that merges ethics, culture, and safety. Finally, the Polish program is a values-centered model rooted in moral philosophy and civic engagement. Each system, therefore, embodies a different interpretation of what it means to prepare teachers as professionals, citizens, and cultural mediators. It seems like the Lithuanian reflective multicultural pedagogy and Latvian sustainability-research integration could complement Polish ethical tradition to form a holistic regional model.

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Correspondence concerning this paper should be addressed to Prof. Renata Bilbokaitė, Vilnius University Šiauliai Academy, Šiauliai, Lithuania. Email: renata.bilbokaite@inbox.lt