

*„Teachers as change agents“*



# The position of global education in teacher education in Hungary

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*based on the results of the participatory systems  
mapping exploring the views of stakeholders*

*research summary*



**H A N D**

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# The position of global education in teacher education in Hungary based on the results of the participatory systems mapping exploring the views of stakeholders

research summary

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using reports from their student researchers' groups.

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## 1. DESCRIPTION OF THE RESEARCH

### 1.1. Research topic and context

In our research, we set out to examine the perspectives of global education in teacher education in Hungary involving stakeholders, in the light of students' and teacher's opinion.

The University of Pécs (PTE) offers a broad spectrum of teacher training, including general and professional teacher training, art teacher training, primary school teacher training and pre-school teacher training.

Eötvös Loránd University (ELTE), the largest teacher training institution in Hungary, also has the largest number of students in the country at all levels of teacher training. Five of the university's nine faculties offer teacher training, supported by the Faculty of Education and Psychology.

As a professional implementer of the HAND Association's project „Teachers as change agents – continued”, we undertook to carry out similarly structured micro-research project with a small group of students. In coordinating the students' research work, we also as teachers had to familiarize ourselves with the decisive method of research, the participatory systems mapping which was a new methodological approach for us.

### 1.2. Research objectives, methods, and interpretation of key concepts

Our task in the project was to explore – through the coordination of the work of student researchers' groups, with the help of our students' facilitators –, how global education is present in university teacher education in Hungary, what factors can help or hinder its mainstreaming, and to formulate proposals on how global education can be integrated into teacher education. We used the methodology of participatory systems mapping. Our analytical criteria were mapped to the visual outputs produced as a work result of that method, following the approach of other similar analyses<sup>1</sup>.

Participatory systems mapping is a multi-stage process of exploring, reflecting, visualizing, and analyzing opinions on a given problem area in a small group of pre-selected members, receptive and concerned about the topic, in a structured, facilitated, and consensus-driven way, in an in-person or online workshop format. The process involves the creation of a common mind map starting from the participants' individual mind maps and then proceeding to the creation of a causal diagram (system maps) focusing on one of the aspects of the common mind map, highlighted by the group as a variable. The third phase consists of the review of the charts and the conclusions drawn by the group. Finally, the diagrams are analyzed by experts. The results of the analysis can confirm previously discovered and proved correlations and can also lead to inspiring and original insights that do not, however, claim to be scientifically validated. Nevertheless, the use of participatory systems mapping for research purposes is admitted, since it is a structured, systematic method for gathering opinions on a wide range of issues,

<sup>1</sup> KIRÁLY, Gábor (2017): *Rendszerek és kapcsolatok – A részvételi rendszermodellezés módszerének bemutatása a felsőoktatásról készített oksági diagramok példáján [Systems and connections- Demonstration of participatory systems modeling methodology using the example of causal diagrams of higher education]*, Vezetéstudomány - Budapest Management Review, 48 (4). pp. 67-83. [http://unipub.lib.uni-corvinus.hu/2819/1/VT\\_2017n4p67.pdf](http://unipub.lib.uni-corvinus.hu/2819/1/VT_2017n4p67.pdf) [16.02.2022] and IFAD (2009): Good practices in participatory mapping - A review prepared for the International Fund for Agricultural Development (IFAD), [https://www.ifad.org/documents/38714170/39144386/PM\\_web.pdf/7c1eda69-8205-4c31-8912-3c25d6f90055](https://www.ifad.org/documents/38714170/39144386/PM_web.pdf/7c1eda69-8205-4c31-8912-3c25d6f90055) [16.02.2022]

which can be used as a starting point worth considering in developing strategies in the area under study, with the involvement of stakeholders.

During the workshop sessions, it was not our intention to discuss the concept of global education or global citizenship education in depth or to give it a uniform interpretation. In the first session, we briefly discussed individual interpretations, then each person's thoughts in this regard were presented in the collective diagram.

Global education, as we understand it, is an educational approach and practice that places the learning in a global context applying the concept of holism, addresses world phenomena that affect all of our lives in a problem-oriented way, and in doing so, emphasize opportunities for active and responsible individual and social action, conveys values and focuses on the development of competencies and promotes the construction of knowledge that addresses all three fundamental dimensions of sustainability – ecological, social and economic – and interpret them in conjunction one with the other. Global education provides individual and social experiences, and a conceptual framework to understand and put into practice the principle „Think globally, act locally, and be yourself.”

### 1.3. Timetable for student researchers' activities

In September 2021, a team of four (PTE) and three (ELTE) student researchers was established in both institutions, which were able to develop their own semester work plan in line with the objectives and timeline of the project „Teachers as change agents – continued.” The intensive implementation phase lasted five months. The first phase was a period of preparation, which, in addition to learning about the project, consisted of learning and mastering the methodology of participatory systems mapping, based on a methodological guide<sup>2</sup>, within the framework of preparatory workshops organized by the HAND Association. The second phase involved identifying and inviting participants for the planned workshops, organizing, conducting, and documenting the system mapping workshops, and discussing the experiences gained during the workshops. In the third phase, the preparation of student researchers for the analysis was carried out, supported by individual online preparation sessions and the written methodological guide. In the fourth phase, the students and the teachers who supervised their work carried out the analysis together and a report was produced by the student researchers in both institutions.

### 1.4. The workshops facilitated by students and the range of stakeholders involved

At ELTE, a total of 6 participants took part in the two student-facilitated workshops, both students (4 persons of whom 2 women and 2 men) and academics (2 persons of whom 1 woman and 1 man). Both sessions consisted of 2.5 hours of attendance. In selecting the participants, we tried to involve as many colleagues and students from different disciplines as possible, but this attempt was not successful. All the students involved in the project attended a course in environmental science teacher programs, one of the lecturers teaches a course in environmental science, the other in biology.

<sup>2</sup> BALOGH, Réka (2021): Módszertani útmutató a részvételi rendszertérképezés módszertanához a HAND Szövetség „Teachers as change agents-continued” című projektjében [A methodological guide to the methodology of participatory systems mapping in the HAND Association's project “Teachers as change agents-continued”] (manuscript), HAND Association

At the PTE, the workshops took place in two groups, one group consisted of students, the other of teachers and experts. The group of students met twice, for about 2.5 hours each time, in attendance. The participants were students at the Institute of Education of the Faculty of Humanities and Social Sciences of the University of Pécs. Of the total of five students (three women and two men), four are becoming teachers and one student is enrolled in a bachelor's program in pedagogy. At the PTE, the teacher/expert workshop was also implemented in two consecutive workshops, but in an online format. Regarding the composition of participants, in addition to the common interest in the topic, we aimed to have heterogeneous groups in terms of organizational background too. Thus, among the 6 participants (5 women and 1 man) there were both science and humanities graduates. Most of them were university lecturers, but there were also public education teachers, representatives of NGOs, a local government representative, and a member of staff from the "Green University project" of the University of Pécs.

In both groups, facilitated by PTE and ELTE students, the process was incomplete in that we could not take the time to analyze the diagrams produced with the participants and they could not formulate their proposals. In consequence, the proposals made in this study are those developed by our mini-research team but based on the ideas and models expressed by the groups that created the diagrams.

## 2. RESEARCH RESULTS

The three system maps or causal diagrams created during the workshops are analyzed and interpreted in detail in the research report available on the HAND Association website<sup>3</sup>. In the following, we focus on the summary of results and main recommendations.

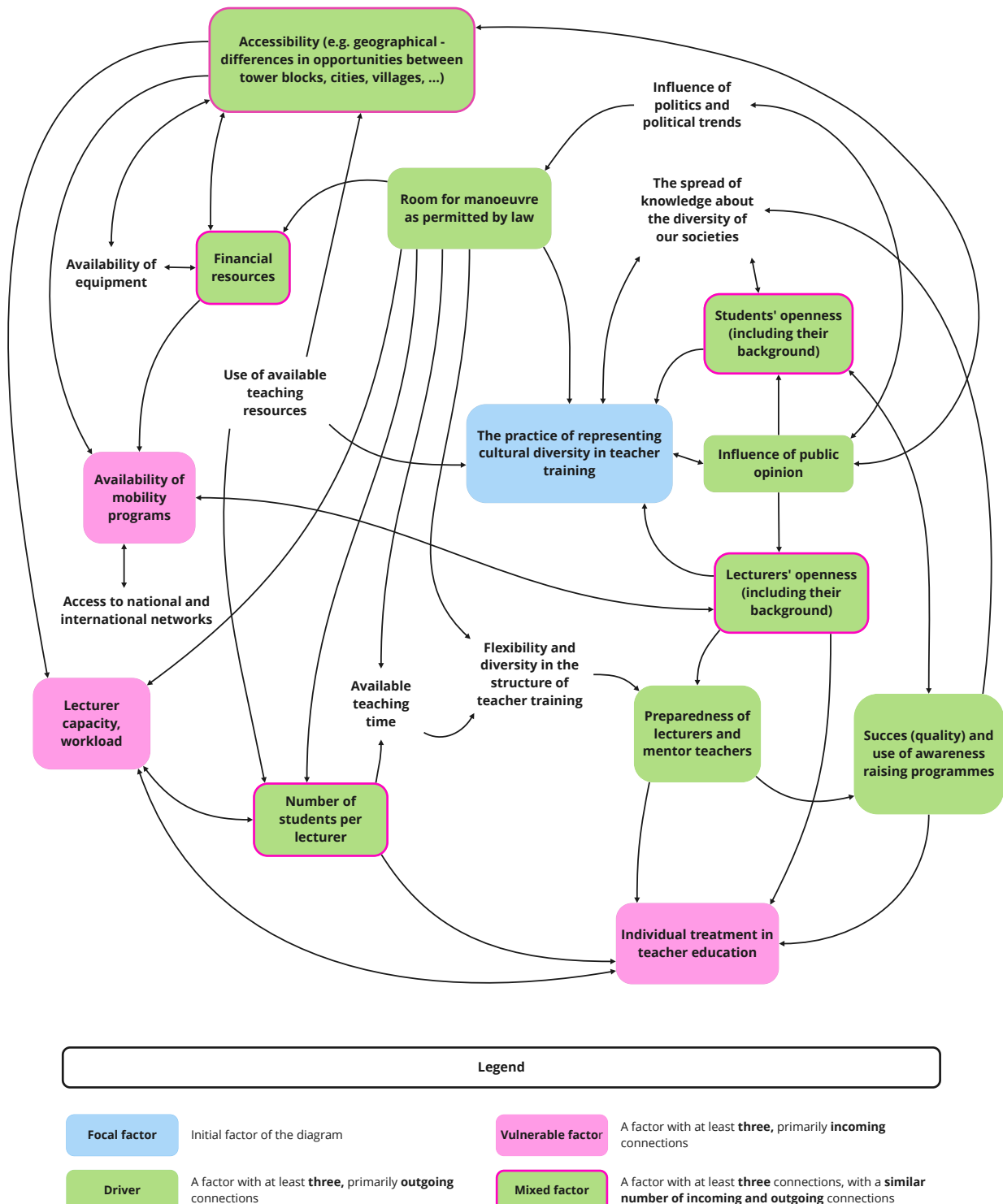
In the student group facilitated by PTE students, participants focused on cultural diversity within global education and its representation in education. In the teachers' group, the focus was on a kind of reform regarding curriculum and methodology, which was considered as important in the field of public education as in teacher training. In the student group facilitated by ELTE students, the degree of practice orientated education in Hungarian university-level teacher training became the central variable in the causal diagram.

On the PTE students' diagram (Figure 1), attitudes are of great importance, and the openness of both students and teachers seems to be an important condition for positive change. Students do not underestimate the influence of public opinion and public thinking, which they believe can affect both legislators and actors of teacher education. Their model also refers implicitly to the area of awareness raising, where they emphasize the social accessibility of knowledge on this subject.

<sup>3</sup> HUSZÁR, Zsuzsanna; ANGYAL, Zsuzsanna (2022): A globális nevelés pozíciói a magyarországi pedagógusképzésben az érintettek véleményét feltáró részvételi rendszertérképezés eredményei alapján. [The position of global education in teacher education in Hungary based on the results of the participatory systems mapping exploring the views of stakeholders], HAND Association

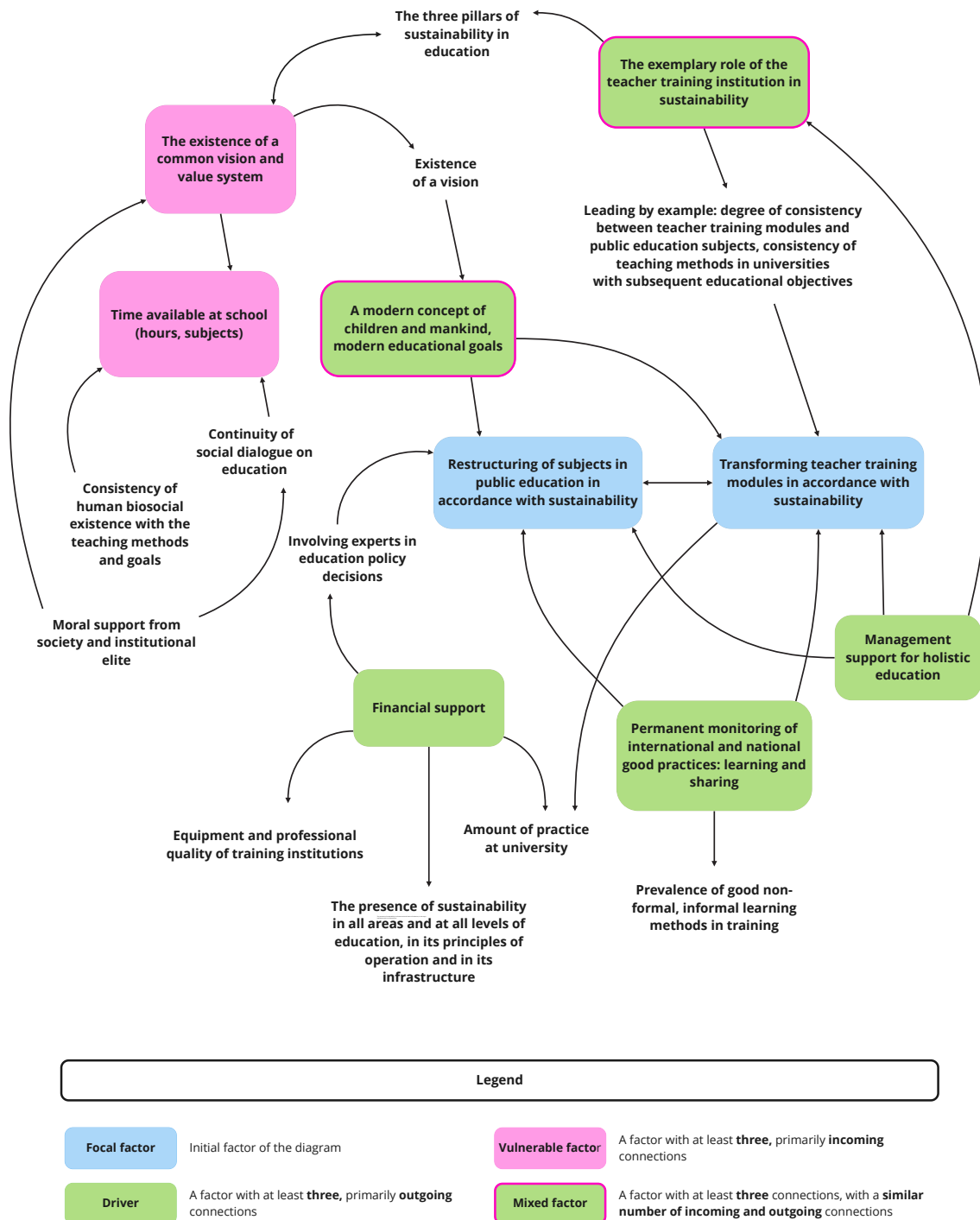


Figure 1: The casual diagram of the PTE student group



The role of attitudinal and value system variables is prominent in the PTE teachers' diagram (Figure 2). According to the model of the teachers' group, the mainstreaming of global education in teacher training depends on the financial and time investment, the consensus of the trainers in terms of attitudes and values, the extent to which the social, economic and ecological aspects of sustainability are acknowledged in the training, the modernity of the vision of children and mankind, and the support of the management, and it can be achieved on the basis of the exemplary role of credible institutional leadership.

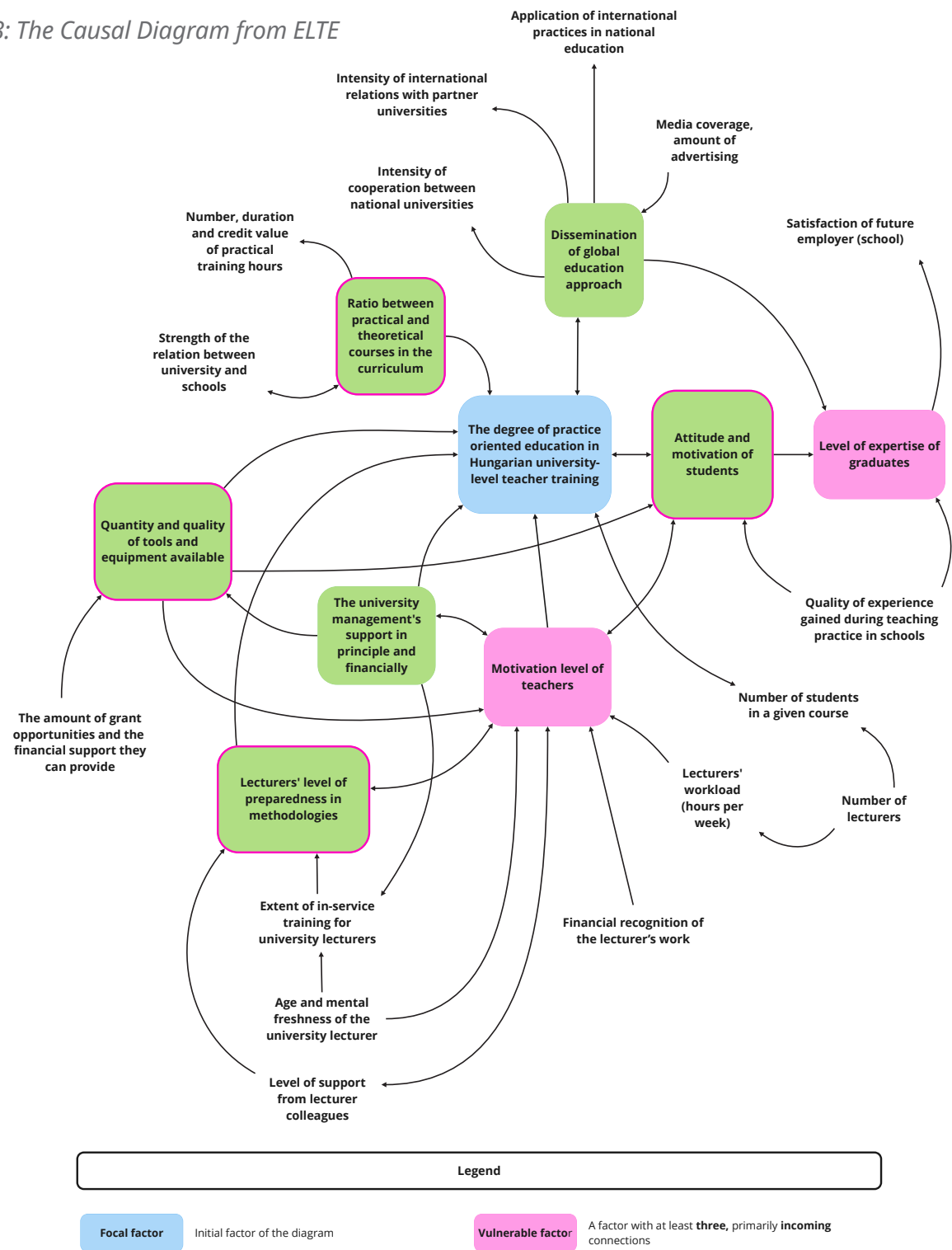
Figure 2: The casual diagram of the PTE teacher/expert group



In the causal diagram produced at ELTE (Figure 3), the participants considered the motivation of the lecturers as the most important factor for the practice orientated education. This is primarily influenced by the financial and moral support of the management team. In addition, individual factors such as the methodological skills and age of the lecturers were also mentioned. The variables relating to teachers have a natural impact on student motivation and, through this, on the expertise available and prospective job satisfaction. The variables also include the spread of the approach of global education, which can be facilitated by the development of inter-university or even international relationships.



Figure 3: The Causal Diagram from ELTE



Although the focal factor of the diagrams brought into the focus in the context of global education in teacher training was different in each of the three groups, there were many common or similar elements in the systems of factors outlined by each group. The common factors of the three system models are summarized in Table 1.

Table 1: Substantive parallels between the factors of the three causal diagrams produced in the research

Factors of PTE teachers' diagram	Factors of PTE students' diagram	Factors of the ELTE student-teacher group diagram
Time available	Available teaching time	Theoretical and practical time ratios in the curriculum, number and duration of practical lessons, teaching load
Financial support	Material input	Funding opportunities and financial support they can provide, financial recognition of the teacher's work
Common vision and value system The three pillars of sustainability in education	Student openness Teacher openness	The mainstreaming of a global education approach Attitude and motivation of students Motivation of teachers
Sustainability in all areas and at all levels of education	The suitability of the structure of teacher training	Curriculum
Social support	The influence of public opinion	Media representation
Support from the management, moral support from the institutional elite	Teacher openness	Support from the university's management in principle and financially
Monitoring, learning, and sharing of international and national good practices	Availability of mobility programs Availability of the network of relationships	Degree of internationalization Application of international practices

After comparing the causal diagrams, we were able to identify factors that – according to the thinking of the stakeholders –, significantly influence the practice of global education in teacher education. There seem to be two main sources of influence on mainstreaming global education in teacher training, one at the institutional and organizational level and the other at the level of policy interventions. According to the opinions revealed, the impact of individuals, the emergence of the possibilities for individual influence is mostly related to attitudinal variables, including openness and supportive attitudes, the importance of which was highlighted in case of teachers, students, and the university management.

In higher education, too, actions to raise awareness of several factors are needed for strategy building regardless of the field in which we want to bring change. The contents of the above summary table suggest that in order to develop a global education strategy in teacher training, based on the participatory systems models presented above, it is advisable to carry out a complex situation assessment that applies the six priority aspects below and tries to improve these areas, including:

- the assessment of resources (material, intellectual, human, time),*
- the assessment of internal, organizational support, and external support on behalf of policymakers and society;*
- the evaluation of chances to reach a consensus on approach and organization regarding the vision to be implemented and modalities to develop a common vision;*
- the modalities to engage and motivate stakeholders (in our case, mainly teachers and students);*
- the institutional design of the optimal training structure and training program;*
- finally, the national network and international relations that can be exploited and the possibilities to gain specific knowledge from them.*

### 3. THE PROJECT IMPLEMENTED AS A LEARNING PROCESS

One of the main objectives of the research project was to explore the potential of using participatory systems mapping methodology in teacher education as a participatory, deliberative, skill building and critical methodological tool that develops critical thinking skills. Lessons from working with them are discussed below.

#### 3.1. Main difficulties expressed by students in the participatory systems mapping process

In their feedback, student researchers identified several difficulties. One was the difficulty of facilitation itself. They experienced it as an unexpected challenge that it was not easy to keep the participants' thoughts in the right vein to reveal and highlight the teacher training relevance of the points raised, to formulate the relevant content in a concise, preferably short way, and to ensure that the formulation fits the logical-visualization structure applied.

The students entered the process as fresh „debut“ facilitators, with no routine. This, of course, had risks for the appropriateness of the diagrams to be analyzed by the facilitated groups. A difficulty was to explain the methodology of the system mapping in a clear and understandable way to the participants. In the construction of causal diagrams, it is important that the factors represented in the chart are formulated as variables, i.e., that they can increase and decrease in some respects, and that the relationships represent causal relationships, not just co-variations between variables. However, it has proved difficult to meet these expectations fully, as it has required a shift of focus away from conventional ways of thinking. The students found that it was not easy for the participants of the workshops to switch to a different way of organizing thoughts.

Face-to-face presence and the online format presented different challenges to the student researchers. Difficulties experienced in the online space were considered more complex than those experienced during in-person sessions. In the face-to-face format, they were able to use all the traditional channels of interpersonal communication, while the online workshop greatly limited their ability to perceive each other's facial expressions and body language. Time constraints were difficult to meet, especially when participants were very deep into a topic.

Although online connectivity has made the organization tasks easier, the first difficulty experienced in the online space has been the technical challenges. Not everyone was familiar with online platforms, so explaining the technical details took longer than planned and was not entirely successful. Although online connectivity has made the organization tasks easier, the first difficulty experienced in the online space has been the technical challenges. Not everyone was familiar with online platforms, so explaining the technical details took longer than planned and was not entirely successful.

#### 3.2. Knowledge and skills acquired

The application of a complex recently learned procedure was challenging and motivating for our student researchers, although it has caused difficulties to them. The students were among the active implementers of the project and were placed in a complex learning situation in which learning and research activities were in parallel, therefore the students gained a lot of knowledge not only for the sake of research but also through research. Self-reflective and

reflective elements were incorporated and systematized in this five-month learning process, and the students paid particular attention to developing in their role as facilitators. Therefore, from a learning methodology point of view, we can say that our students were involved in a process that combined elements of project learning, inquiry-based learning, experiential learning, reflective learning, learning by doing, and that process included cooperative group work, facilitation in pairs, and collective writing.

The skills that can be developed through their involvement in the project include flexible, practical and system thinking, the ability to change perspectives, persuasive communication, reasoning and information sharing, cooperation and organization skills, consensual decision-making, result orientation, and individual responsibility. The positive experience of learning from each other was most often expressed in their own words, as illustrated by the two reflections below:

*„My conceptual network is expanded thanks to this research project“ (M.A.)*

*„In our increasingly globalized world, it is very important that teacher training offer students more courses that enable them to experience this concept and to gain first-hand experience.“ (H.K.)*

## 4. SUMMARY OF PROPOSALS AND CONCLUSION

Based on the lessons learned from the diagrams generated as a result of the system mapping exercise, proposals can be made in the following areas:

The teacher training dimension of global education is partly a policy issue, and some elements of it need to be reflected in the output requirements, training programs and outcome objectives.

1. Institutional developments of teacher training programs should include aspects and relevant content of global education and should be supported by the management, to the extent possible.
2. There is a need for methodological modernization of teacher training in higher education pedagogy in general and in the context of global education as well.
3. We propose to rethink and strengthen the conditions for personalization in teacher training, both in teacher training in general and in the context of global education, in order to achieve the targeted learning outcomes.
4. It would be important to put more emphasis on practice oriented education in teacher training and to promote diversity of field experience. From the perspective of global education, there is a particular need for teacher trainers to be more involved in the widest possible variety of learning environments, both inside and outside the classroom, and to learn methodologies that are well suited to these contexts.
5. A targeted development of training infrastructure and allocation of financial resources to the activities that could be implemented in teacher training may be necessary.
6. It is important to keep abreast of international and national good practices in global education, and to adapt some of these good practices to teacher training.
7. In addition to the quality of expertise of teachers and researchers, which is demonstrated by their academic performance, we also consider it worthwhile to include teacher openness as a qualitative factor in performance assessments.

8. Raising awareness on global education across various layers of society could also help to strengthen the extent of awareness in teacher training. We therefore consider it important to maintain and extend the scope of awareness-raising, dissemination and good practices in both formal and informal context.
9. We propose to further develop cooperation and partnership networks in the field of global education, both at national and international levels.

The above proposals – based on the analysis of the causal diagrams that resulted from the participatory systems mapping facilitated by student researchers –, are in many respects in line with expert suggestions developed in different forms earlier. In particular, the proposals of the „Pedagogy of Sustainability“ session of the scientific conference „Sustainability in Higher Education,“ held in autumn 2019, show clear elements of similarity to the proposals formulated by the participants of our groups. In both contexts, for example, arises a strong need to develop training programs and curricula, to integrate sustainability and global education content and competencies into modules and subjects, to extend school-based practices for longer periods of training, to expand learning situations that provide field experience. The assessment and accessibility of good practice in learning in natural environment, and the systematic introduction of appropriate pedagogical methods, experiential, interactive and cooperative learning situations in teacher training were also emphasized.<sup>4</sup> The lessons learned from the diagrams produced by the groups also show parallels with other documents. Among the factors in the causal diagrams, there are several that are also included in the government strategy for higher education in Hungary. On the other hand, UNESCO’s guide to global responsibility education<sup>5</sup> also proposes pedagogical principles and methodological approaches, similar to those formulated by the groups during the participatory systems mapping.

It is conceivable that comprehensive analyses involving the interpretation of several similar diagrams, complemented by aspects of previous analyses and sets of proposals, could bring us closer to identifying implicit ideas about the predictability and stability of the way systems operate, and to revealing the potential factors through which the direction of the processes represented in the system can be changed, thereby altering the principles of operation of the system or a subsystem, in this case, in relation to the mainstreaming of global education in teacher training.

<sup>4</sup> András LÁNYI, Péter KAJNER (eds. 2019): A fenntarthatóság témaköre a felsőoktatásban [Sustainability in higher education], Budapest: Hungarian National Committee for UNESCO, [https://unesco.hu/data/A\\_fenntarthatosag\\_temakore\\_a\\_felsooktatásban1\\_1\\_.pdf](https://unesco.hu/data/A_fenntarthatosag_temakore_a_felsooktatásban1_1_.pdf) [16.02.2022]

<sup>5</sup> UNESCO (2015): Global Citizenship Education. Topics and learning objectives. UNESCO, [https://en.unesco.org/sites/default/files/gcedtopicsandlearningobjectives\\_01.pdf](https://en.unesco.org/sites/default/files/gcedtopicsandlearningobjectives_01.pdf) [16.02.2022]

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