

# **PERCEPTIONS OF GLOBAL TOPICS AMONG STUDENTS OF ECONOMICS AND ENVIRONMENTAL STUDY PROGRAMS IN SLOVAKIA**

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## **Abstract**

The aim of the survey was to find out if there is a difference in the perception of relevance of the global issues to their respective study fields between students of economic and ecological study fields at four Slovak universities and if there is such difference among the students of the four faculties. We used an on-line questionnaire developed in the project Ethical Internationalism in Higher Education Research Project (<http://eihe.blogspot.sk/>). The responses were analysed in the program Statistika 12. We found out that there is a difference in the perception of global topics between the students of Business and Ecology. The results will be used to innovate the study programs at the respective faculties and similar faculties.

**Key words:** *global education, global problems, universities, economics study program, environmental study program, Slovakia*

## **INTRODUCTION**

Nowadays, in the context of globalisation, the differences between lives in the different parts of the world have been more and more eliminated. That means that the lifestyles within different regions of the world have become more similar than ever before. At the same time, the countries are more interdependent. Contrary to the growing closeness of the regions, the era we are living could be called the era of paradoxes. On one hand globalisation is pushed by transnational corporations, doing their business all over the world, offering people to live the same consumerism way of life in quite different countries, with different conditions and possibilities. On the other hand, the differences between developed and developing countries are persisting, making inequality within countries and among countries a continuous problem of the present society. At the same time, it points that current globalisation endangers a sustainability of the world. Today's international system has to ensure a sustainable development among countries and also inside the countries. Each person has to understand his or her own part of responsibility toward the development of the Earth, and understand the fact that he or she does not belong only to some particular nation, but also to a big global society. [Mravcová 2017]

Issues like increasing population in the developing countries, in parallel with ageing population in the developed countries, persisting poverty, environmental issues, climate change, robotization and automatization, need of renewable sources of energies, all those are challenges which need the reaction of the global community, as it is not enough to react individually on the state level.

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The international community pays an increasing attention to these issues. The examples are clear, as e.g. the Agenda 2030 – Sustainable development goals of the UN which have been in place since 2015. An example for the European continent is the work of the European Environment Agency (EEA), which is regularly assessing global development from the social, environmental, economic, technical, but also political perspective. In its report from 2015, they formulated 11 areas of global megatrends: diverging global population trends; more urban world; changing disease burdens and risks of pandemics; accelerating technological change; the future of economic growth; increasingly multipolar world; intensified global competition for resources; growing pressures on ecosystems; increasingly severe consequences of climate change; increasing environmental pollution; diversifying approaches to governance. Because of these megatrends, Europe's ecological and societal resilience will be significantly affected in coming decades, but at the same time Europe itself contributes to environmental pressures in other parts of the world. [EEA 2015: 4-5]

Due to the character of current challenges and mentioned examples of activities on the level of international organizations, it is clear that the solutions depend on cooperation on the interdisciplinary basis, as none of the scientific disciplines is able to solve them individually.

## **1. GLOBAL EDUCATION**

The situation described above creates a big challenge for the education systems on all levels and everywhere. It is not possible any more to teach just in a manner of imparting definitions and looking at the potential problems ignoring the global context. The role and the need of the so called “global education” is increasing, especially in the region of just recently developed countries (e.g. former transitional economies), where Slovakia could serve as a nice example. However, it is not possible to cover the problem in the broad context of all important aspects just in one paper. That is why the focus of this paper is on the tertiary education in Slovakia, analysing the importance of global education for economic and environmental study programmes.

Global education is not actually a modern term as it may seem in our region, where it was not used before. Its origin goes back for more than 50 years, when in Northern America some authors started to argue that systematic view was needed in order to understand global interdependence and that this should also be reflected in the curriculum. The UK authors Pike and Selby in 1988 highlighted what they called “*the four dimensions of globality*’. These are: (i) *the spatial dimension*; (ii) *the temporal dimension*; (iii) *the issues dimension*; (iv) *the human potential dimension*”. During the 1990s a number of global educators have specifically explored the nature of the temporal dimension of how global issues affect and are affected by interrelationships between past, present and future. “*The broad purpose of such work is to help young people think more critically and creatively about the future, especially in relation to creating more just and sustainable futures*”. [Hicks 2003]

There does not exist just one acceptable definition of the global education. In general, different definitions point out different aspects of the complexity which the

term global education covers. For the modern understanding of the global education the definition of GLEN (Global Education Network) seems to be relevant, saying that *“global education is a creative approach of bringing about change in our society. It is an active learning process based on the universal values of tolerance, solidarity, equality, justice, inclusion, co-operation and non-violence.”* Based on this definition the global education starts with the awareness of *“global challenges such as poverty or the inequalities caused by the uneven distribution of resources, environmental degradation, violent conflicts or human rights, thus creating deeper understanding of the complexity of the underlying causes. It aims to change people’s attitudes by them reflecting on their own roles in the world.”* The result of global education should be empowering people to become active and responsible global citizens. [GLEN 2009: 3] Maastricht Global Education Declaration [2002: 66] defines global education as *“education that opens people’s eyes and minds to the realities of the world, and awakens them to bring about a world of greater justice, equity and human rights for all. Global Education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimensions of Education for Citizenship.”* Slovak National Strategy on Global Education uses the term global education *“as an overarching principle. It includes development education (education concerning developing countries and poverty in the world), environmental education, multicultural education, peace studies, and education relating to the development and maintenance of human rights in the global context.”* [Slovak National Strategy, 2012: 1]

Professor Andreotti, who has done extensive research in the area of global education, points out the challenge of global education, as *“whether and how to address the economic and cultural roots of the inequalities in power and wealth/labour distribution in a global complex and uncertain system. In order to understand global issues, a complex web of cultural and material local/global processes and contexts needs to be examined and unpacked.”* Andreotti in her work quotes the question of Pogge, from 2002: *“How can severe poverty of half of humankind continue despite enormous economic and technological progress and despite the enlightened moral norms and values of our heavily dominant Western civilisation?”* [Andreotti 2006: 41-42] This question moves us back, to first of all understand the meaning of the word „globalisation”. There exist quite different definitions of this term. UNESCO on their webpage has several definitions, one of them is: *“Globalisation is a multi-dimensional process characterised by the acceptance of a set of economic rules for the entire world designed to maximise profits and productivity by universalising markets and production, and to obtain the support of the state with a view to making the national economy more productive and competitive.”* [UNESCO 2017] According to the World Bank, globalization is simply *“the growing integration of economies and societies around the world.”* [The World Bank 2001] More controversial definition is offered by Dobson, who defines globalisation as *“an asymmetrical process in which not only its fruits are divided up unequally, but also in which the very possibility of ‘being global’ is unbalanced”.* [Dobson 2005: 262] In the introduction we mentioned that we live the era of paradoxes. On the other hand, this brings us to the division of the

world to the part where this is true and where it would not be true maybe even in the long-run and differences between countries will persist. So, although the world is global, and countries are interdependent, their roles in the process of globalisation are totally different.

## **2. SKILLS FOR 21<sup>ST</sup> CENTURY – THE CASE OF SLOVAKIA**

The 21st century is quite different from the 20th with regard to the skills people need for work, citizenship, and self-actualization. Development of information and communication technologies (ICT) has been faster in the last 50 years than ever before. The challenges of the present era mentioned above put emphasis on the different abilities from young people. In fact, skills students need nowadays are not new. Critical thinking and problem solving, for example, have been components of human progress throughout history. Information literacy and global awareness are not new either, at least not among the elites in different societies. [Rotherharm 2010: 17] However, the need of these skills today is not limited to the educated few but on a mass scale.

While thinking about the skills of the present and future generations, the system of higher education in each country seems to play an increasing role. The system of education needs to reflect the changing world in which it plays a crucial role. When considering the processes in the human resource development, it seems obvious that classical education methods are not suitable to meet all the new requirements. Therefore, substantial changes are needed towards more accessible, open, flexible and professional education which can meet the special needs of learning and internationalization of especially tertiary education. Individuals with their obtained education, skills and professional experience (representing the human capital of the society) change the course of the country in response to the challenges of the 21st century. This emphasizes the increasing importance of the education system for the development of the country and its society. [Mekvabidze 2015: 51-52]

In the Slovak Republic, the university studies are narrowly specialised, offered by 20 public universities or tertiary education institutions. Chosen topics of the global education appear within their curriculum on a different scale. However, the problems of the current globalised world are complex and their solutions need cooperation of experts from different fields (e.g. economists, sociologists, ecologists etc.). Consequently, there is a need for more interdisciplinary cooperation in different forms within the higher education (e.g. discussions, innovation of curriculums with the global topics, solving problems in interdisciplinary teams). This poses a challenge for both the global education theorists and practitioners. As prof. Andreotti says in her paper. *„To meet the challenges of the 21st century in terms of equipping learners to listen to one another and work together to create new possibilities for an equitable and sustainable future, development education will need to challenge its boundaries, become self-reflexive, diversify its constituency, raise its professional profile, operate inter-disciplinarily, focus on the interface between development and culture, articulate the connections between theories and practices and, in accountable ways, face the challenge of walking the minefields”*. [Andreotti – Souza 2008] It means that it is mostly up to the teachers to come to

grips with the new demands and find or create ways how to lead students to look at the problems 'Through Other Eyes'.

The Slovak Republic is one of the signatories of the Agenda 2030, thus signalling the obligation to meet the Sustainable Development Goals. In the Manifesto of the Government of the Slovak Republic for years 2016 -2020, the Government declared its aim to strengthen the institutional frameworks for national implementation of the Agenda 2030. Within the institutional structure, important role is assigned especially to the Ministry of Foreign and European Affairs with the Slovak Agency for International Development Co-operation, as well as the Ministry of Education, Science, Research and Sport. Since Slovakia became a donor country, development education has been integral part of the Slovak ODA. Pursuing global education is one of the crucial steps in fulfilling international obligations. That is why the three mentioned institutions have prepared the National Strategy for Global Education for 2012 – 2016. A new strategy is being discussed currently. [GENE 2017: 51]

National Strategy for Global Education defines „global education” as an education emphasizing global context in learning, leading to increased awareness about global issues on individual level, developing individual critical thinking and deeper understanding of global problems. The Strategy states that global education within tertiary education institutions has been from 2005 initiated mostly by the NGO sector and in some cases by institutions themselves. At present the courses dealing with global education issues are taught as compulsory and optional courses at several universities in Slovakia. [Slovak National Strategy 2012]

There are seven ongoing projects contracted earlier in 2015 dealing with global education topics focusing on universities, secondary schools and increasing public awareness. “*The most important outputs from these projects are:*

- *publications for inclusion of global education into educational system;*
- *developing the new lectures/courses at university level or enrichment of already well-established lectures on the dimension of global education;*
- *new lecturers trained in global education;*
- *capacity building and multiplication effect;*
- *increased awareness of global education among students;*
- *active effort of the organisations involved in global education projects in obtaining accreditation for courses dealing with global education and development co-operation.”* [GENE 2017: 70-71]

As the goals of the National Strategy for Global Education oriented towards universities are defined as innovation of the teaching process in connection with global education and implementation of the new topics, the starting point should be the data collection about the current state of teaching (content and methods of teaching), knowledge, skills and attitudes of teachers and students at the Slovak universities.

We still lack a thorough analysis of the current state of global education in Slovakia and the relevant survey of university students regarding GE issues. So far, there is only the study of Jančovič and Penfold (2017) that analyses needs of Slovak university students of pedagogics, future teachers, regarding global education topics. The students (n = 127) of the universities involved (Presov University, Matej Bel University in Banska Bystrica, Trnava University, Comenius University in Bratislava and the P.J. Safarik University in Kosice) filled in an online or printed

questionnaire in order to find out their understanding and needs in the area of global education. The study included also other target groups – teachers at the involved universities and the graduates – teachers at work.

There have been several projects implemented for the higher education teachers in order to connect the teaching with the needs of practice, current trends and to respond to the objectives of the National strategy of global education 2012 – 2016, such as:

- Global education for the universities of 21st century (2015 – 2016)
- Academics actively and practically (2016 – 2018)
- University network of global education (2017 – 2019).

These projects have been implemented in the cooperation of Technical University in Zvolen and the renowned Slovak non-governmental organisation – The Centre for environmental and ethical education Zivica with the support of SlovakAid. At first, the cooperation focused on gathering the state-of-the art knowledge of global education and its teaching methods (such as the workshop for university teachers with Vanessa Andreotti from the British Columbia University, Canada Research Chair in Race, Inequalities and Global Change). However, in order to implement the topics of global education at universities it is also necessary to strengthen the skills of university teachers, so there have been also workshops on critical thinking, conflict resolution, facilitation, non-aggressive communication and similar). Currently there is work being done on networking the university teachers that innovate their courses in various fields both in contents and teaching methods so that they incorporate the issues and methods of GE. So far, six out of 20 public universities in Slovakia have been involved in the project, and teachers come from 11 faculties in different fields (economics, ecology, law, social work, mass media communication, pedagogics and teacher training etc.). The teachers study together, share their experience through webinars and work together on creating new study programs aimed at global education using knowledge and experience from various fields.

In order to assess the impact of the innovated contents, forms and methods of teaching the global issues at universities, it is necessary to establish the current state of students' perception of these topics and their relevance to their studies. We approached students of four Slovak universities studying economics and ecology to see how relevant they find the global issues to their studies and how they differ in their assessment of these topics based on their study fields.

We verified these hypotheses:

H01: There is no difference in the perceived relevance of the global issues to their studies between Business and Ecology students.

The alternative hypothesis was:

HA1: There is a difference in the perceived relevance of the global issues to their studies between Business and Ecology students.

H02: There is no difference in the perceived relevance of the global issues to their studies among the students of different faculties in Slovakia.

The alternative hypothesis was:

HA1: There is a difference in the perceived relevance of the global issues to their studies among the students of different faculties in Slovakia.

### 3. METHODOLOGY

Andreotti et al. (<http://eihe.blogspot.sk/>) studied social roles of current higher education, contributions and risks of education internationalisation, as well as relevance of global education topics, political and social problems to the study programs at 22 universities in different countries worldwide (Ethical Internacionalism in Higher Education Research Project - EIHE). For the collection of our data at Slovak universities we used the questionnaire from this survey. Our survey was run in an online form in 2017. The target group comprised students of Bachelor degree study at four faculties, out of which two faculties are in Business/Economics field of study and two faculties are in Ecology study field (50 students at each faculty, 200 questionnaires in total, Table 1). In this paper we evaluate the students' responses from one part of the EIHE questionnaire dealing with global education, in particular global topics and their relevance to the students' field of study (e. g. *economic growth, trade barriers, global mobility, technological advancements, poverty, climate change, over-consumption, terrorism, racism, etc.*).

**Table 1: Faculties involved in the survey**

University	Faculty	Abbreviation
Comenius University in Bratislava	Faculty of Management	<b>BUSBA</b>
Matej Bel University in Banská Bystrica	Faculty of Economics	<b>BUSBB</b>
Technical University in Zvolen	Faculty of Ecology and Environmental Sciences	<b>ECOZV</b>
Slovak University of Agriculture in Nitra	Faculty of Horticulture and Landscape Engineering	<b>ECONR</b>

Students expressed the level of their agreement/disagreement with a concrete statement on a 6-degree scale:

*strongly disagree, disagree, unsure/no opinion, agree, strongly agree.*

At the statistical evaluation we merged the responses unsure and no opinion and we used this scale:

- 1 strongly disagree
- 2 disagree
- 3 unsure/no opinion
- 4 agree
- 5 strongly disagree.

We analysed the data collected through the online questionnaire in the program STATISTICA 12. We tested the differences:

- a) Between the responses of students of Economics (BUS) and students of Ecology (ECO) using the Mann-Whitney U test (we compared two groups of



students: Business group consisting of BUSBA and BUSBB students, n = 100;  
Ecology group comprising ECOZV and ECONR, n = 100)

- b) Between the responses of students of the different Faculties (BUSBA n = 50, BUSBB n = 50, ECOZV, n = 50, ECONR n = 50) using Kruskal – Wallis ANOVA test. After finding the statistically significant difference we subjected the data to non-parametric post-hoc comparisons to see the differences in responses among students of different faculties.

#### 4. RESULTS

We have processed the responses of students of Economics and Ecology at four different Slovak universities regarding the *global themes that are relevant to their field of study*.

##### **Comparison of groups: students of economics and ecology**

Most students of both Economics and Ecology responded with *agree or strongly agree* to the relevance of the following global topics to their study field (over 50% of the students of the respective group agreed):

- a) without a statistically significant difference between the BUS and ECO groups (more in the Table 2):

- *technological advancements*
- *access to education*
- *waste of resources*
- *corporate greed*

- b) with statistically significant differences between the BUS and ECO groups, with a higher proportion of positive responses of Business students in comparison with the responses of Ecology students. However, these differences are the result of a varying level of agreement (a varying ratio of responses agree, strongly agree and other responses, see more in the Tab. 3):

- *economic growth*
- *international cooperation*
- *international solidarity*
- *global mobility*
- *over-consumption*.

In the following group of statements we have established statistically significant differences between the BUS and ECO groups that we consider as relevant:

- a) with a higher proportion of agree answers of BUS students (over 50 % responded with agree or strongly agree to these statements) in comparison with the ECO students' responses (most responses were agree or strongly agree, but they were below 50 %):

- *trade barriers*
- *poverty*
- *human rights*
- *government overspending*.

- b) with a higher proportion of agree responses of ECO students:  
 - *climate change (agree or strongly agree: 80 % ECO, 47 % BUS).*

**Table 2: Results of the Mann\_Whiney U test**

Statement	U-value	U-value	p-value	significance
economic growth	2420.500	<b>6.301500</b>	<b>0.000000</b>	***
trade barriers	2442.000	<b>6.248967</b>	<b>0.000000</b>	***
global mobility	3686.000	<b>3.209391</b>	<b>0.001330</b>	**
technological advancements	4351.000	1.584538	0.113072	NA
access to education	4727.500	-0.664602	0.506306	NA
international cooperation	3640.000	<b>3.321787</b>	<b>0.000895</b>	***
international solidarity	3936.500	<b>2.597322</b>	<b>0.009396</b>	**
poverty	3850.000	<b>2.808676</b>	<b>0.004975</b>	**
climate change	3107.000	<b>-4.62411</b>	<b>0.000004</b>	***
human rights	3400.500	<b>3.906979</b>	<b>0.000093</b>	***
discrimination	3256.000	<b>4.260049</b>	<b>0.000020</b>	***
government overspending	2761.000	<b>5.469526</b>	<b>0.000000</b>	***
loss of jobs	2969.000	<b>4.961301</b>	<b>0.000001</b>	***
gap between rich and poor	3336.000	<b>4.064577</b>	<b>0.000048</b>	***
unequal relations of power	2986.500	<b>4.918542</b>	<b>0.000001</b>	***
over- consumption	4132.000	<b>2.119640</b>	<b>0.034037</b>	*
corporate greed	4326.000	1.645622	0.099843	NA
waste of resources	4635.000	0.890615	0.373136	NA
terrorism	4489.500	1.246128	0.212718	NA
disease epidemics	4841.000	0.387277	0.698551	NA
over- surveillance	4758.000	-0.590078	0.555138	NA
distribution of wealth	2824.000	<b>5.315593</b>	<b>0.000000</b>	***
racism	4284.000	1.748245	0.080423	NA

n = non-significant, \*p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Table 3: The most numerous responses by student groups (% responses)**

Statement	BUS %, response	ECO %, response
<b>economic growth</b>	95 yes	58 yes
<b>trade barriers</b>	88 yes	44 yes
<b>global mobility</b>	78 yes	57 yes
technological advancements	80 yes	76 yes
access to education	72 yes	81 yes
international cooperation	94 yes	83 yes
international solidarity	78 yes	64 yes
<b>poverty</b>	59 yes	37 yes
<b>climate change</b>	47 yes	80 yes
<b>human rights</b>	77 yes	49 yes
<b>discrimination</b>	67 yes	<b>39 NO</b>
<b>government overspending</b>	86 yes	41 yes
<b>loss of jobs</b>	72 yes	<b>39 NO</b>
<b>gap between rich and poor</b>	64 yes	<b>39 NO</b>
<b>unequal relations of power</b>	66 yes	<b>39 NO</b>
<b>over- consumption</b>	76 yes	58 yes
<b>corporate greed</b>	65 yes	53 yes
waste of resources	85 yes	77 yes
terrorism	41 yes	<b>45 NO</b>
disease epidemics	<b>42 NO</b>	<b>45 NO</b>
over- surveillance	<b>42 NO</b>	<b>38 NO</b>
<b>distribution of wealth</b>	70 yes	<b>40 NO</b>
racism	49 yes	<b>44 NO</b>

Pozn.: yes = odpovede agree, strongly agree, NO = disagree, strongly disagree

Opposing responses with statistically significant differences among Business students (over 50% responded with agree or disagree) and ECO students (most responses of disagree, strongly agree or no opinion/unsure) were found with the statements:

- *discrimination*
- *loss of jobs*
- *gap between rich and poor*
- *unequal relations of power.*

The following statements got predominantly responses disagree, strongly disagree or no opinion/unsure without statistically significant difference:

- *disease epidemics*
- *over- surveillance*
- *terrorism* (41 % BUS agree, 45 % ECO disagree)
- *racism* (49 % BUS agree, 44 % ECO disagree).

Based on the test results above we reject the hypothesis H<sub>01</sub>:

There is no difference in the perception of the relevance of global issues in relation to their study field between the Business and Ecology students.

We accept/confirm the alternative hypothesis:

H<sub>A1</sub>: There is a difference in the perception of the relevance of global issues in relation to their study fields between the Business and Ecology students.

### Comparison of the faculties: business and ecology students

In the previous part we have described the differences found between the responses of BUS and ECO students. In the following part we are concentrating on comparing the students' answers by their faculties (BUSBA, BUSBB, ECOZV, ECONR). The results corresponding to the results of the previous part are not repeated, we rather go into more detail when commenting new findings.

The only statement with no statistically significant difference among students of all faculties was waste of resources, with which all students either agreed or strongly agreed (over 50%). At other statements we have found statistically significant differences (Table 4).

**Table 4: Results of the Kruskal – Wallis ANOVA test - H (3,200)**

Statement	H-value	p-value	Significance
economic growth	52,7	0,00001	***
trade barriers	45,38	0,00001	***
global mobility	15,84	0,0012	**
technological advancements	16,81	0,0008	***
access to education	8,03	0,045	*
international cooperation	18,8	0,0003	***
international solidarity	11,13	0,01	*
poverty	13,94	0,003	**
climate change	63,95	0,00001	***
human rights	21,67	0,0001	***
discrimination	20,86	0,0001	***
government overspending	32,63	0,00001	***
loss of jobs	31,74	0,00001	***
gap between rich and poor	22,39	0,0001	***
unequal relations of power	30,03	0,00001	***
over- consumption	14,82	0,002	**
corporate greed	11,55	0,009	**
waste of resources	3,39	0,33	NA
terrorism	19,33	0,0002	***
disease epidemics	14,36	0,003	**
over- surveillance	12,43	0,006	**
distribution of wealth	42,0	0,00001	***
racism	15,36	0,0015	**

Statements with which all the groups mostly agree or strongly agree, except one group of students (Tab. 5)

- *economic growth*
- *human rights*

- *corporate greed*

**Table 5: Statements with the majority of agree answers except one group of students**

Statement/student group	% agree or strongly agree			
	BUSBA	BUSBB	ECOZV	ECONR
economic growth	94	96	<b>46</b>	70
human rights	72	82	60	<b>38</b>
corporate greed	56	74	64	<b>42</b>

Statements that all groups but one mostly agreed with (Table 6):

- *poverty* (statistically significant difference between: BUSBB 68 % agreement and ECONR 38 % disagreement)
- *climate change* (BUSBA 60 % disagreement, all other agreement).

Statements to which only one group of students responded to with a definite response (Table 6):

a) BUSBB agreement:

- *disease epidemics*
- *racism*

b) ECONR disagreement:

- *over-surveillance*.

Topic of *terrorism* elicited definite and opposing responses by students of BUSBB (agreement) and ECONR students (disagreement).

**Table 6: Responses with statistically significant differences among the groups of students by faculties**

Statement/student group	% of responses			
	BUS BA	BUS BB	ECO ZV	ECO NR
poverty	50 yes	<b>68 yes</b>	46 yes	<b>38 NO</b>
climate change	<b>60 NO</b>	78 yes	76 yes	84 yes
terrorism	50 NO	<b>56 yes</b>	42 yes	<b>58 NO</b>
disease epidemics	58 NO	<b>52 yes</b>	40 NO	50 NO
over-surveillance	50 NO	36 unsure/no opinion	44 yes	<b>54 NO</b>
distribution of wealth	64 yes	76 yes	<b>38 unsure/no opinion</b>	<b>52 NO</b>
racism	42 NO	<b>60 yes</b>	<b>38 yes</b> <b>38 NO</b>	<b>50 NO</b>

Statements to which the responses of students differ even though they are from the same study field but from different faculties:

- a) BUSBA and BUS BB: *climate change, disease epidemics, terrorism, racism*
- b) ECOZV and ECONR: *over-surveillance, distribution of wealth*

Based on the results we reject the zero hypothesis:

H<sub>02</sub>: There is no difference in the perception of the relevance of global issues among the students of different faculties.

We accept the alternative hypothesis:

H<sub>A1</sub>: There is a difference between the perception of the relevance of global issues among the students of different faculties.

## 5. DISCUSSION

The authors of the paper work at the four faculties students of which were the members of the focus group. The results above will serve as a basis for a discussion leading to the innovation of courses at the respective faculties. At the same time these results can contribute to reflecting the teachings of global issues at other faculties and universities in other fields of study.

Some global topics are perceived as relevant to their studies by more Business students (e.g. *trade barriers* – 80% of BUS and 44% of ECO), other by more Ecology students (e.g. *climate change* – 80% of ECO students and only 47% of BUS students), which is due to their study specialization. However, in the world today it is not quite possible to see the global problems only from one perspective and specialization. For example Åč [2014] draws the attention to the effects of climate change on developed countries, conflicts, migration, spreading of diseases and other that have serious economic consequences. Similarly, *over-consumption* (76% of BUS and 58% ECO agree) results not only in depletion of resources but also a sharp increase in the amount of waste, which creates environmental costs [Huppel et al. 2006, Mózner, 2014, Pikoń 2015].

The problem of *poverty* (59% of BUS and 37% of ECO agree) is not only a sociological and economic problem but it may also cause serious environmental problems [Duraiappah 1998, Baland et al. 2010, Deodatis et al. 2014], as well as a *gap between rich and poor* (64 % BUS agree, 39 % ECO disagree) [World Bank 2017, Davies et al. 2017].

There are topics that both groups of students perceive as relevant – e. g. *economic growth*. However, while the economists consider economic growth largely as inevitable and positive the ecologists and environmentalists would criticize the concept of continuous growth as unsustainable [Everett et al. 2010, Johanisová, Fraňková 2012, Drews et al. 2018].

Some authors notice the disagreement between ecology/environmentalism and economics due to their differing goals [Klinec, 1998]. However, as noted by Johanisová [2014], as early as in the 1980-s the ecologists and economists in Sweden started to work on a new study field – environmental economics. We consider the integration of economic and ecological/environmental aspects of the development as crucial at studying these fields at universities as the current global problems require both environmentally and economically sound solutions.

As for the more general and more civic global topics, such as racism, human rights, or discrimination, we find that students do not see them as very relevant to their study fields. Eco students produced a wide scale of responses to this topic and their perception of the relevance of this topic to their studies is thus very ambiguous (ECOZV 38 % disagree, 24 % unsure/no opinion, 38 % agree. ECO NR 50 % disagree, 30 % unsure/no opinion, 20 % agree). BUS students see this topic depending on which faculty they come from – BUS BB 60 % agree, 16 % unsure/no opinion, 24 % disagree) and BUS BA 38 % agree, 18 % unsure/no opinion, 44 % disagree.

However, racism may have serious economic consequences in addition to its social, political, psychological and moral ones [McLoyd, 1990, Larson et al., 2007, Paradies et al. 2015, Elias, Paradies 2015] and it is also a current concern in many countries [Eurobarometer 2015]. The topic of *human rights* elicited an ambiguous response from ECONR students (38 % agree, 30 % unsure/no opinion, 32 % disagree). University study in Slovakia today is typical by narrow specialization and in case the social or humanistic issues are not what the students study, they become marginal in the curriculum or they are not dealt with at all. We could argue that students dealt with these topics in the lower levels of their schooling (in the subjects like Ethics, Civic education, etc.) so it is not necessary to deal with them again at Universities, but we are aware of the fact that teaching of these subjects at lower levels faces many problems (formalism, frontal teaching, etc.) so it does not fulfil its education aims [Valica et al., 2014].

The implementation of global education into the curricula of different higher education faculties is a serious task. As found by Jančovič and Penfold (2017), over two thirds of student respondents from pedagogical faculties have heard of global education and agree with the statement „*Global education asks questions and provides different points of view of global challenges.*“ Most future teachers, however, have not learned or been trained how to teach about globalization, global challenges or environment considering global aspects. About one half of respondents received some training aimed at multiculturalism and human rights. Most students that lacked the training in global education thought that it would be useful to incorporate global topics into the curriculum of future teachers. In general, the prevailing opinion was that it is important for future teachers to receive training in the topics of globalization, global challenges, intercultural education, human rights or environment and in developing the attitudes of global responsibility, solidarity, citizenship, social justice and critical thinking.

Based on our results from students' responses we propose adding global topics to the study content at each of the faculties and innovate the teaching of these topics. Firstly, it is the topics at which we found statistically significant differences in the responses of economics and ecology students or their responses were on a wide scale (not clear opinions):

- a) topics that BUS and ECO students may view from opposing perspectives but in practice *they have serious economic and ecological consequences (they are closely related)*:
  - *economic growth*
  - *poverty*
  - *climate change*

- *gap between the rich and poor*
  - *over-consumption*
- b) topics that may not seem as relevant to the particular study program but we consider them important in the value systems of all higher education students (and citizens):
- *human rights*
  - *discrimination*
  - *racism*
- c) topics that are connected with good functioning of democratic states, they are often dealt with on a national and international level and they should be reflected by students as active citizens
- *government overspending*
  - *over-surveillance*
  - *terrorism*
  - *distribution of wealth*

As our focus group in the study were students of Bc. degree we presume that it is likely that they change their perception of the relevance of global topics to their specialization in the course of their university studies provided their curriculum is innovated both in terms of content and teaching methods. We plan to repeat the survey after two years, at the end of their Master degree, aiming to find out whether:

- the perception of relevance of global topics at which there was a wide range of answers will become more clearly positive
- the students' perception of global topics will change and how
- the differences between BUS and ECO students will grow

The presented findings are a contribution to the mapping of the situation regarding the students' perception of global education topics at higher education fields of Economics and Ecology in Slovakia. There is a new project aimed at mapping the teaching of global education in Slovakia being implemented that will also include identification of the main barriers to its inclusion into the higher education and gathering good practice examples (Development of global education programs at higher education institutions, January 2018 – August 2019). This should support both the existing courses of global education and creating new courses and programs at higher education institutions.

## **CONCLUSION**

We approached students of four Slovak universities studying economics and ecology to see how relevant they find the global issues to their studies and how they differ in their assessment of these topics based on their study fields.

We accept/confirm these hypothesis:

There is a difference in the perception of the relevance of global issues in relation to their study fields between the Business and Ecology students. There is a difference between the perception of the relevance of global issues among the students of different faculties.

One of the main objectives of the university study is to prepare experts in specific fields using the results of the state-of-the-art research. At the same time, the



university graduates should master the skills of a constructive discussion, team work, innovativeness, among others. Many of the current social problems, including the global ones, require cooperation of experts in different fields, for example economists and environmentalists. We see the results of our survey as an insight into the perception of global topics by students of environmental studies and economics at selected Slovak universities. They will serve as a background material at discussions about the contents of teaching today and an impuls for the innovation of curricula at the respective faculties.

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