

The Opinion of Latvian and Norwegian Students about Education for Sustainable Development

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Abstract: Education for Sustainable Development (ESD) aims to enable everyone to acquire the values, competencies, skills and knowledge necessary to contribute to building a more sustainable society. Education for Sustainable Development should begin from the very early years of schooling and continue throughout life. The aim of the research was to understand the level of competence of Latvian and Norwegian pedagogical speciality students in the field of ESD and their attitude to the implementation of topics about sustainable development in the school's curriculum. The electronic survey of Latvian and Norwegian students about their opinion to education for sustainable development was carried out. Altogether 154 students were surveyed. The results of the research showed that more Norwegian students in comparison with Latvian students consider that they know what sustainable development is. Most Norwegian students as well as Latvian students agree that during school educational process they haven't studied topics of sustainable development or they have studied them very rarely. More Norwegian students in comparison with Latvian students agree that it is necessary to pay attention to the topics of sustainable development during the educational process. The majority of Norwegian students consider that it is necessary to begin to study topics connected with sustainable development during preschool education or during primary school education but the majority of Latvian students consider that it is necessary to begin to study topics of sustainable development during primary school education or during secondary school education. Norwegian students better understand the necessity of human behaviour in the context of sustainable development in comparison with Latvian students. The majority of Norwegian students as well as Latvian students consider that they partly act sustainable in their practical dealings. Many Latvian as well as Norwegian students understand the necessity of the sustainable development and they accept including topics of sustainable development in the school curriculum but they do not have a good understanding about sustainable development.

Keywords: sustainable development, Norwegian students, Latvian students, school education.

Introduction

The important task of education is to give students complex understanding about the main processes going in the world and society, and about sustainable development. All educational domains and levels, including primary and secondary science education, have been working to contribute to education enabling younger generations to become responsible citizens and promote sustainable development in our world (Eilks, 2015). Education for Sustainable Development (ESD) aims at encouraging changes required to promote sustainable development (Capelo, Santos, 2012).

Sustainable development is a central concern of today's politics across the world. Different political agendas have been developed to promote sustainability and make it a political goal worldwide (Burmeister, Eilks, 2013). If we seek for human well-being, social equality and reduction of environmental risks we need to create sustainable prosperity. We need a new vision of the economy and its relationship to the rest of the world that is better to the new conditions we face. Our material economy is embedded in society, which is embedded in our ecological life-support system, and that we cannot understand or manage our economy without understanding the whole, interconnected system. True development must be defined in terms of the sustainable well-being (Costanza, Alperovitz, 2013). In the last 200 years humanity has transitioned into new geologic era – termed Anthropocene – which is defined by an accelerating departure from the stable environment into a new, unknown state of the Earth. In order to maintain a global environment that is conducive for human development and well-being it is necessary to return to the long term stable global environment that nurtured human development (Steffen, Rockström, 2011). We have to understand better what really does contribute to sustainable human wellbeing and recognize the substantial contributions of natural and social capital, which are now the limiting factors to improving well-being in many countries. We have to be able to distinguish between real poverty, in terms of low quality of life, and low monetary income (Costanza, Alperovitz, 2013).

The important role of education for preparing students for work in the field of sustainable development have been approved by schools, higher education institutions, governments and United Nations (Grandins, Apine, 2010). ESD aims at enabling everyone to acquire the values, competencies, skills and knowledge necessary to contribute to building a more sustainable society. Biological knowledge and practice are intrinsically related to building a sustainable relationship between nature and human society (Diong, Mijung, 2012). However, sustainable development is a complex idea, based on environmental, economic and social dimensions. In line with sustainable development, education for sustainable development is an approach to teaching that combines cognitive and affective domains and aims to build empowerment abilities (Berglund, Gericke, 2014). In many countries it has long been upheld as an important tool for increasing understanding of, and dealing with, environmental problems. At the same time it is not clear, however, what role education can actually have in the making of a more sustainable future. Even though there are several potential ways for sustainable development to be involved in education, the concept raises many questions when transferred to the school context (Gyberg, Löfgren, 2016).

Whether we view sustainable development as one of our greatest challenges we need education for sustainable development in different levels. ESD should begin from the very early years of schooling and continue throughout life (Sa, Martins, 2012).

If one wants to change the society and education, one of the cornerstones to start with is the education and training of teachers and teacher educators. This requires a change both in education and in teacher education (Hofman, 2015). ESD means including key sustainable development issues into teaching and learning. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. In order to carry out these tasks it is necessary to know the knowledge and attitude of students to ESD.

The aim of the research was to understand the level of competence of Latvian and Norwegian pedagogical speciality students in the field of ESD and their attitude to the implementation of topics about sustainable development in the school's curriculum.

Methodology

The electronic survey of Latvian and Norwegian students about their opinion to education for sustainable development was carried out. Norwegian students were surveyed in the Lillehammer University College but Latvian students were surveyed in the Riga Teacher Training and Educational Management Academy during 2015-16 academic year. Norwegian as well as Latvian students were studying pedagogy. Altogether 154 students were surveyed (54 Norwegian students and 100 of Latvian students). The survey was worked out in order to clarify the understanding of students about sustainable development, to find out, if students have studied topics about sustainable development during school's educational process, to clarify the opinion of students, is it necessary to pay attention to the topics of sustainable development during educational process and what topics of sustainable development must be included in school's educational programme, to clarify the opinion of students, when is it necessary to begin to study topics connected with sustainable development, have students thought about human behaviour in the context of sustainable development and the opinion of students, do they act sustainable in their practical dealings.

SPSS statistical data processing program was used for statistical analysis. Mann-Whitney U test was used for data analysis.

The research questions were: are Norwegian and Latvian students competent in the field of education for sustainable development and what are the student attitudes to the including of topics about sustainable development in the school's educational programme.

Results and discussion

The results of the questionnaire showed that more Norwegian students consider that they have good understanding about sustainable development in comparison with Latvian students. Forty-eight percent of surveyed Norwegian students consider that they know what is sustainable development (Figure 1). Only 18 % of Latvian students exactly know what is sustainable development but 46 % of students partly know what sustainable development is. Fifteen percent of Norwegian students and 18 % of

Latvian students don't know what sustainable development is. Differences between Latvian and Norwegian student answers are on tendency level ($p=0,065$).

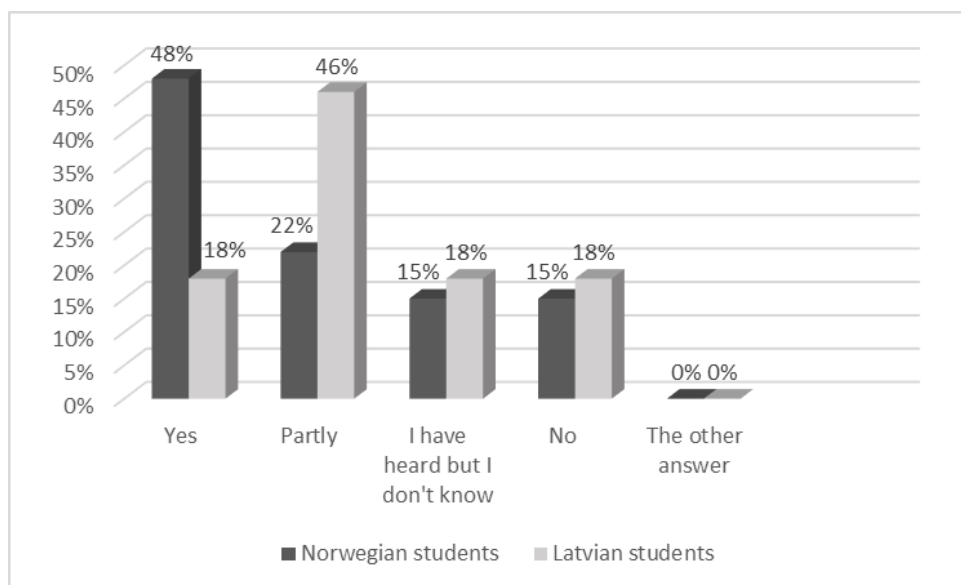


Figure 1. The understanding of Norwegian and Latvian students about sustainable development (in % from the number of respondents).

The majority of Norwegian students as well as Latvian students agree that during school educational process they haven't studied topics of sustainable development or they have studied them very rarely (Figure 2). Even more Norwegian students (59 %) in comparison with Latvian students (34 %) answered that they have not studied topics connected with sustainable development during school educational process. A part of students answered that they have sometimes studied topics about sustainable development during school educational process (22 % of Norwegian students and 26 % of Latvian students). At the same time 8 % of Norwegian students and 14 % of Latvian students claim that they have studied topics about sustainable development during school educational process. The answers of students give a notion that students do not have a clear understanding, which are the topics of sustainable development.

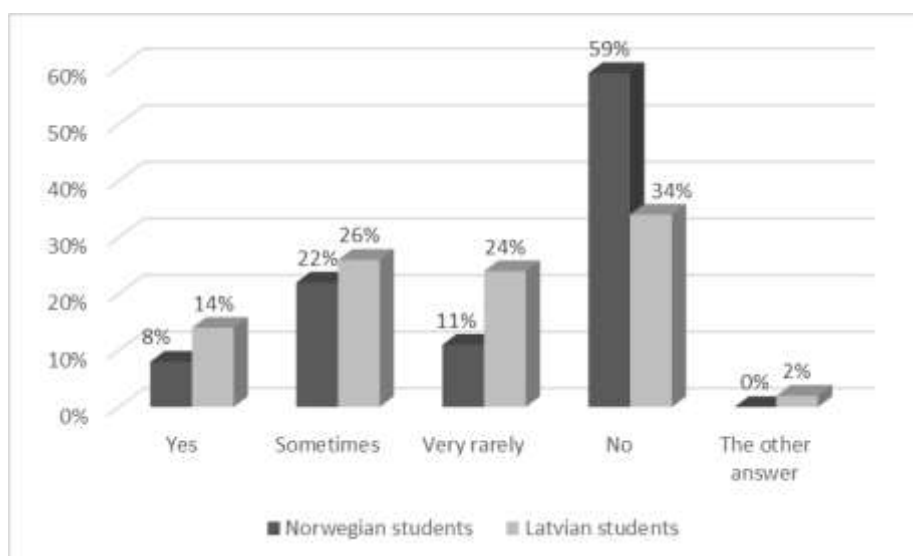


Figure 2. The answers of Latvian and Norwegian students if they have studied topics about sustainable development during school training process (in % from the number of respondents).

More Norwegian students (56 %) in comparison with Latvian students (28 %) agree that it is necessary to pay attention to the topics of sustainable development during educational process (Figure 3). The majority of Latvian students (56 %) rather agree that it is necessary to pay attention to the topics of

sustainable development during educational process. A part of students has no opinion about this question (18 % of surveyed Norwegian students and 14 % of Latvian students), but there are no students in both groups who don't agree that it is necessary to pay attention to the topics of sustainable development during educational process. Differences between Latvian and Norwegian student answers are on tendency level ($p=0,096$).

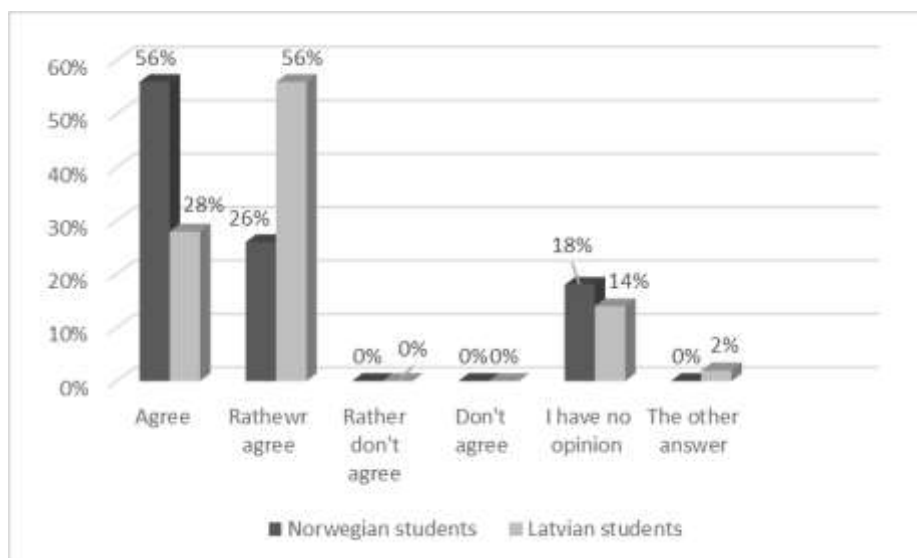


Figure 3. The opinion of Norwegian and Latvian students about problem: is it necessary to pay attention to the topics of sustainable development during educational process (in % from the number of respondents).

Most Norwegian as well as Latvian students agree or rather agree that it is necessary to include different topics of sustainable development in the school's educational programme (Table 1). Fifty-six percent of Norwegian students and 64 % of Latvian students consider that it is necessary to include topics about pollution. Fifty-nine percent of Norwegian students and 46 % of Latvian students assist the opinion that topics about natural resources must be included in the school's educational programme. Forty-four percent of Norwegian students and 60 % of Latvian students agree that topics about sorting and management of waste and 44 % of Norwegian students and 48 % of Latvian students think that topics about ecosystems and its protection must be included in the school's educational programme. Forty-one percent of Norwegian students and 50 % of Latvian students rather agree that topics about greenhouse effect and reduction of emission of gases must be included in the school's educational programme. More Latvian students in comparison with Norwegian students consider that such topics as reduction of environment risks and decision making and ownership must be included in the school's educational programme. Sixty-four percent of Latvian students agree the opinion that topics about decision making and ownership must be included in the school's educational programme but only 26 % of Norwegian students have the same opinion.

Rather many of Norwegian students admit that they have no opinion about including of topics of sustainable development in the school's educational programme. For example, 30 % of Norwegian students declare that they have no opinion about including in the school's educational programme topics about reduction of biodiversity, 29 % of Norwegian students have no opinion about including such topics as biosphere, its protection and decision making and ownership in the school curricula. There are more Norwegian students in comparison with Latvian students who don't agree for including of different topics of sustainable development in school curriculum. It seems that some of Norwegian students are not competent about different topics of sustainable development.

Table 1

**The opinion of Norwegian (NO) and Latvian (LV) students: what topics of sustainable development must be included in the school's educational programme
(in % from the number of respondents)**

Answer Group of students Topic	Agree		Rather agree		Rather don't agree		Don't agree		I have no opinion	
	NO	LV	NO	LV	NO	LV	NO	LV	NO	LV
Pollution (air, water, soil)	56	64	26	34	0	2	7	0	11	0
Use of natural products	30	56	37	40	15	4	7	0	11	0
Biosphere, its protection	30	38	30	44	7	12	4	2	29	4
Ecosystems, its protection	44	48	26	46	11	6	4	0	15	0
Greenhouse effect and reduction of emission of gases	33	28	41	50	4	20	4	2	18	0
Natural resources, use, saving, recovery	59	46	18	52	4	2	4	0	15	0
Sorting and management of waste	44	60	22	36	15	4	4	0	15	0
Energy efficiency and renewable energy	41	34	33	44	7	14	4	6	15	2
Reduction of biodiversity	26	36	26	44	11	12	7	6	30	2
Reduction of environment risks	30	62	37	32	11	4	4	0	18	2
Decision making and ownership	26	64	30	32	15	4	0	0	29	0

Most surveyed students consider that it is necessary to begin very early to study topics connected with sustainable development (Figure 4). 48 % of questionnaire Norwegian students believe that already during preschool education children must begin to study topics connected with sustainable development. The same opinion is expressed by 26 % of Latvian students. 40 % of Latvian students and 22 % of Norwegian students consider that it is necessary to begin to study topics connected with sustainable development during primary school education. Only few students (4 % of Norwegian students and 10 % of Latvian students) consider that students must begin to study topics connected with sustainable development during secondary school education but no one student have answered that these topics must be obtained only during higher education process. Students are confident that it is too late.

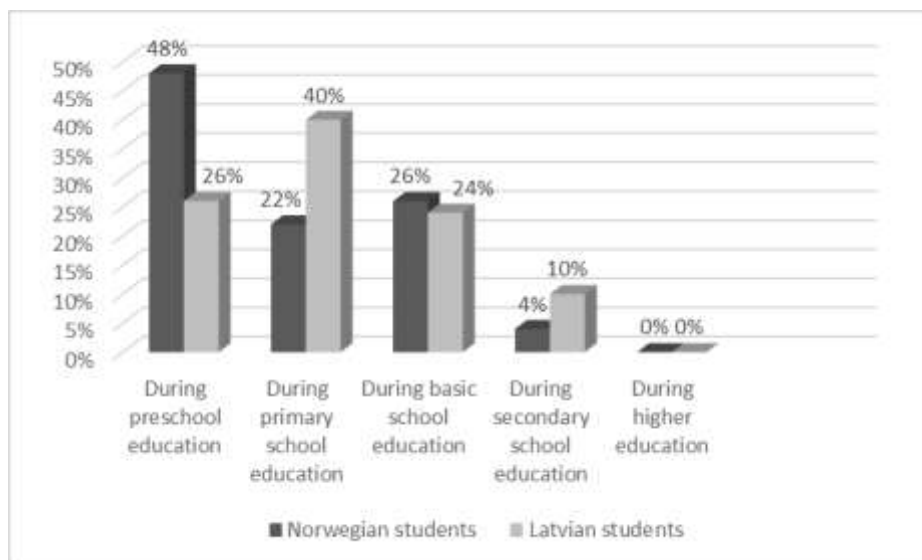


Figure 4. Norwegian and Latvian students view, when is it necessary to begin to study topics connected with sustainable development (in % from the number of respondents).

The majority of Norwegian students have thought about human behaviour in the context of sustainable development (44 %) or sometimes thought about it (44 %) (Figure 5). These answers show that Norwegian students understand the necessity of human behaviour in the context of sustainable development. Latvian students more rarely have thought about human behaviour in the context of sustainable development. 48 % of surveyed Latvian students admit that they have not thought about human behaviour in the context of sustainable development. The results of student answers show that it is necessary to improve understanding of Latvian students about sustainable development in the practical context.

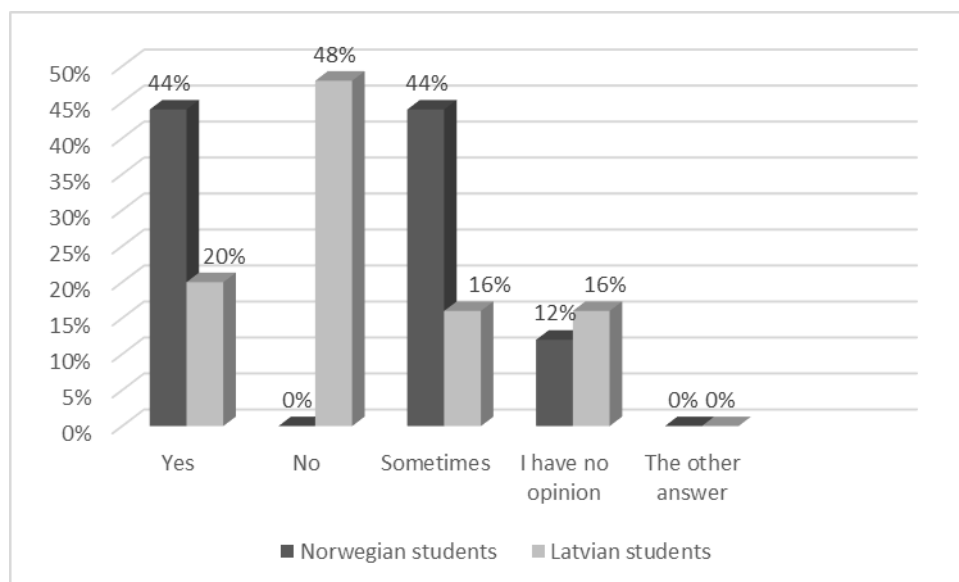


Figure 5. The answers of Latvian and Norwegian students if they have thought about human behaviour in the context of sustainable development (in % from the number of respondents).

The majority of Norwegian students (63 %) as well as Latvian students (68 %) consider that they partly act sustainable in their practical dealings (Figure 6). Even more Latvian students (22 %) in comparison with Norwegian students (15 %) believe that they act sustainable in their practical dealings. It is very important to act sustainable in practical dealings for everybody but in order to act sustainable, good understanding about sustainable development is necessary.

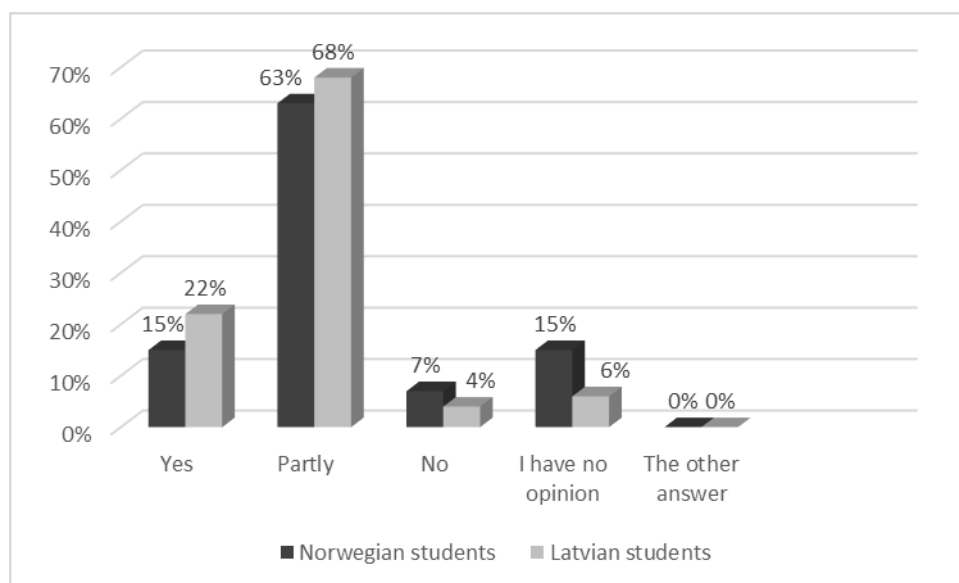


Figure 6. The opinion of Norwegian and Latvian students, if they act sustainable in their practical dealings (in % from the number of respondents).

Conclusions

- More Norwegian students than Latvian students consider that they know what sustainable development is. The majority of Latvian students partly know what sustainable development is, or they have heard about it but they don't exactly know what it is. The majority of Norwegian students as well as Latvian students agree that during school educational process they have not studied topics of sustainable development or they have studied them very rarely.
- More Norwegian students in comparison with Latvian students agree that it is necessary to pay attention to the topics of sustainable development during educational process. At the same time, a part of Norwegian students do not have a good understanding about topics regarding sustainable development.
- Students are confident that it is necessary to begin to study topics connected with sustainable development very early. The majority of Norwegian students consider that it is necessary to begin to study topics of sustainable development during preschool education or during primary school education but the majority of Latvian students consider that it is necessary to begin to study topics of sustainable development during primary school education or during basic school education.
- Norwegian students better understand the necessity of human behaviour in the context of sustainable development in comparison with Latvian students. More Norwegian students in comparison with Latvian students have thought about human behaviour in the context of sustainable development. The majority of Norwegian students as well as Latvian students consider that they partly act sustainable in their practical dealings.
- The results of the research suggest that the majority of Latvian as well as Norwegian students understand the necessity of the sustainable development and they accept including topics of sustainable development in the school curriculum but they have not good understanding about sustainable development.

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