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Non-formal Education for Sustainable Society: A Case Study of "Hobby School" in Estonia

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Abstract: The United Nations Decade of Education for Sustainable Development from 2005 to 2014 was an official global movement to reflect our sustainability. There were many remarkable activities across countries because education had a significant role for sustainable environments in natural, cultural, economic, and social aspects. School education is often called formal education, and more flexible practices are non-formal education (NFE). School is authorized by the governments, and NFE includes more autonomous and volunteer learnings. A small country such as Estonia concentrates on knowledge economy to survive in the globalized world today, but its identity is implicitly more important to sustain. The Estonian education system is successful, and meantime, it has many NFE, especially education focusing on nature. This article picks up a long-lasting NFE case and tries to illustrate how NFE keeps their worship to nature as the central portion of the Estonian national identity.
Keywords: ESD, sustainability, non-formal education, national identity, Estonia

Özet: 2005 ve 2014 yılları arasında Birleşmiş Milletler Sürdürülebilir Kalkınma için Eğitim Onyılı sürdürülebilirliğimiz üzerine düşünmek adına resmî bir küresel hareketti. Birçok ülkede birçok faaliyetlerle, eğitimin doğal, kültürel, ekonomik ve sosyal bakımdan sürdürülebilir bir çevre için sahip olduğu önemli rol tartışılmıştı. Okul eğitimi, resmî ve okul-dışı daha esnek uygulamalarsa gayrıresmî eğitim olarak adlandırılmaktadır. Okul devletce remiyete büründürülürken, gayrıresmî eğitimin taşıyıcısı gönüllülerdir. Küreselleşen dünyada ayakta kalabailmek için bilgi ekonomisine odaklanan Estonya gibi küçük bir ülkede, nevi şahsına münhasır karakteri, kendi sürdürülebilirliği açısından oldukça önemlidir. Estonya'da eğiştim sistemi başarılı olsa da, ayrıca gayrıresmî eğitim kurumları da mevcuttur. Bu makale uzun soluklu bir gayrıresmî eğitim kurumunu merkeze alarak Estonya ulusal kimliğinin nasıl sürdürülebilir kılındığını göstermektedir.
Anahtar Kelimeler: Sürdürülebilir Kalkınma için Eğitim, sürdürülebilirlik, gayrıresmî eğitim, ulusal kimlik, Estonya

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Introduction

Our globalized society is changing so fast that it can be a good timing today to think about what to sustain for ourselves and the next generations. One of the significant key concepts today is sustainable development, originally defined by the Brundtland Report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987: 43)". The world trend such as the United Nations Decade of Education for Sustainable Development (UNDESD) from 2005 to 2014 was an official global movement to reflect our sustainability[1]. UNDESD provided many countries with opportunities for educational activities at both the regional and national levels. These activities have some typical aspects, differing from the traditional education manners, such as integrated cross-subject curriculum and networking or collaboration among stakeholders.

Formal school is sometimes recognized as the only education provision within nation, but the UNDESD lets us find alternative channels for wider views in education and learning. All education channels are important to sustain the national identity, especially for a small country neighbored by larger countries. The Republic of Estonia with 1.4 million population is a front runner in the knowledge society. For example, an Estonian computer engineer was one of developers of Skype which connects us more than telephone for a long distance call today. This small country has achieved high education performance, according to OECD's survey[2], and meantime, has to make itself sustainable while its population is ageing and fewer children are born.

The Estonian principal of Youth Centre *Lille* House, where accepts any children have difficulty in daily life and gives opportunities for them to find their talents, explained for this study about how young people need supports in Estonia as a metaphor of a chair with three legs[3]. The top sitting part of the chair refers to the whole personality of a child, including his or her private

[1] There were many trends and movements before UNDESD: for example, the United Nations Conference on the Human Environment as Stockholm Declaration in 1972; Environmental Education in the intergovernmental conference as Tbilisi Declaration in 1977; and the Summit on Environment and Sustainable Development as Agenda 21 in Rio de Janeiro in 1992

[2] Some learning outcomes of compulsory schooling are understood in the framework of OECD's DeSeCo (Definition and Selection of Competencies) study across the countries today. Some education systems perform better than others. Estonia is one of the most successful systems, according to the results of the OECD study: PISA (Programme for International Student Assessment) 2012 resulted Estonia in the fifth in Mathematical Literacy, seventh in Reading Literacy, and third in Scientific Literacy, although the study cannot always obtain the effects of many out-of-school activities.

[3] Interviewed on 14 January 2015.

time, and the three legs represent school, family, and non-formal education. If one of them get weaker or shorter, the chair becomes surely unstable. If a message "*Lga noor on vaartus. Tulevik tehakse tana* [Every young person is valuable: the future is made today] " on her cup is true, how can we ensure education and learning opportunities are meaningful for the next generation in high uncertainty and fast-changing society?

This article tries to illustrate how non-formal education activities function to keep Estonian sustainability. The authors summarize the concept of non-formal education, followed by the case study in Estonian environmental education practice. Discussion covers Estonian identity for concluding that non-formal education accelerates social sustainability besides the national education by formal education.

1. Research Framework and Methods

1.1. What is Non-Formal Education?

The term non-formal education did not have any cultural history (Rogers, 2004: 78). But the definition was widely shared as "any organized educational activity outside the established formal system - whether operating separately or as an important feature of some broader activity - that is intended to serve identified learning clienteles and learning objectives (Coombs et al, 1973: 10-11). " Comparing to formal education, often understood equally as school education, non-formal education (NFE) is more contextualized and flexible education and occurs no matter where the education is taken. Therefore, NFE is semi-structured and has educational intention but is not always authorized by official organizations (Maruyama & Ohta, 2013).

With the level of flexibility and authorization on two axes, Figure 1 shows four categories of education and learning. Quadrant III refers to school education, which is designed by structured curriculum, fixed location such as classroom, authorized teachers, and official teaching materials. The rest of quadrants are categorized into NFE in this study. Informal education/learning is also a common expression for flexible activities, which can be located the right position from Quadrant II[4], but this article excludes informal learning because it is too wide to analyze. Informal learning also differs from NFE on intentionality: informal learning covers the incidental learning such as skills accidentally learned at the end of interactions, while an educational purpose is set in NFE.

[4] Informal learning is rarely located at the right side of Quadrant I because almost no informal learning is authorized.

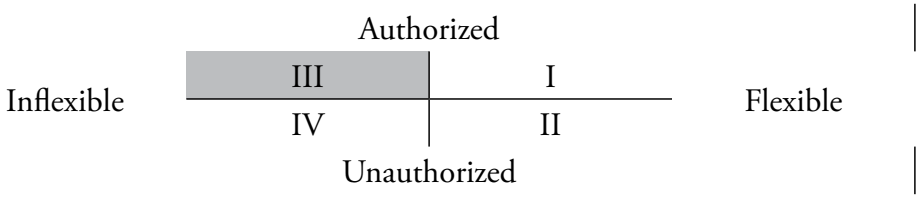

Figure 1: NFE with Flexibility and Authorization

Quadrant I includes education authorized by official bodies and practiced without fixed location (*e.g.* mobile library), without textbook (*e.g.* apprenticeship system), and without standardized curriculum (*e.g.* alternative schools), but it has flexible learning contents, depending on the interests of its participants/students (*e.g.* local activities). Quadrant II represents the practice of self-motivated learning activities (*e.g.* book club) and of self-structured education (*e.g.* private tutoring). The IV indicates school-type education but not official recognition is required (*e.g.* teaching by staff with no teacher's license)[5].

This four-quadrant model can analyze the dynamics of education practice. When the Ministry of Education (MOE) recognizes a type of education out of school by education laws, it is called formal school and can categorized into the quadrant I or III. If the school provides fixed curriculum in fixed place, it is in III. But if Steiner Schools in Japan have the campus and buildings but very flexible pedagogy, they are in I. They were not recognized as an official school by the Japanese MOE in the past, and thus, it used to be in IV. When school curriculum reform requires pedagogical change from chalk & talk approach to child-centered approach, school identified in III moves much closer to I[6]. International Baccalaureate is still not recognized as a certificate widely in Japan so that it is in IV, but MOE starts to accept it, as it turns to be in III.

Another example is Halk Egitimi Merkezleri (Public Education Centres) in Turkey. It was officially set in 1932 to bring education to those who never gone to school and nourish the Turkish citizenship. Today, it gives more learning opportunities based on participant's request. HEM can be put in I at the beginning and in II for recent status. People come for their daily interests and exchange information (II), and after a while they build an interest group and require its membership to the newcomers (IV). We can analyze the dynamics of various education activities and their backgrounds by comparison of time and contexts.

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[5] Ethnic minority school can be also included here if it is not authorized as a school by the ministry of education.

[6] In this sense, the vertical border between I and III and between II and IV are rather continuum than clear cut line.

The main characteristic of NFE is its flexibility that the teaching side can change the materials and methods depending on the contexts of learning side. Teaching materials are chosen or made by the teaching side to match the level of learning side's understanding. Collins & Halverson (2009) points out the age of learning changed historically from apprenticeship to national service and to individual's lifelong learning with computer-mediated learning opportunities today. When public school was for the privileged people, learning opportunities were responsible for parents to succeed their occupations. School system provided the common contents.

1.2. Methods

In addition to the following interviews, authors also reviewed literatures about Estonia and its history. The series of intensive interviews were conducted from 12 to 14 January 2015 in Tartu where the present study's target groups are located such as Ministry of Education and educational Non-Governmental Organizations (NGOs).

Specifically, the authors interviewed with the following informants: Maris Kivistik, Head of Department, Environmental Board of Estonia; Anne Kivimäe, Head of department, Youth Affairs Department, The Ministry of Education and Research; Ülle Kikas, Adviser, Management team, Ministry of Education and Research: and Liina Vaher, Educational Programmes Manager in Science Center AHHAA on 12 January 2015. Hedi-Liis Toome and Piret Pungas, Network of Innovation Schools, the Pedagogicum of the University of Tartu; Janika Ruusmaa, Director-General, Tartu Environmental Education Center (TEEC); and Terje Tuisk, Head of Science Communication Department, Estonian Research Council on 13 January 2015. Karin Lukk, Principal, Tartu Kivilinna School; Hele Riit-Vallik, Principal, Youth Centre Lille House; Signe Söömer, Hobby School Director, Ott Maidre, a teacher, and Megumi Igata, a student, Hobby School Student, Tartu Nature School-TEEC on 14 January 2015. In addition to them, authors also participated in the three-day UNESCO's camp called the Estonian Baltic Sea Project winter camp in which 30 students came from nine schools between 9 and 11 January 2015. The students responded informally to daily questions about Estonian cultures.

2. Case Study: "Hobby School" in Estonia

2.1. Historical & Social Backgrounds in Estonia

Estonian people identify themselves with three components of their characteristics: nature, culture, and language. Although they can be religiously categorized into Christian in general, they are much closer to nature than to God. This sentiment is called "*maausk*" or native worship to nature - being an

inseparable entity together with Estonian land, traditional culture and native languages as a consistent worldview, tradition and way of life in Estonia[7]. One of the reasons is that religions came from outside areas into Estonia historically, while the local people had hold animism for a long time. The young Estonian people also believe their origin is from the nature. Another reason is Estonian history of being invaded by outer power in the past 700 years and small population could disappear if the land is occupied. The small-sized population also empathize the importance of their Estonian language. They were happy, for example, when they watched on television someone wanted to learn Estonian because it sounds beautiful when the Estonian music was ranked in sixth place by the 2012 Eurovision[8].

Both non-formal education institutes and schools had a role to conserve Estonian nature. Nature Education Centers/Schools as a non-formal education institute were set in Tallinn, Tartu, and Pärnu in the 1950s, followed by very popular school forests movement. And meantime, Estonian school students often won at Science Olympics during the Soviet time because science and technology were top priority in education. Environmental education already became popular in the 1970s, while other Soviet republics also focused on it. Important impact was also the UNESCO conference in 1978 that suggested cross curriculum themes and environment was one of them. In the beginning of 1990 when there were plans for new curriculum, it was important to add ICT, environment, career and safety to this document. In 1996 the new constructivist curriculum was confirmed with cross cutting themes. Environmental education was common over the shift from the Soviet to democratic regime in the 1980s and 1990s.

Sustainable Development Law was enacted at the national level in 1995 after the Rio de Janeiro Summit which discussed sustainable development in 1992. In the year 2000 Swedish Ministry of Education invited all Baltic Sea ministry representatives together to incorporate the feedbacks of the Rio Summit into their education policies. In Estonia, Education for Sustainable Development (ESD) was included in school curriculum in 2002. This was because "Agenda 21", the report of the Rio Summit in 1992, included topic ESD and Estonian government prepared new curriculum by adding ESD as one cross-cutting theme. Estonia was an early adapter of ESD, influenced by Finland, while ESD came very first time in Johannesburg Summit in 2002

[7] Retrieved from http://www.maavald.ee/en/religion-and-culture/339-the-estonian-native-religion on 19 January 2015.

[8] Estonia has participated in Eurovision song contest since 1993 and won the competition in 2001.

and the United Nations General Assembly in 2003 adapted that the decade from 2005 to 2014 would be the United Nations Decade for ESD.

At the same time, Estonia had history of grassroots activities called hobby clubs which did not always have academic duty. The oldest hobby clubs were Zoology, Mechanization, and Photography since 1953; Reading and Geology in 1954, and Botany in 1955. There was Ecology club from 1983 to 2000. The environmental protection group started in 1991. The clubs were organized in Hobby Schools in Estonia.

2.2. Hobby School

Hobby School, listed in Private Act, provides leaners with the certificate at the end of courses. Many of the courses have the same periods as formal schooling so that the students come to join one or some courses for maximum 12 years. Teaching staff are required for official teacher license. Presently, teachers work as part time lecturer for the Hobby School and all of them have academic backgrounds in natural science. Their personality is also important because the teachers are mainly enthusiasts who like to learn, explore and develop together. Although no official data at the national level is available, more than half of all Estonian students go to Hobby Schools, according to the Ministry of Education and Research[9].

Hobby School (HS) is an attractive place for children and young people in the age seven to 18, because it invites them to notice and care about their environments at the daily and global world. For smaller children, HS concentrates on opportunities to generate their interests in nature and create wider perspectives of the diverse natural world. Children are invited to participate in activities like games, handicraft, and outdoor activities. For example, nature watch "Hello Spring[10]", quizzes, competitions (drawing, inventing, knowledge based quizzes) are popular all over the Estonia. For senior children, the activities concentrates on more concrete subjects that they work with close cooperation with universities and experts in the field. There are also opportunities for hiking, camping in nature, participating in national and international projects with researches and the parents can take part into of different academic competitions. The learning activities in analyzing the world problems develop learner's understanding of the relationship between human and nature, and it also helps them to reflect their lifestyle, especially in the aspect of sustainability, with logical and critical thinking. The school also gives the

[9] Interviewed on 12 January 2015.

[10] http://tere.kevad.edu.ee/?aasta=2014&leht=english

place for them to meet other children with the same interests, and children often find life friends. They develop communication skills by these activities.

HS "classes" are usually held twice a week. The classes for younger students are held in the morning and in the afternoon. Senior student classes are held only after school. One lesson lasts for 90 minutes or three hours as like a formal school lesson. Class size is generally 15 students, interestingly smaller than 35 in formal school classroom. To participate in hobby club parents must pay a small amount of money, 34.60 € per year. The whole family can come to see nature films, participate in environmental actions, lectures, workshops and bus trips.

The hobby classes are operated in six different locations, namely, Tartu Nature House or education centre, University Museum of Natural History, and four formal schools[11]. All students who have participated at least one semester can apply for Tartu Nature House membership card. This card lets students visit Tartu University Museums[12]. They take public transport to go home or their parents come to pick up when they end activity of the day.

There are three types of Hobby Schools: 1) Normal Hobby School: School children between age seven to 18 take structured courses at NGO or out of school facility; 2) After-school activities: Children participate in the activities after school time within school; and 3) Youth Centre: This centre functions as a shelter for the youth. Visitors are categorized into four age groups (7-12; 13-15; 16-19; and 20-26). The main purpose of Youth Centre is for the youth to find their talents rather than to receive a number of visitors. The Estonian students participate in one or more of them. The most famous HS within Tartu Nature House is located in Tartu Environmental Education Centre (TEEC).

2.3. Tartu Environmental Education Centre: TEEC

Tartu Environmental Education Centre (TEEC) is the largest and oldest centre as listed at the top of private non-formal education centre in the Tartu Municipal official document. It is located in Tartu, the second largest city in Estonia. A large park area covers the building and provides space and resources for different educational and cultural activities. TEEC originated from a Nature School which was established in 1953, and The Articles of Association of Sihtasutus Tartu Keskkonnahariduse Keskus (the Tartu Environmental Education Centre Foundation) was approved by the foundation resolution

[11] Tartu Forseliuse High School, Variku school, Tartu Russian Lyceum, Annelinna High School.

[12] Botanical Garden, Zoology Museum, Geological Museum, Art Museum, History Museum; Natural History Museum of Estonia (Tallinn), Tallinn Botanical Garden and Ice Age Centre.

adopted on 8 April 2002. Its building was set up in 2013, equipped with energy efficient structure and hardware partly by the EU assistance programme.

TEEC is an open and diverse organization for environmental education among children and adults. It promotes a long-lasting and environmentally friendly way of living from generation to generation in Estonia with a diverse, open, and friendly settings. It also educates children, young people, and adults to notice and care about the nature around them. TEEC offers the programs for various purposes as follows:

- 18 different hobby clubs for children from age 7 to 18 including such hobbies as hiking, indoor plants, young nature friends, nature guides, nature friendly handyman, zoology, and photography. Hobby clubs are available also in Russian language. All activities are based on ministry approved curriculums;
- a possibility to find answers to diverse questions about nature and environment in public environmental information centre. This involves topics of pollution, hiking, air, water, garbage, energy. There is also a mobile information centre that participates indifferent big fairs and events;
- trainings for adults are open to all people interested in nature and environmental topics. There are also special training lessons for teachers and office workers. All lessons are based on approved curricula;
- educational programmes for school classes;
- the exhibition "Tartu Nature House Inside Out." The aim of the exhibition is to present building materials, water cycles, and sustainable management solutions for energy and waste;
- public events such as movie and nature evenings, lectures, workshops, environmental bus trips and memory quizzes;
- outdoor activity programmes with games, camps, competitions, as well as a bicycle school for students; and
- family club and morning activities for preschool children.

3. Discussion

3.1. Why Hobby Schools Continues as NFE?

This article focuses on the hobby clubs called the systematic Hobby Schools (HS) because they have been operated for 61 years over many changes in the Estonian society. HS remain through many social changes. Estonian people are supportive to the HS courses because they understood it was for personal development besides schooling in the Soviet time. This is why HS are in the jurisdiction of Ministry of Culture but not of Education. The parents are

supportive as they satisfied with their children's activities in the evening for their security. Today's parents are working outside in weekdays and can hardly spend time with them before the evening. They sometimes understand HS as like a safe baby sitter, while many young people who do not join the HS tend to hang out in the street and shopping malls.

Formal schools identify HS is beneficial for subject lessons and for entrance examinations. Children who go to HS can discipline themselves and concentrate on study more than those who do not[13]. HS activities attach children to their own everyday life, and their interests and motivation in study increase in general. When they apply for university, the applicants can include their experience at HS and it is considered a valuable carrier. Some school principals also authorize HS activities as credit of formal subject lessons. HS provide many opportunities of teamwork, too. Estonian student's PISA performance is much higher than OECD average, but teachers think social skills are still low. Children can develop the skills in HS activities because they work frankly and comfortable atmosphere. This is a typical advantage of NFE.

TEEC's HS has semi-structured learning contents, flexibly depending on targets and participants, and fixed location, but it is not fully authorized as formal school. Although the Private School Act recognizes HS is the same as formal private school, the official document of Estonian Ministry of Education and Research does not include HS into the number of private schools (Haridus- ja Teadus ministeerium 2013). Therefore, HS is basically located at the Quadrant IV in Figure 1.

There are many, however, educational approaches in HS such as participatory approach in learning activities. Moreover, Department of Culture in Tartu Municipal Government recognizes and National Ministry of Environment financially supports parts of the activities and management of TEEC, so that we can partially put HS into II with authorization. As a typical example of NFE, HS itself is also flexibly changing its position in today's changing society.

3.2. Reasons in Systems

There are two reasons in the systems. One is a legal reason. NFE itself is under the jurisdiction of National Ministry of Education and Research, and

[13] The portions of students who go to HB and not are not identified by the authority because it is free choice. Tartu Kivilinna Kool school the authors visited had more than 80% of students participated, according to its principal, but the Ministry of Education and Research told only the half of high school students go to HB. This is partly because municipalities have considerable autonomy in running schools within their jurisdiction. They decide when to open or close schools (Toots, et. al. 2009: 280)

thus, TEEC's activities are also. Private School Act[14] enlists the schools of both formal and non-formal private schools, including HS, and it also decides the course fee and the course periods. Hobby Schools Act[15] guarantees the curriculum and activities of HS, many of which cover scientific experiments with local nature, and learning at hobby clubs develops the sense of belongings to nature.

The other reason is the financial system. Students pay little amount of money, and teachers need to earn small money out of school. The annual fee of a TEEC courses is 34.6 Euro for a student. This is comparatively cheaper than other private non-formal schools such as music school costing 441 € per year. Teacher's salary is neither high nor low, comparing to that of other occupations, but it is hard for them to earn for a family. Their average salary is about 600 Euro, excluding tax, and teachers can receive extra 100 if they become a class teacher or other school roles, although the salary recently increased 20% (Vihhoreva 2012). At the same time, teachers can work out of school for a part time because all of them are basically with lifelong contrast but not public servant in Estonia. Some teachers have part-time job at hobby clubs[16].

3.3. Sustaining Estonian Identity

More importantly, however, we can point out that HS functions to cultivate the Estonian identity among learners besides national education provided by formal schools. The activities function to nourish the Estonian identity, as the preamble of the Estonian Constitution mentions the preservation of the Estonian nation, language and culture through the ages[17]. Because Estonia has experience of being invaded and occupied in recent history by neighboring powers such as Russia and Germany, the people are always sensitive to their identity with nature, culture, and language. An example of the relation between nation's independence from the Soviet Union and the people's belonging to nature is illustrated in Rein (1981) and Raun (2001):

The ecological protests of 1987 activated the Estonian population. The powerful environment issue cut across a wide range of economic, social, and political concerns. It also represented a cultural protest in that the environmental demonstrations and the subsequent green movement sought to pre-

[14] https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/530062014001/consolide

[15] https://www.riigiteataja.ee/en/eli/ee/Riigikogu/act/517062014006/consolide

[16] Of course, it is a part of reality that many teachers work in private sector such as hotel management and earn larger amount of money.

[17] Retrieved from http://www.president.ee/en/republic-of-estonia/the-constitution/ on 14 January 2005.

serve a traditional Estonia that could be passed on intact to future generations. In addition, the Estonian Greens called for a spiritual rebirth that would change the "collective mindlessness" toward nature that the Soviet system had encouraged (Loc.3317).

The HS activities encourage the native nature worship called "*maausk*" in Estonia. Many Estonian teachers may not notice the function of transferring their values to the next generation, but education usually have three types of curriculum: i) intended, ii) implemented, and iii) hidden ones. The intended curriculum is what teachers plan to teach, and the implemented is how they actually teach students. These two are frequently analyzed in research of formal education. The hidden curriculum is that a certain message is transmitted to the students from a teacher, because each teacher plays a role model of being the Estonian, and students learn how they should behave and obtain the values teachers show without spoken words. It is hard to analyze how each teacher influences the students because it all depends on contexts in which learning activities occur.

HS as a NFE practice let students choose available courses. Their free choice is democratic and leaning activities are flexible. The more they participate in the activities of learning and touching nature, the stronger their sense of belonging to nature becomes. Although NFE generally has independent direction, not like formally structured school, being with nature build student's values of being the Estonian. It is of course necessary for such a small country to sustain the society, and the world trend for environmental sustainability accelerates their non-formal education by different channels.

Conclusion

The Estonian children have been ranked at the top level in the international surveys. For the sustainability or more serious surviving of the country, Estonia tries to educate the children by many channels. Not only does formal school as national education obviously develop the Estonian citizens, but non-formal private schools named Hobby School also provides one of the most influential educational activities, nourishing Estonian identity such as worship to nature, culture and language, although it does not show ideological approach at all. The small country which faces population decline and a strong neighbor such as Russia, justifying her annexation of Crimea today, needs to find a way of sustaining the country. Thanks to rich nature within the country and people's supports, educational conditions are good enough for the students because children also like to spend their time in wood. The Estonian future is being made by the activities in and out of school everyday today.

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