UNECE

Engaging Young People
in the Implementation
of ESD in the
UNECE Region:

Good Practices in the Engagement
of Youth in Education
for Sustainable Development

UNITED NATIONS

Geneva, 2022

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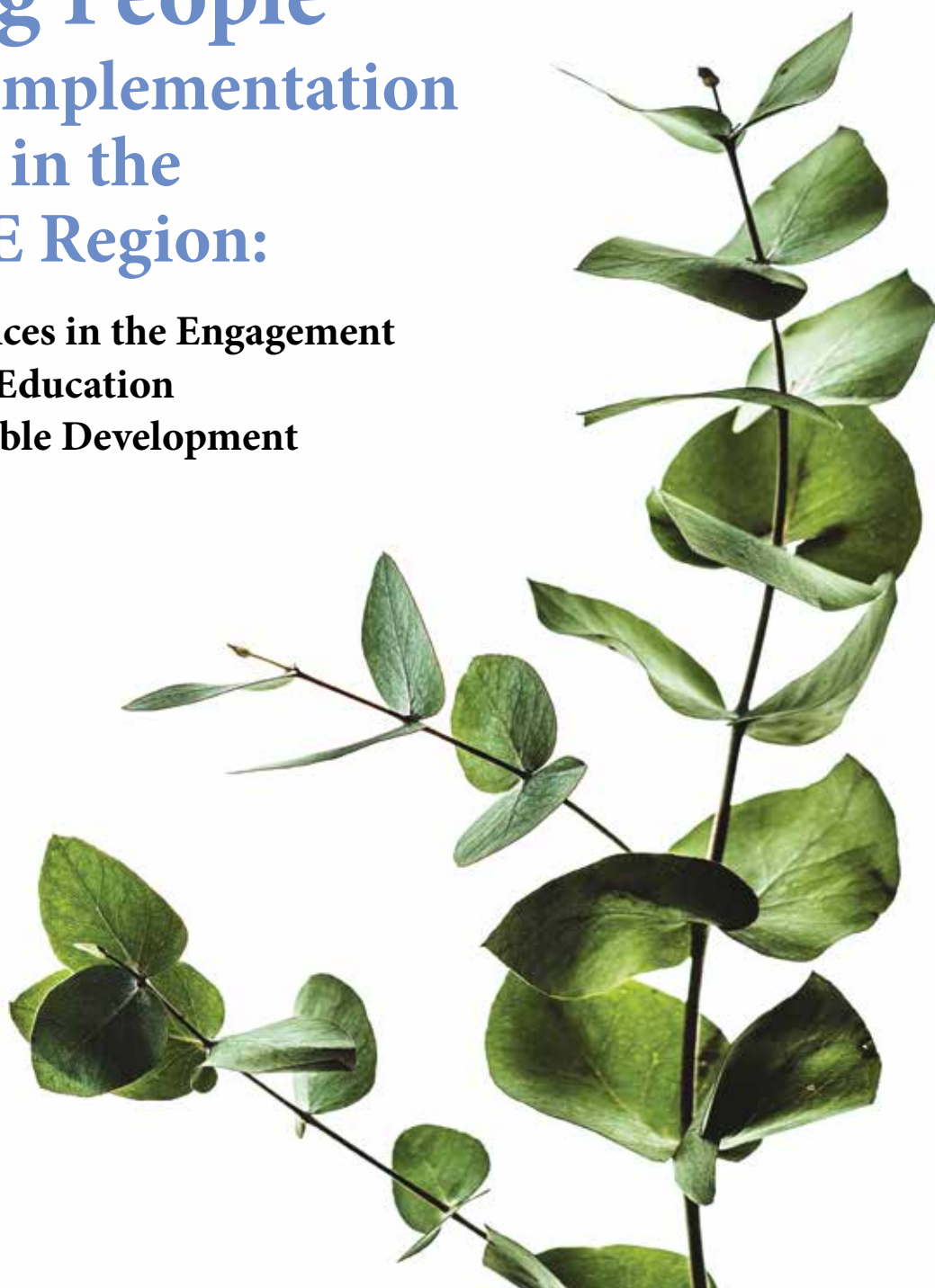
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Foreword

Believing in the aspiration and vision of young people is important. Giving space to young people and making them participants and equal players in all stages of the processes and mechanisms concerning their future is more than important, it is their legitimate request that we have to respond to. Education itself should provide young people with the knowledge, skills, means, and mechanisms that will allow them to innovate, create, and prosper to become agents of change for a more sustainable world.

Education for Sustainable Development (ESD), as a dynamic and liberating form of learning, but above all, as a comprehensive framework for thinking and viewing life, suggests that young people are not only the focus of our policies and decisions, but active co-designers and pioneers in the implementation of policies and actions related to the protection and preservation of the planet and to our survival. The UNECE Steering Committee on Education for Sustainable Development (ESD SC), recognizing that youth participation is critical in the global effort to achieve sustainability goals, recommended to establish the UNECE ESD Youth Platform. Its aim is to create a dynamic network of communication and interaction of young people from countries of the UNECE region, allowing them to participate in political processes in the field of ESD and directly involving them in the work of the UNECE Steering Committee on ESD. Through this platform, young people can put forward initiatives and actions for their active involvement and participation in ESD issues both in the national context of their countries and at the regional level, while developing cooperation with other international and regional organizations and networks.

The present publication introduces good practice programs and initiatives aimed at supporting and empowering youth participation in ESD and in the implementation of the UNECE

Strategy for ESD in member countries. It deserves to be highlighted that the publication was developed and implemented by the UNECE ESD Youth Platform. The authors of the texts are young people, active researchers and professionals working for and with young people to promote ESD in their country.

On I would like to thank and congratulate all those who have contributed to this excellent publication in our hands today.

It is just the beginning of the actions and initiatives that young people in the UNECE region are planning through the UNECE ESD Youth Platform for the period 2022-2030. The UNECE Steering Committee on ESD and the secretariat y will continue to support all efforts to strengthen their role and participation in ESD in the region and internationally.

Olga Algayerova
United Nations Under-Secretary-General
Executive Secretary of the United Nations Economic Commission for Europe

As we inch closer to 2030, the Earth is faced with increasing challenges in meeting the ambitious United Nations Sustainable Development Goals. These goals are designed to be a 'blueprint to achieve a better and more sustainable future for all[1] and to prevent us reaching an irreversible tipping point for the planet. This publication was envisioned not only as a call to action, but also as evidence that change is possible. It focuses on best practices to build a better, sustainable future with realistic and attainable approaches.

Taking this context into account, it is not surprising that the focus of this publication is on youth. Young people are a the people whose actions are our best hope for achieving sustainable development assuming they can play their full part as key agents for social change, economic growth and technological innovation. Participation in decision-making is a key priority area of the UN agenda on youth. In 1995, on the tenth anniversary of the International Youth Year, the United Nations strengthened its commitment to young people by adopting the World Program of Action for Youth, an international strategy to more effectively address their problems and increase opportunities for participation in society. The international community has reaffirmed its commitment to youth participation through UN General Assembly resolution 58/133, which reiterates the "importance of the full and effective participation of youth and youth organizations at the local, national, regional and international levels in promoting and implementing the World Program of Action and in evaluating the progress achieved and the obstacles encountered in its implementation". Subsequent resolutions have also dealt with policies and programs involving youth as well as promoting youth participation in social and economic development[2].

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[1] dpicampaigns. "Take Action for the Sustainable Development Goals." United Nations Sustainable Development. https://www.un.org/sustainabledevelopment/sustainable-development-goals/ (May 2022, 2022).
[2] social.un.org/youthyear/docs/youth-participation.pdf

Within the Implementation Framework of the UNECE Strategy for ESD (education for sustainable development), youth has taken a more central role in recent years, a trend that the UNECE Steering Committee on Education for Sustainable Development wishes to promote. The creation of the UNECE ESD Youth Platform in 2020 and increasing involvement of young people in the work of the Steering Committee, as well as in the implementation of activities related to the regional Strategy, are a testament to the increasingly important role young people have but also to the importance that is given to their voice. This forms the backbone and the logic of this publication, there is no future without youth. We must include them in the processes that affect them and ensure that relevant policies actively take them into account.

Authors were asked to submit best practices, theoretical articles on youth participation and methodologies to support their inclusion in ESD and sustainable development in general. Articles were submitted from across the UNECE Region, from Western Europe to Central Asia, by young people and organizations or government agencies working with young people. We hope that this publication will not be seen as a standalone document but rather as a living publication which can inspire others to involve young people in their work.

Simon Herteleer
Editor

Acknowledgements

Cover photograph: © Annie Spratt

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Abbreviations

CAREC	Central Asia Regional Economic Cooperation Program
CCE	Climate Change Education
COP	Conference of the Parties
CSO	Civil Society Organization
EIT	European Institute of Innovation and Technology
ESD	Education for Sustainable Development
GAP	Global Action Program
GCE	Global Citizenship Education
GEF SGP	Global Environmental Facility's Small Grants Program
HE	Higher Education
ICT	Information and Communications Technology
CKIC	Climate Knowledge Innovation Community
MIO-ECSDE	Mediterranean Information Office for Environment, Culture and Sustainable Development
MDGs	Millennium Development Goals
MOOCs	Massive Open Online Course
MSESD	Mediterranean Strategy for Education for Sustainable Development
NFE	Non Formal Education
NGO	Non-Governmental Organisation
SD	Sustainable Development
SDGs	Sustainable Development Goals
UfM	Union for the Mediterranean
UNECE	United Nations Economic Commission for Europe
UNECE SC-ESD	UNECE Steering Committee on Education for Sustainable Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

1. A Sense of Urgency: The Case for Emphasizing Non-Formal Esd

Serafin Groebner
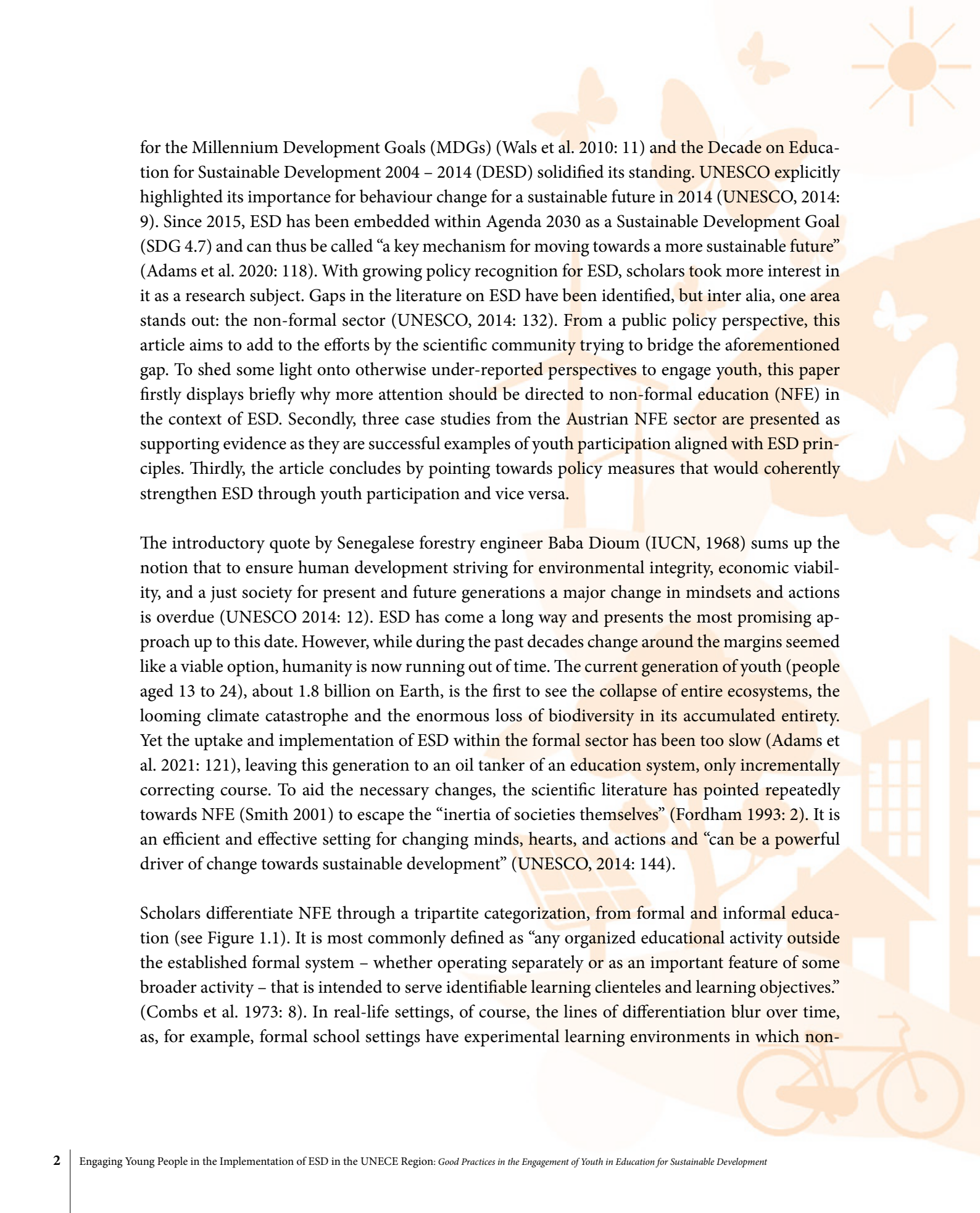
ABSTRACT:

Ever since Education for Sustainable Development (ESD) was officially embedded in the Sustainable Development Goals in 2015, many assumed that ESD had arrived in formal education settings. In reality however, this is only true to quite a small degree. Its uptake within the UNECE region has been shown to be too slow. Seen in the context of the ever-growing challenges our societies – and especially young people within them – face, this article points to non-formal education (NFE) as a powerful driver of change towards sustainable development. It shows that NFE's complementary power has been undervalued for too long, and its potential for youth participation has been left almost untapped. Three successful best practice examples from Austria deliver supporting evidence and show how to combine ESD and NFE from a policy implementation perspective. The article concludes that in reforming one-size-fits-all education systems, non-formal education for sustainable development should play a key part.

Keywords: Non-formal education, case study, participation, youth, engagement

> *In the end,*
> *we will conserve only what we love,*
> *we will love only what we understand,*
> *and we will understand only what we are taught. (Baba Dioum)*

Long before the current global health crisis, rapidly sweeping change was altering the biosphere of our planet in unprecedented ways. The northern hemisphere was perhaps less affected in its daily routines, yet humanity as a whole had been going through profound shifts in its demographic makeup, its social and economic fabric and its relationship to the natural environment that supports life on Earth. Education for Sustainable Development (ESD) from its outset had this realization at its core. Since the 1980s ESD emerged from its early 'environmental education' days into an all-encompassing empowering approach, adding social, ethical, and cultural dimensions to the mix. Recognized at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro (UN 1992), ESD's relevance grew consistently ever since. It was a cornerstone

for the Millennium Development Goals (MDGs) (Wals et al. 2010: 11) and the Decade on Education for Sustainable Development 2004 – 2014 (DESD) solidified its standing. UNESCO explicitly highlighted its importance for behaviour change for a sustainable future in 2014 (UNESCO, 2014: 9). Since 2015, ESD has been embedded within Agenda 2030 as a Sustainable Development Goal (SDG 4.7) and can thus be called "a key mechanism for moving towards a more sustainable future" (Adams et al. 2020: 118). With growing policy recognition for ESD, scholars took more interest in it as a research subject. Gaps in the literature on ESD have been identified, but inter alia, one area stands out: the non-formal sector (UNESCO, 2014: 132). From a public policy perspective, this article aims to add to the efforts by the scientific community trying to bridge the aforementioned gap. To shed some light onto otherwise under-reported perspectives to engage youth, this paper firstly displays briefly why more attention should be directed to non-formal education (NFE) in the context of ESD. Secondly, three case studies from the Austrian NFE sector are presented as supporting evidence as they are successful examples of youth participation aligned with ESD principles. Thirdly, the article concludes by pointing towards policy measures that would coherently strengthen ESD through youth participation and vice versa.

The introductory quote by Senegalese forestry engineer Baba Dioum (IUCN, 1968) sums up the notion that to ensure human development striving for environmental integrity, economic viability, and a just society for present and future generations a major change in mindsets and actions is overdue (UNESCO 2014: 12). ESD has come a long way and presents the most promising approach up to this date. However, while during the past decades change around the margins seemed like a viable option, humanity is now running out of time. The current generation of youth (people aged 13 to 24), about 1.8 billion on Earth, is the first to see the collapse of entire ecosystems, the looming climate catastrophe and the enormous loss of biodiversity in its accumulated entirety. Yet the uptake and implementation of ESD within the formal sector has been too slow (Adams et al. 2021: 121), leaving this generation to an oil tanker of an education system, only incrementally correcting course. To aid the necessary changes, the scientific literature has pointed repeatedly towards NFE (Smith 2001) to escape the "inertia of societies themselves" (Fordham 1993: 2). It is an efficient and effective setting for changing minds, hearts, and actions and "can be a powerful driver of change towards sustainable development" (UNESCO, 2014: 144).

Scholars differentiate NFE through a tripartite categorization, from formal and informal education (see Figure 1.1). It is most commonly defined 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 identifiable learning clienteles and learning objectives." (Combs et al. 1973: 8). In real-life settings, of course, the lines of differentiation blur over time, as, for example, formal school settings have experimental learning environments in which non-
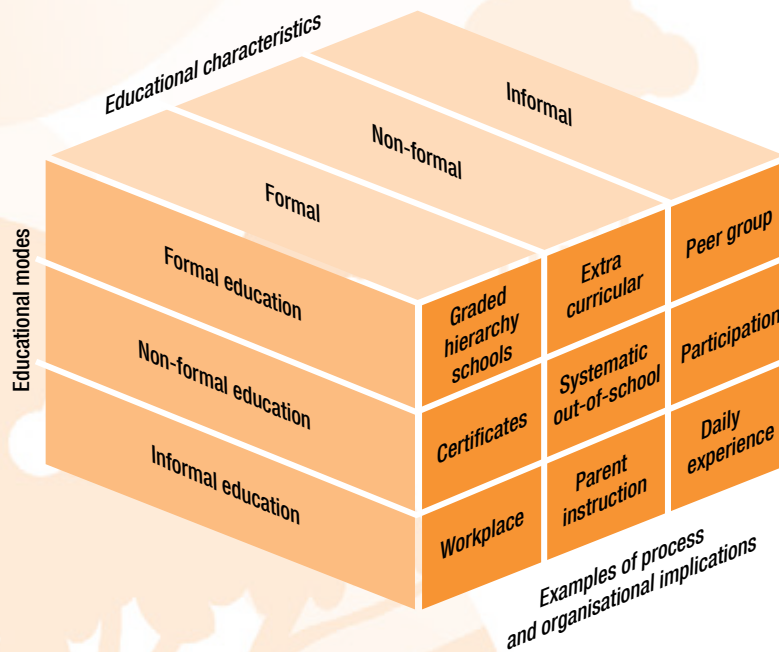
Figure 1.1
Tripartite Categorization of Education

formal methods are used. NFE has however shown remarkable methodological effectiveness on the ground. As it pertains to ESD and youth, it has been argued that it might be even more effective than the formal sector. The practical work carried out by NGOs for example, provides a contrast to more factual, technical, and objective teaching in the classroom, resulting in a learning experience that is more involving, creatively stimulating, and emotionally affective (cf. Adams et al 2021: 121). Regarding youth participation, NFE is guided by participatory methods and principles, which in turn develop within the social context of the community it is tailored towards.

To illustrate the benefit NFE has for strengthening ESD for youth participation, the following Austrian case studies offer supporting evidence. To demonstrate their vertical integration and coherence with international education strategies (ESD: A Roadmap; UNESCO 2020), European frameworks (European Youth Strategy 2018, EU Green Deal 2020), as well as national strategies (AT government program 2020-2024, the AT-Youth-Strategy 2021), the case studies, were selected alongside the ESD characteristics of:

Interdisciplinarity
Values driven
Critical thinking and problem solving
Multi-method
Participatory

Decision-making
Applicability
Locally relevant
(cf. UNESCO 2012: 18)

As a recent example, the first case study presents a 2021 project, supported by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) and carried out by the NGO, GLOBAL 2000. Since 2010, this Austrian NGO has offered students a framework program called "Environmental Communication", giving young people the opportunity to communicate environmental protection issues to students of their age. These environmental workshops convey background knowledge on risks and conflicts in topics such as pesticides, climate change, meat consumption, plastics, food waste, or nuclear energy, as well as possibilities on how students can become active themselves. Yet, despite GLOBAL 2000s efforts to work inclusively, integrating different school types into their programs, young people from marginalized groups and/or disadvantaged backgrounds are the minority of participants. To counteract this issue and to bring topics such as climate change closer to these so-called educationally disadvantaged groups, it was necessary to develop approaches and teaching materials in reciprocity with the relevant communities. This participatory approach was aimed at creating ownership and acceptance by the young people as well as their educational multipliers. With this project, GLOBAL 2000 wanted to tackle the core issue that, for many students with a migrant background and/or social and economic disadvantages, environmental issues are simply not part of their daily experience. However, the multiple crises are not yet an integral part of the curriculum and schools in particular often have little time for these important future issues that affect us all. With the NFE workshops offered by GLOBAL 2000, a conscious effort is made to reach young people who are not yet familiar with environmental issues.

The second case study presents a project first initiated in 2016 titled "klimareporter.in" (climate reporters). From its inception in 2018 the project was an initiative by the BMK, which then bloomed into an independent NGO called "CliMates Austria" (CA). Still financially supported by the BMK, the project klimareporter.in became a part of CA's overall portfolio. The project enables the formation of a klimareporter.in editorial team on a regularly recurring basis. A team of 20 young adults reports in understandable and exciting formats on complex climate-related topics, shoots videos, documents climate events and is expanding its presence on social media. CliMates Austria aims to evaluate the challenges posed by the climate crisis, to raise awareness among young people and mobilize them, to educate the public, train young leaders and develop innovative tools and solutions to combat climate change. CA sees itself as a "think-do tank" and is part of the international organization CliMates, which unites over 400 members in about 30 countries. Following a

well-rounded concept, it is led by and created for young professionals and students. The second part of CA's portfolio is that it is accredited to the UNFCCC. It annually sends a Youth Delegation to the COP and the Intermediate Conferences. Additionally, in 2021 CA organized a Youth Conference independently. NFE in the context of this project has been shown to create thematic awareness. Incorporating youth and empowering them to design their educational contents as well as organizational structures, enabled multiplier effects for these contents. This in turn has led to new formats created by and for youth alongside NFE and ESD principles, influencing the policy debate on different levels and amplifying the voices of young people in a participatory manner.

The third and final case supports the notion that ESD is best conveyed in an NFE setting strengthened by different levels of government and a range of civil society organizations; the Voluntary Environmental Year (FUJ), is a longstanding initiative of the BMK and its partners. Since 2012, it has enabled young people to take up volunteer assignments across Austria instead of mandatory military service. It is accompanied by vocational training courses for youth to gain orientation during this specific time of their life, right after graduating. It offers entry-level vocational/professional experience in the environmental, nature conservation, and sustainability sector. The program aims to inspire and enable the participants for a possible professional career in the field. Conversely, environmental and nature conservation organizations throughout Austria (NGOs, national parks, etc.) benefit from the volunteers' work and use the program to raise awareness within the key demographic of young people in their field of activity. The comprehensive benefits of the FUJ are demonstrated by the increasing interest in the program on the part of young people and volunteer organizations. Structurally the program was aided by a legal framework, which made it easier for young people to opt for this possibility. More specifically, the Volunteers Act of June 2012 made the FUJ eligible to act as a substitute for military/civilian service and the introduction of the 'Youth Network Ticket' in 2013 aided the mobility needs of participants. Young people still receive family allowances during the duration of their FUJ, plus gaining a small expense allowance monthly. This lowered the barriers of entry for young people from less affluent backgrounds and thereby directly contributed to efforts to couple ecological, economic and social dimensions of sustainability.

This article proposes that, for achieving quality education whilst adhering to the goals, principles, and guidelines of ESD, we need more participation by young people outside of the formal educational sector. To achieve this, the argument made here goes beyond, yet supports, the European Commission's call on their Member States for "stronger efforts to support high-quality lifelong learning for environmental sustainability, including traineeships, apprenticeships, volunteering, extra-curricular activities […] and to recognize and reward civic engagement in environmental sustainability" (EC 2022:12). The article illustrates the potential of ESD for leveraging positive change within and across communities. It argues that this potential has been underestimated for

too long. In light of the current global challenges, it is time to realize that approaches embracing NFE settings deliver 'whole system' views more effectively. NFE is a key part of reforming one-size-fits-all education systems that cannot meet the needs of increasingly complex and fluid societies. This is particularly apparent for sections of society that are 'hard to reach' (cf. Rogers 2019:168). The critical policy implication that this article puts forth is that ESD needs to be implemented much more intentionally across educational and training programs. In the context of youth engagement, making youth themselves agents of change, as demonstrated in the Austrian case studies, often achieves this goal. In sum, NFE offers a proven toolbox, with a plethora of methods to support youth as transformation agents, structurally integrating their energy and creativity into coherent educational approaches. Appropriate legal and organizational frameworks are the backbone for fostering these participatory mechanisms and promoting the commitment, ownership, and responsibility needed for further advancing ESD within and across our societies.

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2. Empowering Youth
in Luxembourg: A Transversal
and Systemic Approach
by the Ministry of Education,
Children and Youth

*Tania Gibéryen, Charles Schiltz, Manon Assa,
Kathleen Lapie, Michèle Schilt, Christian Lamy,
Claude Sevenig, Luc Weis*

ABSTRACT:

The Ministry of Education, Children and Youth (MENJE) is the public authority in charge of education and youth policy in Luxembourg. Education for sustainable development (ESD), the term established throughout the UN Decade for ESD (2002-2014), has found its way transversally into all levels of the national education system in the Grand Duchy. The framework outlined here, with national educational targets based on the 17 SDGs, shows that educational policy in Luxembourg follows a holistic, future-oriented and participatory approach, in which the focus lies on the recognition of young people and their needs. Innovative educational approaches for Global Citizenship Education in Luxembourg are made possible through the development of expertise and capacity building within the system.

Keywords: Transversal, Holistic, Youth participation, five overarching key competences, National framework for non-formal education

The *Ministry of Education, Children and Youth* (MENJE)[1] is the public authority in charge of education and youth policy in Luxembourg. Education for sustainable development (ESD), the term established throughout the UN Decade for ESD (2002-2014), has found its way transversally into all levels of the national education system in the Grand-Duchy.

The underlying holistic concept, linking environmental issues with social and economic challenges, has become part of the *Agenda 2030* of the United Nations, to which the Government of Luxembourg committed itself in 2015; this in turn supports the concept of *Global Citizenship Education* (GCE). The 17 Sustainable Development Goals (SDGs) of *Agenda 2030* have not only been transposed into the *3rd National Plan for Sustainable Development*, but they represent the guidelines when it comes to accompanying children and youth on their development path of becoming strong, critical and systemically thinking world citizens (Gouvernement du Luxembourg, 2017, 2019; United Nations, 2015).

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[1] *www.men.lu*

What does sustainable GCE in the third decade of the 21st century mean, in the decade of a global pandemic, of digitization and the rise of artificial intelligence, of the rising awareness and urgency of the climate crisis, the decade in which *Democracy* is shaken to its foundations and during which traditional media are being replaced.

What are the implications and challenges of these profound changes on education systems, be it on formal and non-formal education?

Stefania Giannini (UNESCO, 2020), underlines the importance of education and above all the contents to be learned and skills to be acquired that can contribute to ensure the survival of the planet. This in turn is linked to the need to empower young citizens to conscious self-growth and to pro-active contributions to society. This requires an inherently transformative education which prepares children and young people for a life in a digital, complex and global society, to face current and future challenges to be encountered, be it in their future professional and academic life or in their personal daily lives. The empowered young person is the central focus of the current educational policy in the Grand-Duchy.

Such an inherently sustainable education policy is tailored to meet the needs of children and young people in a globalized context. Young people, who will enter a future world unknown today, should be connected and confident, actively use their creativity, be open to changes of perspective and be self-aware of being citizens of Luxembourg, as well as of Europe and the World.

Modern educational goals must hence be chosen to address these needs and be operationalized through their translation into key competences to be acquired through learning scenarios:

1. Educational goals and related curricula for primary education are centrally determined by grand-ducal regulation. This legislative framework is currently undergoing a fundamental review, where its societal relevance, its usability for teachers and the alignment with the curricula of secondary education as well as the overarching goals of secondary education are the focal points. This participatory review process, involving all major stakeholders, including the *National Parents Representation* as well as the teachers and pupils, is coordinated by the national *Department for the Coordination of Research and Educational and Technological Innovation* (SCRIPT[2]), and is to be concluded by the start of the school year 2024/25 (SCRIPT, 2021c).

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[2] *www.script.lu*

2. Educational goals and curricula for secondary education on the other hand, had always followed a bottom-up logic being developed by national program commissions composed of high-school teachers. Since 2018, SCRIPT gives guidance by setting the overarching educational goals, which are then unfolded by the different program commissions to suit each subject individually (MENJE, 2018; SCRIPT, 2021c).

3. Since 2021, the following five overarching key competencies (SCRIPT, 2021b) are set as the major guidelines for the development of the curricula:
   1. Multiliteracy competence
   2. Self-competence
   3. Transformative competence
   4. Thinking competence
   5. Social competence.

In order to ensure coherent implementation of these objectives transversally among school subjects and throughout subsequent school years, SCRIPT additionally develops reference frameworks and tools, e.g. *Mediencompass* (SCRIPT, 2019), which are deployed via the platform *curriculum.lu*[3].

SCRIPT also develops, tests and implements new innovative concepts and teaching methods transversally throughout the educational landscape. If successful, they become eventually anchored within the educational system. Such flagship implementation examples with several focal points (methods, competences, key topics such as sustainability and digitization) include the *Pedagogical ecological check for high-schools (öko-check)* (MECDD, MENJE, et al., 2020), the implementation of a *National network of educational gardens* (MECDD, MENJE, et al., 2020), the newly introduced *digital sciences* course (MENJE, 2021) in secondary education and the *coding* course (SCRIPT, 2021a) in primary education (UNESCO Institute of Statistics, 2017; Weis & Gibéryen, 2021).

MENJE also works in close collaboration with the national *Platform of Education for Environment and Sustainable Development* (PEEDD) which brings together teachers, educators and NGOs, for example through an annual ESD-fair (PEEDD et al., 2022).

With Luxembourg being a country facing a strong and diverse immigration, MENJE follows a

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[3] *www.curriculum.lu*

policy of smoothing intercultural integration through *Welcome Classes* and developing a network of public international schools, hence setting the framework to facilitate educational achievement for all children and youth.

A further important component to achieve the sustainability and educational goals requires teachers and schools to set the appropriate context to enable education for sustainable development. To facilitate this, the *National Educational Training Institute* (IFEN[4]) (MENJE, 2015a) offers a wide range of continuous professional development and networking opportunities plus specialized books in its library. Topics such as *How to promote participation and self-responsibility in the classroom* are equally relevant to IFEN's offer as are trainings that explicitly address the issues of education for sustainable development. At the level of school development, IFEN's school improvement coaches also focus on setting incentives initiating sustainability projects and fostering a culture of participation in educational institutions.

The conditions for youth participation in schools were created by law in 2004 (MENJE, 2004), be it class representatives, student committees or the *National Student Council* (CNEL[5]) (MENJE, 2015b). To ensure that the active expression of young people's opinions in Luxembourg via these channels becomes effective, the *Centre for Political Education* (ZpB[6]), an independent foundation (RCSL, 2021), supports participatory structures in schools in extracurricular contexts. It also supports teachers with the implementation of class councils whose discussions find their way up through the school councils to the *National Student Council*, thus making their voices heard at the (inter)national political level. Similar formats are also promoted by ZpB in the non-formal sector for children and young people to advocate for their concerns, mostly at the municipal level.

ZpB's mission, in line with that of the SDGs, is to promote an understanding of democracy and politics among children, young people and adults. ZpB develops publications, new learning settings and methods (e.g. *Léieren duerch Engagement* (ZpB, 2022), interactive exhibitions (e.g *DemokratieLabo* (ZpB, 2020)) training courses and empowering workshops (e.g. *Democracy Train* (ZpB, 2018), *DemocraCity* (ZpB, 2019)) that illustrate and explain democratic processes and social issues. These hands-on experiences allow children and young people to experience democracy and politics first-hand, allowing them to grow into responsible and engaged citizens. The ZpB's slogan

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[4] *www.ifen.lu*
[5] *www.cnel.lu*
[6] *www.zpb.lu*

Learning and living democracy - Demokratie léieren a liewen illustrates the two focal points of the foundation's work.

Non-formal educational youth participation and related youth policy instruments are regulated by the Youth Act (MENJE, 2016) and are guided by three strategic orientations: participatory, transversal and evidence-based. This provides for active questioning of young people on all issues that are of concern to them and an important legal instrument of institutional youth participation is the *National Youth Parliament*[7]. Youth participation and youth empowerment are an integral part of the non-formal educational work and youth work.

The *National Framework for Non-formal Education* (MENJE & SNJ, 2018) is also rooted in the *Youth Act* and drives the *National Youth Service's*[8] (SNJ) work. The framework provides the essential pedagogical basis and defines youth participation both as a goal and as a method of youth work, with a values-based approach, and *Democracy* and *Participation* being defined as a specific field of action. It describes amongst others the characteristics guiding the empowerment of youth: volunteering, openness, participation, discovery-based learning, process orientation, collaborative learning, relation and dialogue as well as autonomy and self-efficacy.

The active youth participation and strengthening of the youth is additionally implemented through long-term contracts with youth structures and require as a decisive founding factor that activities should be planned *by* and *with* young people, regardless of whether it concerns designing their own youth centre at the local level or youth participation at municipal level or projects at the national level such as discussion forums on the design of education policy. A major challenge in terms of participation is inclusion. Empowerment and sustainable development are key concepts deployed either directly through topic-specific projects or through projects that indirectly address these topics by improving young people's self-esteem, sense of initiative, cooperation and responsibility, all of which lead to more committed and responsible citizens. Youth work and non-formal education in particular are strong levers that complement the school offer and reach young people.

The SNJ *Centre Hollenfels* (SNJ, 2022) is the national flagship educational centre when it comes to sustainable development using a non-formal educational approach. Young people experience environmental topics first-hand through collaborative and discovery-based learning activities, en-

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[7] *www.jugendparlament.lu*
[8] *www.snj.public.lu*

hanced participation, systemic thinking and raising awareness of self-efficacy. As a ripple-effect, the initiative *Being active outdoors* (SNJ, 2021a), expands this offer to non-formal educational partner-structures by supporting new projects, like the *Outdoor Day* (SNJ, 2021c); or the *Outdoor Camp* (Elisabeth Jeunesse, 2021), which also stimulate youth empowerment by having them spend teambuilding weekends out in the woods for example.

Furthermore, the SNJ's work focuses specifically on the crucial transitional phase between school and work life by offering individual counselling, specific workshops, housing opportunities as well as voluntary services on a national, European, and international level. This brings young adults into touch with diverse topics such as social injustice or global issues, allowing them to be better equipped to implement their own personal projects, to activate their sense of responsibility and to reflect upon themselves and society.

The platform *IWantICan- EchWellEchKann* (SNJ, 2021b) completes this offer by encouraging young people to be active, to try out new experiences and implement their own personal projects through a diverse offer of activities and volunteering opportunities as well as personal project development support, all of which help to build healthy self-esteem.

In Luxembourg, youth empowerment is also supported by the guidance policy, which refers to activities helping citizens to identify their capabilities, skills, and interests, allowing them to make well-informed decisions concerning their choice of studies, trainings, and professional activities with the purpose of serving their personal development. In a national partnership perspective to reach a common goal, several public services supporting guidance, such as educational and public employment services, were gathered into one site when the national guidance centre was officially created in 2017 as the *House of Guidance (Maison de l'orientation)*[9] (MENJE, 2017), and a *Reference Framework for Educational and Vocational Guidance* had been elaborated by its services in collaboration with the different stakeholders. (MENJE, 2019).

The *House of Guidance* is developing a reflection on sustainable guidance linked to European objectives (green jobs, green skills, sustainable guidance) in cooperation with the *Euroguidance network*[10] and with SCRIPT. It implements, in schools as well as in out-of-school non-formal educational settings, programs of awareness-raising on the competences required by the professional

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[9] *https://maison-orientation.public.lu/fr.html*

[10] *https://www.euroguidance.eu/*

world, hence facilitating a sustainable integration of young people into the job market. The *House of Guidance* organises activities linked to several ESD objectives; in this way it is supporting social inclusion and education for all and promoting lifelong learning opportunities.

Conclusion

The framework outlined here, with national educational targets based on the 17 SDGs, shows that educational policy in Luxembourg follows a holistic, future-oriented and participatory approach, in which the focus lies on the recognition of young people and their needs. Innovative educational approaches for *Global Citizenship Education* in Luxembourg is made possible through the development of expertise and capacity building within the system. Despite challenges of overcoming remaining ingrained, systemic hurdles and ways of thinking, a sustainable educational environment in which innovation is promoted opens up new horizons. Innovation is the key feature of a holistic concept of high-quality and contemporary education. Finally, it must be emphasized that many initiatives derive from the motivation of youth workers, youth services, members of youth organisations and young people themselves.

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3. Engaging and Empowering Youth in Belgium And Beyond: Select Case Studies

Simon Herteleer

ABSTRACT:

Young people play a pivotal role in the implementation, dissemination and realisation of ESD. Many initiatives exist that put youth at the center, however institutions often lag in implementing meaningful change that moves young people from being participants to shapers of educational systems.

Keywords: Youth, Participation, Formal, Non-formal and Informal learning

According to the United Nations, there are approximately 1.2 Billion young people aged 15 to 24 at present.[1] When thinking of this figure, it is important to remember that there is no universally agreed definition of what is meant by 'youth'. Sometimes these definitions are more restrictive at other times, more permissive. Despite this lack of a universally agreed definition, young people bear the brunt of the future on their backs. The world has reached a tipping point and young people have very little, and often no, say in what is happening or what should change. Whilst there are many different ways to try and change this, no collective solution exists. However, young people (should) have one common denominator: education. Education and educational institutions are supposed to be the breeding ground for our common knowledge, of shared history and for the dissemination of knowledge.

As with youth, there is no common definition of either education or of educational institutions. These are often split in various categories depending on the context and the goal: formal vs informal; primary, secondary, tertiary; compulsory or voluntary. In this article we will focus on this first split, between formal vs informal education and look at how these can and should complement each other at different levels, from imparting, to sharing, to shaping education and knowledge. In this article we will look at how the divide between formal and informal education is bridged through ESD both with and by youth.[2]

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[1] *https://www.un.org/en/global-issues/youth*

[2] Note: the author has participated in some of the referenced initiatives, however their mentioning in this article does not imply endorsement by the referenced insitutions/organizations.

Formal vs informal education

When thinking about education we often think of recognized institutions such as schools, universities, technical schools, etc. These institutions generally require accreditation from governments or other governing organizations. For accreditation they often require substantive validation, including among others, courses, curricula and learning objectives. At the same time, these recognized institutions, as part of the formal educational system also require funding, infrastructure and personnel. Depending on the country this can be organised through public bodies, private companies or a combination of both. If the institution is recognized, it will often result in the delivery of a certificate or degree of acquired knowledge or completed courses which can be used in future life. This method of education is what the world has known for centuries: a student is taught a certain set of things by a teacher.

In recent years however, recognition has come for a different type of education, informal education which could be divided into two further categories: *non-formal learning* and *informal learning*. Non-formal education takes place outside formal learning environments but within some kind of organisational framework. It arises from the learner's conscious decision to master a particular activity, skill or area of knowledge and is thus the result of intentional effort. Informal education takes place outside schools and colleges and arises from the learner's involvement in activities that are not undertaken with a learning purpose in mind.

All forms of education however have something in common, they aim to impart knowledge, skills and teaching to a learner. Sometimes these can aim to further the shared lived experiences of a culture or society, sometimes they aim to impart factual knowledge, on other times they aim to improve an individual's skills and abilities. However, education should always be used for the good of a population and of mankind – at least this author hopes so. This is also where ESD comes into play. As we face unprecedented challenges for modern society, with clear warning signs and little action, ESD can and should help us prepare, adapt, mitigate and act to face and counter difficulties humans and ecosystems face. This can only be achieved by bridging the gap between formal and informal education.

Formal and informal education play a complementary role for learners of all ages. Where formal education is often based on the principle 'what should a learner learn?', informal education often departs from two main questions: 'What does the learner not yet know?' and 'what does the learner want to learn?' It is in this meeting point that ESD plays a crucial role, as it empowers learners of all ages with the knowledge, skills, values and attitudes to address the interconnected global challenges we are facing, including climate change, environmental degradation, loss of biodiversity, poverty and inequality. Non-formal education in this sense plays an interesting role. When

included within the setting of formal education – or closely related to it – it depends on the active and often voluntary engagement of participants

Imparting knowledge: The complementary role of informal and non-formal education
WereldWijs[3]– A simulation of the UN
A Model United Nations (MUN) – or a simulation of another (inter)national body – brings together students from higher or secondary education to simulate a real UN or intergovernmental conference. Participants follow in the footsteps of a diplomat, political or other figures, defend the views of a country or organization and debate a topical issue, requiring preparation, understanding and participation.

During a MUN, the participating delegations immerse themselves in the policy of a certain country and then take on the role of diplomat or government negotiator. Once the simulation has started, topical subjects of (inter)national importance are examined, after which, during a series of successive debates, a solution to the world problem in question is actively sought. During the actual simulation of the negotiation process students are expected to use their communication and negotiation skills as well as their critical thinking abilities to defend their countries, organization's or individual's policy.

Whilst many such examples exist, a notable case from Belgium is the exchange program between a school in Antwerp (BE) and Roosendaal (NL). Every year, a group of between 25-30 students from both schools voluntarily join to prepare the simulation on a topic of interest. Students have the possibility of immersing themselves in a topic they are not yet accustomed to and which complements what they are learning in school; through workshops with local actors they also get first-hand experience of what is happening in the field. Topics covered can include for example, poverty reduction, migration or the energy transition. Students try to solve a case-study and receive information from experts or people who work in the field. They learn, for example, how to live on a limited budget (poverty) or reduce their ecological footprint (energy transition), all in addition to their regular school work with a dedicated team of teachers and non-formal educators who work together to make the program possible.

Sharing Knowledge
Empowering Young People to share their experiences
Young people are often seen mainly as the recipients of knowledge, however they have a multitude

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[3] For more information, please refer to: *www.vvn.be/activiteiten/scholierenmun/*

of information to share. It is for this reason that in recent years the concept of peer-to-peer education has acquired greater importance. Peer education involves people being tutored or taught by others from backgrounds similar to their own. It departs from the principle that the experiences lived by a member of a similar group (age, background or other) have shared experiences and can therefore teach and impart knowledge which is 'closer to home'. Recent trends calling for more south-south cooperation are a clear example of this principle.

As young people have grown up being faced with similar challenges (environmental degradation, demographic changes, etc.) they are able to share experiences and can more easily share knowledge among each other. Many platforms exist for young people to share knowledge and learning, from national youth councils and student councils to organized groups such as the Scouts or specific interest groups. Sometimes young people are also included in more formal structures, something often called youth-adult partnerships, where young people and adults team up to work on a shared topic.

An example from Belgium is the inclusion of young people into the world of Sexual and Reproductive Health and Rights (SRHR) through a dedicated youth group (de Ei-Cel[4]) through which young people have a say in the materials and policies of the organization but also actively share their own knowledge with peers. These models exist throughout the region and worldwide where young people either organize themselves to share and impart knowledge or are actively involved to help improve the work of organizations and institutions. The UNECE ESD Youth Platform is another such example. It is a dedicated space for young people to 1) organize themselves and 2) actively participate in the decision-making processes of the Steering Committee on ESD of the UNECE[5] (see below).

Shaping education policies and programs

Another important role for young people in the ESD realm, is their part in the shaping of policies and programs. Although young people are often simply seen as the recipients of knowledge, they hold a trove of information and knowledge which is often ignored. In order to ensure that this knowledge is not lost and that their voices are heard, young people either organize themselves or are invited to participate and shape the development of policies and programs. Sometimes these are extremely successful, sometimes young people are simply included as tokens to illustrate how 'youth-friendly' a policy, program or government are.

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[4] For more information, please see: *https://www.sensoa.be/participeer-de-jongerengroep-van-sensoa*
[5] For more information, please see: *https://unece.org/esd-strategy*

Successful initiatives involve for example, the European Youth Forum – which serves as a platform and advocacy group of the national youth councils and international non-governmental youth organisations in Europe and is recognized as a major stakeholder by many governments and (inter-)national institutions or the United Nations Major Group for Children and Youth. This is the United Nations General Assembly mandated, official, formal and self-organised space for children and youth to contribute to and engage in certain intergovernmental and allied policy processes at the United Nations.

Looking to the future

Young people, as recipients and participants of education in general, and those who will face many more man-made disasters in the future, still face many challenges. Despite some of these successful initiatives, other institutions are still lagging behind. Formal educational institutions have not been overhauled in many decades, continue to use similar teaching methods and have few participative approaches to what is taught. Political systems are still dominated by the same power groups as many years ago and our society in general fails to acknowledge the existence of those 1.2 billion young individuals when making decisions. ESD as a tool, and the actors aiming to implement it, should not forget that this group exists and that it can and will play a pivotal role for the future we will live in.

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4. National and Regional Practices on the Engagement of Youth in Education for Sustainable Development in The Aquitaine Region, France

Professor Michel Ricard
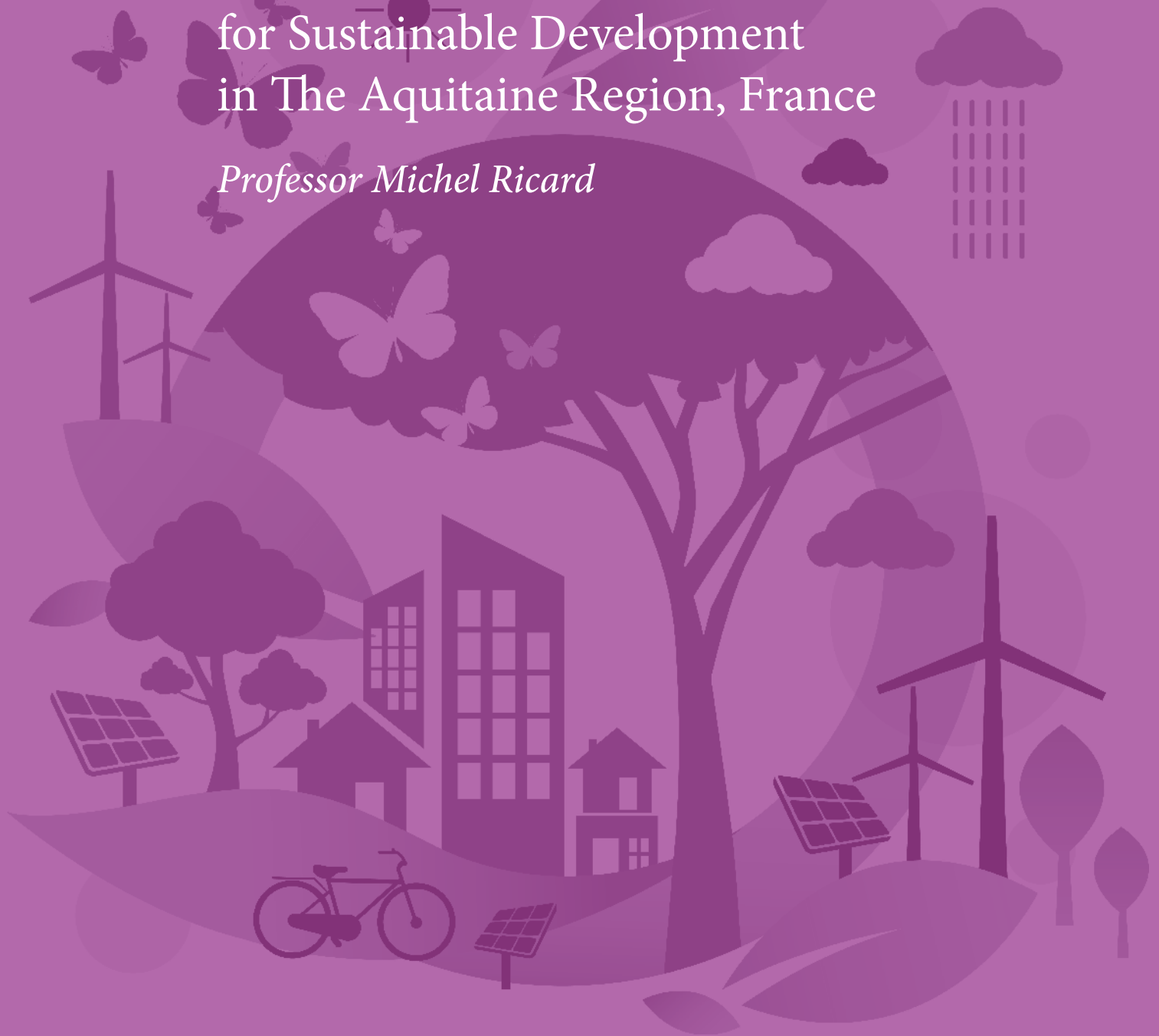
ABSTRACT:

Throughout the curriculum followed in France by young people in kindergarten, then in middle school and finally in high school, national systems or regional initiatives are set up, all of which have the characteristic of putting young people at the heart of the action. The article presents the main lines of the French national educational program in ESD then details a certain number of regional devices implemented in the Neo-Aquitaine region, the largest administrative region located in the south-west of France. All of these initiatives are aimed at educating young people and placing them at the heart of society so that they can participate in the reflections and decisions that will decide the society of tomorrow that will be theirs.

Keywords: ESD National and regional programs in France

The place and role of young people in ESD

Beyond education, and more particularly education for sustainable development (ESD), it is important to question the future of our society and its future actors. The current generation of young people is the last generation that can implement the necessary transition towards sustainable development (SD). These young people must therefore be properly educated and prepared so that they can be involved early in decision-making within the framework of intergenerational dialogue.

A quality, inclusive and egalitarian school education has a major role to play in bringing about a more sustainable world. Indeed, from kindergarten, young people construct their choices, acquire the bases of a number of fundamental values and behaviours. They form most of their habits within the family and at school, which helps them to develop their critical thinking, reflection and creativity. The earlier the principles of SD are introduced, the greater their influence; this reinforces the importance of developing ESD throughout the school system and in the associated extra-curricular systems.

French national programs to empower young people to implement ESD

ESD is at the heart of the collective project and the educational commitment of the French Ministry of National Education. Throughout the curriculum that young people follow, from kinder-

garten to high school, national systems or regional initiatives are set up, all of which have the characteristic of putting young people at the heart of the action.[1]

These national programs for ESD are not a straitjacket but contribute to the development of regional initiatives which respond to specific local needs and which appeal to local authorities and associations. The importance of meaningful youth participation, and the different forms it can take, are included in the various processes related to the implementation of ESD.

Examples of national systems are presented here, as well as other systems with a more regional vocation developed in the Bordeaux Academy in the Aquitaine region, with a particular focus on the 'for Sustainable Development – JSD' program.

The installation of eco-delegates in schools in France
The establishment of eco-delegates in schools, colleges or high schools has been developed for many years, particularly in establishments engaged in a global approach to sustainable development; they are labelled 'Establishment in a SD approach – E3D', where E3D refers to the whole institutional approach (WIA) mentioned in UN Sustainable Development Goal 4. This label, awarded by National Education, values the exemplary commitment of school structures that implement participatory approaches that involve different internal actors, with students in particular, as well as external partners.

The ministerial circular on ESD (August 2019) generalized the installation of eco-delegates in the 2nd degree with the election of two eco-delegates per establishment who sit on the bodies of school democracy and have a role of official representation of their classmates as well as the appointment of at least one eco-delegate per class to promote local dynamics.[2]

These eco-delegates are a source of proposals for the deployment of projects in their establishment in order to improve its operation (fight against food waste, sorting of waste, layout of the courtyard, revegetation, etc.) and the well-being of users. Contributing to their training in citizenship, this mission of eco-delegate allows young people to realize their desire for commitment to respond to contemporary environmental issues and to be involved in ongoing projects. These students benefit from support to strengthen their knowledge of environmental issues and lead them to autonomy and the exercise of active citizenship.

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[1] *https://eduscol.education.fr/document/5239/download*
[2] *https://www.education.gouv.fr/bo/19/Hebdo31/MENE1924799C.htm.*

Each year, an eco-delegate action prize allows students to present a video describing the ESD project they are carrying out on the eco-delegate section of the Bordeaux academic portal.[3]

Educational areas, a French partnership initiative
Initiated by the French Office for Biodiversity (OFB) and several ministries, educational areas (AE), marine or terrestrial, allow middle and high school students to deepen their knowledge of the biodiversity of their local area, to take ownership of the issues related to its preservation and to manage a portion of the coast, wetland, forest, river or urban park in a participatory manner. This system is deployed at the school as part of an educational project led by a teacher with the support of a technical adviser. It is a partnership action, in connection with local environmental issues, allowing young people to be bearers of proposals for the management of this natural environment and therefore to act through concrete actions in their living environment.

Deployed using a specific methodology and in compliance with a charter of educational areas, this system is based on three pillars:
- *Know*: acquisition of knowledge about the natural and cultural heritage of the chosen area
- *Living*: discovery of the environment, its actors and its different uses
- *Transmit*: transmission of knowledge and management of a preserved common heritage.

The award "Educative marine area" (AME) and "Educational terrestrial area (ATE)" recognize the implementation of an eco-citizen approach at the heart of the management of natural and cultural heritage.[4]

Accelerating ESD through youth actions: Examples of regional ESD projects
ESD cannot be restricted to national programs but must also be based on initiatives allowing young people to better integrate into the various actions that make up their social and societal life. In the Aquitaine region, there are many regional ESD projects, some of which are presented below.
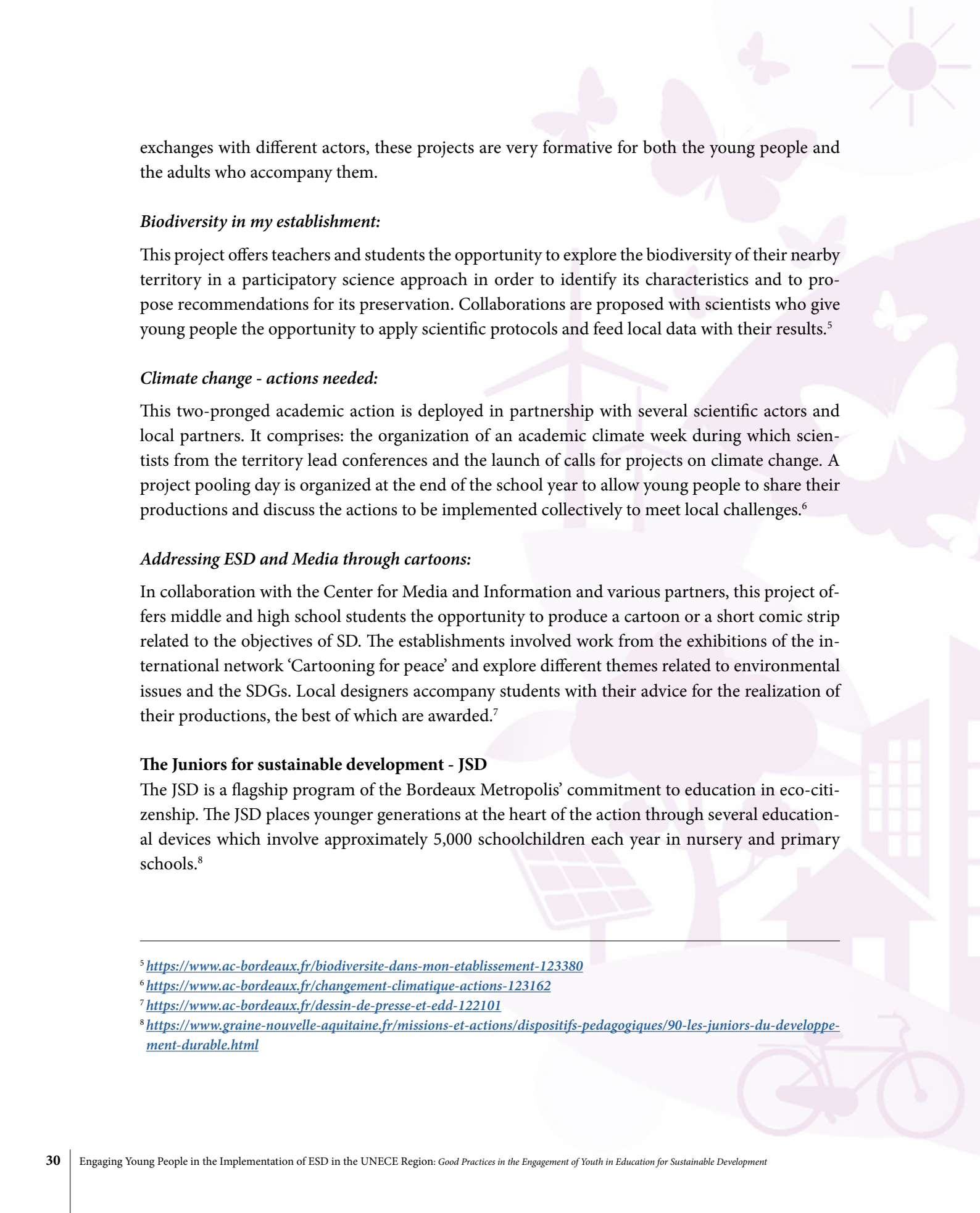
ESD educational projects driven by the rectorate of the Bordeaux Academy
The ESD academic mission drives various educational projects for middle and high schools in collaboration with various local partners in order to allow students to take ownership of the environmental issues of their territory and to act through concrete actions to respond to them. In terms of building/strengthening skills, re-investing knowledge, motivating the students involved,

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[3] *https://ent2d.ac-bordeaux.fr/disciplines/edd/eco-delegates/*
[4] *https://ofb.gouv.fr/actualites/ouverture-des-inscriptions-aires-educatives*

exchanges with different actors, these projects are very formative for both the young people and the adults who accompany them.

Biodiversity in my establishment:

This project offers teachers and students the opportunity to explore the biodiversity of their nearby territory in a participatory science approach in order to identify its characteristics and to propose recommendations for its preservation. Collaborations are proposed with scientists who give young people the opportunity to apply scientific protocols and feed local data with their results.[5]

Climate change - actions needed:

This two-pronged academic action is deployed in partnership with several scientific actors and local partners. It comprises: the organization of an academic climate week during which scientists from the territory lead conferences and the launch of calls for projects on climate change. A project pooling day is organized at the end of the school year to allow young people to share their productions and discuss the actions to be implemented collectively to meet local challenges.[6]

Addressing ESD and Media through cartoons:

In collaboration with the Center for Media and Information and various partners, this project offers middle and high school students the opportunity to produce a cartoon or a short comic strip related to the objectives of SD. The establishments involved work from the exhibitions of the international network 'Cartooning for peace' and explore different themes related to environmental issues and the SDGs. Local designers accompany students with their advice for the realization of their productions, the best of which are awarded.[7]

The Juniors for sustainable development - JSD

The JSD is a flagship program of the Bordeaux Metropolis' commitment to education in eco-citizenship. The JSD places younger generations at the heart of the action through several educational devices which involve approximately 5,000 schoolchildren each year in nursery and primary schools.[8]

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[5] *https://www.ac-bordeaux.fr/biodiversite-dans-mon-etablissement-123380*
[6] *https://www.ac-bordeaux.fr/changement-climatique-actions-123162*
[7] *https://www.ac-bordeaux.fr/dessin-de-presse-et-edd-122101*
[8] *https://www.graine-nouvelle-aquitaine.fr/missions-et-actions/dispositifs-pedagogiques/90-les-juniors-du-developpement-durable.html*

Concretely, the JSD allows a network of associations to provide their expertise to teachers by financing their interventions in class or outside the walls of the school. Teachers involved in JSD projects benefit from the support of educational advisers from the Department of National Education Services. The JSD also targets extracurricular structures and associations that are in contact with the young public to support them in their development of skills on ESD. In addition to the Academy of Bordeaux, several regional and departmental associations support various programs such as the Graine Nouvelle-Aquitaine association.[910]

Specifically, the actions developed within the framework of the JSD include several initiatives which complement the national programs aiming to build the knowledge, skills and culture of the common base and to build a sense of citizenship within the pupil. These initiatives are intended to carry out awareness-raising and project actions, obtain the E3D label (WIA) and participate in development days in extracurricular activities.

WIA label (E3D)

This label, issued by National Education, rewards schools that work for SD both in their educational project and in the overall operation of the establishment. This labelling is not only a priority for the rectorate, but it also resonates with the commitments of Bordeaux Metropolis for SD which accompanies this approach.[11]

Valorisation days

The SD Valorisation Days bring together all the classes that have participated in the ESD system during the school year and allow students to understand sustainable development from all angles thanks to the discovery of numerous projects with various themes.

Extracurricular activities

- *Large format*: a fruit of the partnership between Bordeaux Metropolis and the GRAINE Nouvelle-Aquitaine network, 'Large Format' is intended to welcome minors who wish to engage in an educational approach to SD. An expert trains the facilitators in the challenges of SD and project methodology. Whether the team is beginning or confirmed in ESD, it is assisted for a year in the implementation of the educational project. Large Format support takes the form

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[9] *hhttps://juniorsdudd.bordeaux-metropole.fr/decouvrez-nos-partenaires*
[10] *Https://graine-nouvelle-aquitaine.org*
[11] *https://juniorsdudd.bordeaux-metropole.fr/accompaniment-E3D*

of training workshops and collaborative work groups. The support offers a maximum of four days a year.[12]

- *Fridays of the ACMs*: In 2021, the JSD and the NGO Graine Nouvelle-Aquitaine initiated the Friday's Collective workplaces for minors, a cycle of one-off, practical and thematic training sessions in favour of the ecological transition. It takes place four times a year, on four themes, in four locations. The program comprises feedback and testimonials, moving debates, practical advice, site visits and live entertainment to fill up on ideas.[13]

The JSD also includes two other schemes open to teachers and schoolchildren of Bordeaux Métropole: *Junior Creators* leads students to reflect on major environmental issues through a sensitive, creative and artistic approach by articulating the course of education for sustainable development in the Artistic and Cultural Educational Course. The *Earth's Reporters Juniors* tackles sustainable development topics through investigation, writing articles and reporting by articulating ESD and EMI (Media and Information Education).

The challenges faced by young people and the solutions to overcome them
Today young people are faced with three major challenges: employment and training, equal opportunities and the rebuilding of a more sustainable social project. Young people find it very difficult to meet these challenges, even though they bring the energy and creativity that our society needs to manage the social and economic transition; the participation of young people is crucial to achieving the Sustainable Development Goals. But how to participate, when so many young people do not have access to health, education or employment and are often forgotten in the development of our societies? Around 15% of young people aged 15 to 24 are unemployed even as they represent our hope for achieving the SDGs and facing the challenges of tomorrow.

It is therefore crucial to mobilize young people to build sustainable development and this is possible by setting up, from an early age, a coordinated school course right from kindergarten when young people begin to build their criticality, their thinking and their creativity.

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[12] *https://www.graine-nouvelle-aquitaine.fr/missions-et-actions/dispositifs-pedagogiques/90-les-juniors-du-developpement-durable.html*
[13] *https://www.graine-nouvelle-aquitaine.fr/missions-et-actions/dispositifs-pedagogiques/90-les-juniors-du-developpement-durable.html*

It is with this purpose that national programs and regional initiatives have been developed in France which aim to develop an inclusive and egalitarian ESD which puts young people at the heart of the system and allows them to participate, in a responsible and informed manner, in the decisions taken today and which will condition tomorrow's society: their society.

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5. The Integration of Esd in the Higher Education Curriculum Through Citizenship Education: A Case From Westminster International University in Tashkent

Sherzod Khaydarov, Alisher Kosimov and Aziz Kholmatov
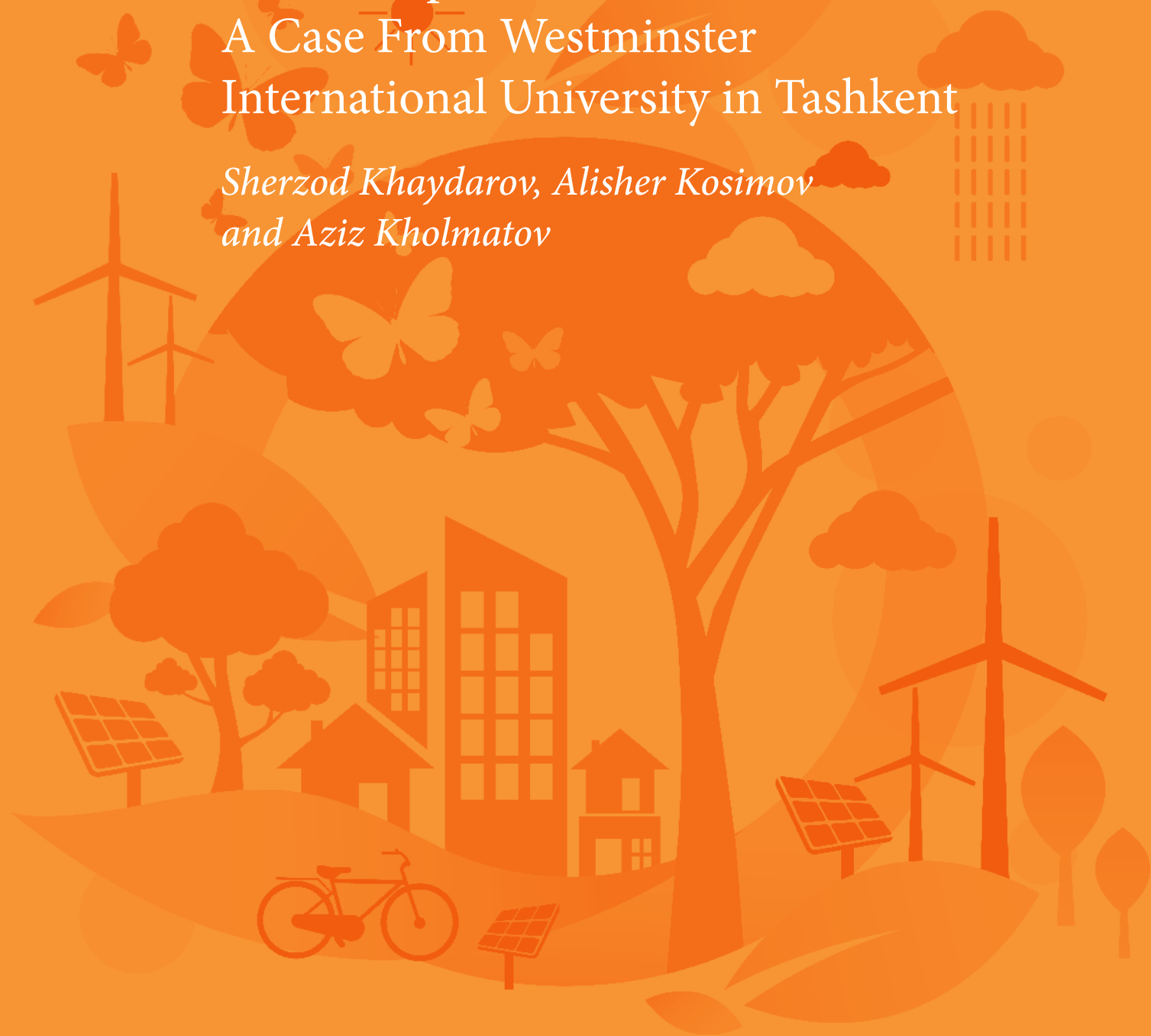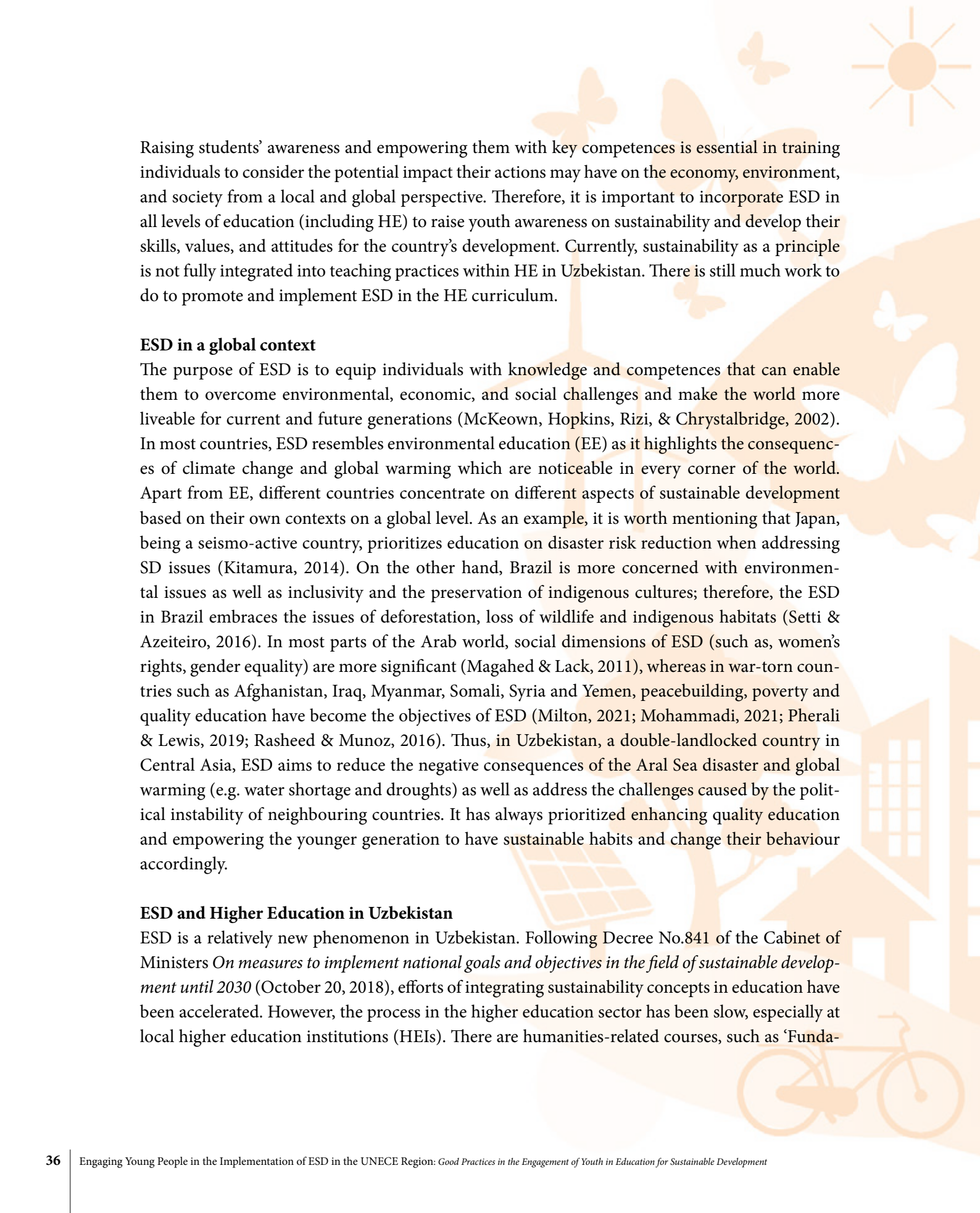
ABSTRACT:

The role of higher education has become vital to disseminate the values of sustainability among youth. In a globalized world, the sustainable development of communities and states depend, among other things, on how universities prepare the youth for environmental, social and economic challenges that are becoming increasingly visible elsewhere, especially following the spread of Covid 19. As a young developing country, Uzbekistan is also susceptible to economic and environmental crises. Therefore, raising the awareness of youth and empowering them with relevant knowledge and skills is the key to the stability and social well-being of the country. The purpose of this article is to draw attention to the emerging role of education for sustainable development (ESD) in youth empowerment and to showcase good practices of effectively incorporating ESD in the higher education curriculum. Based on a case study at a leading international branch campus in Tashkent, we propose a good example of an ESD integrated course that can be transferred to other local universities' curricula in Uzbekistan. The paper contributes to a broader debate on ESD in higher education and maps the merits as well as the challenges of integrating ESD into the curriculum through citizenship education as a way to develop young people's competences for sustainable development.

Keywords: ESD, higher education, sustainability, citizenship education, youth empowerment

Background

Education for sustainable development (ESD) has become a global trend in higher education (HE) in recent years and plays a crucial role in promoting the ambitious Sustainable Development Goals (SDGs) of the 2030 Agenda adopted on September 25, 2015. Although the idea of incorporating sustainable development (SD) into education appeared in 1987, the concept gained power after the Thessaloniki conference in Greece 1997 (Gadotti, 2008) and the worldwide implementation began after the UN announced the years 2005-2014 as the Decade of Education for Sustainable Development (UNESCO, 2009). ESD encompasses all dimensions of global problems and aims at developing individuals' skills so that they can make informed decisions and reflect on their actions.

Raising students' awareness and empowering them with key competences is essential in training individuals to consider the potential impact their actions may have on the economy, environment, and society from a local and global perspective. Therefore, it is important to incorporate ESD in all levels of education (including HE) to raise youth awareness on sustainability and develop their skills, values, and attitudes for the country's development. Currently, sustainability as a principle is not fully integrated into teaching practices within HE in Uzbekistan. There is still much work to do to promote and implement ESD in the HE curriculum.

ESD in a global context

The purpose of ESD is to equip individuals with knowledge and competences that can enable them to overcome environmental, economic, and social challenges and make the world more liveable for current and future generations (McKeown, Hopkins, Rizi, & Chrystalbridge, 2002). In most countries, ESD resembles environmental education (EE) as it highlights the consequences of climate change and global warming which are noticeable in every corner of the world. Apart from EE, different countries concentrate on different aspects of sustainable development based on their own contexts on a global level. As an example, it is worth mentioning that Japan, being a seismo-active country, prioritizes education on disaster risk reduction when addressing SD issues (Kitamura, 2014). On the other hand, Brazil is more concerned with environmental issues as well as inclusivity and the preservation of indigenous cultures; therefore, the ESD in Brazil embraces the issues of deforestation, loss of wildlife and indigenous habitats (Setti & Azeiteiro, 2016). In most parts of the Arab world, social dimensions of ESD (such as, women's rights, gender equality) are more significant (Magahed & Lack, 2011), whereas in war-torn countries such as Afghanistan, Iraq, Myanmar, Somali, Syria and Yemen, peacebuilding, poverty and quality education have become the objectives of ESD (Milton, 2021; Mohammadi, 2021; Pherali & Lewis, 2019; Rasheed & Munoz, 2016). Thus, in Uzbekistan, a double-landlocked country in Central Asia, ESD aims to reduce the negative consequences of the Aral Sea disaster and global warming (e.g. water shortage and droughts) as well as address the challenges caused by the political instability of neighbouring countries. It has always prioritized enhancing quality education and empowering the younger generation to have sustainable habits and change their behaviour accordingly.

ESD and Higher Education in Uzbekistan

ESD is a relatively new phenomenon in Uzbekistan. Following Decree No.841 of the Cabinet of Ministers *On measures to implement national goals and objectives in the field of sustainable development until 2030* (October 20, 2018), efforts of integrating sustainability concepts in education have been accelerated. However, the process in the higher education sector has been slow, especially at local higher education institutions (HEIs). There are humanities-related courses, such as 'Funda-

mentals of Spirituality' (direct translation from Uzbek), and Ecology, taught at local universities that concentrate on developing spiritual and moral values and environmental education. Some other universities (private and international ones) on the other hand, have modules that are relevant to ESD, such as Contemporary Global Issues (TEAM University) and Business and Global Issues (Webster University, Tashkent).

Example of good practice

One example of a good practice at Westminster International University in Tashkent is a new module which was introduced as a year-long core module as part of the foundation course (Certificate in International Foundation Studies - CIFS) for level 3 students in the academic year 2020/2021 named *I Citizen*. The module was developed with the ambitious aims of preparing informed and active citizens by enhancing students' critical, creative and inquisitive thinking as well as problem-solving skills, which are considered 21st-century skills (Erdem, Bağcı & Koçyiğit, 2019). The module is an implicit form of ESD which covers practically all SDGs and relates them to citizenship education. The first semester of the module teaches students to make informed judgments based on an inquiry they make on a particular issue related to one of the SDGs. The second semester of the module on the other hand, is more practical and leads students to acquire the values of active citizenship and problem-solving skills by collecting primary data to solve a certain problem in their communities. In other words, students are introduced to the 17 UN SDGs and are encouraged to link these goals to various local and global problems and issues during the course. Other syllabus elements include communicating ideas effectively, citizenship, human rights, group work, conflict resolution and decision making.

Context

Uzbekistan is currently undergoing rapid reforms in many spheres. The country is becoming more open to the world. It is located in Central Asia and has the highest population in the region. Some of the current main challenges of the country are the effects of the Aral Sea's shrinking, shortages of electricity/gas in several regions, shortage of water and the impact of global warming. The country is also trying to address the problems that the Coronavirus pandemic has caused.

The institution

Westminster International University in Tashkent is an accredited Institution of the University of Westminster in the UK. The language of instruction is English. Apart from classroom instruction, the University provides a library, student support and additional training that supports teaching and learning. Students can also get advice from students of higher levels who have previously taken the course.

I, Citizen

The *I, Citizen* module helps students to develop competencies necessary to be able to understand the complex world they live in and act responsibly. The following paragraphs describe the module's learning outcomes and assessment tasks.

The module has five learning objectives (LO) according to which, students will be able to: demonstrate the skills and values for academic study (LO1); apply basic reasoning skills to global and local issues (LO2); demonstrate effective group-working skills (LO3); demonstrate basic understanding of active and informed citizenship (LO4); apply basic problem-solving techniques (LO5).

The learning outcomes are designed so that the obtained skills are practical and students can implement them in their daily lives when confronted with complex problems and issues. There are two assessment components which measure students' acquired skills. The first assessment requires students to take a reasoned stand on a particular issue by providing evidence and defending their ideas. This task evaluates LOs 1, 2, 4. The second assessment is a group project. Students are required to identify a local problem from their communities, provide a reasoned account for its causes and propose a solution. They will also be required to reflect on how their group worked as a team. This task evaluates LOs 1, 3, 4, 5.

Process

The module is delivered through seminars during one academic year. The module is divided into two semesters. The total number of teaching and learning hours of seminars and blended learning is 96 hours (seminars – 48 hours; blended learning – 48 hours). Students are expected to do 104 hours of independent study.

In the first semester, students choose a local issue to research. The students are expected to learn the context (i.e. current state, history of debate and political/social/cultural context) of a chosen issue and generate arguments for and against, supported with evidence, considering both the local and global impact. Having studied the context of the issue and generated the arguments for and against, students need to make the final judgment which should be based on the evaluation of arguments. During seminars, lecturers will model and provide opportunities to practice key skills. The final product of this module is an oral presentation of students where the students are expected to present their work.

In the second semester, students do a group project. The group consists of 3-4 students. The task is to choose a complex local problem and investigate the causes and needs of stakeholders to propose an effective solution. The final product of the project is a written proposal. The proposal will be

graded based on the comprehension of the selected problem, use of evidence, quality and originality of solutions and implementation of feedback. Students will also reflect on their group work experience and do peer evaluation. Students have a progress meeting with the lecturer during the process to get formative feedback.

Innovative advances in the field
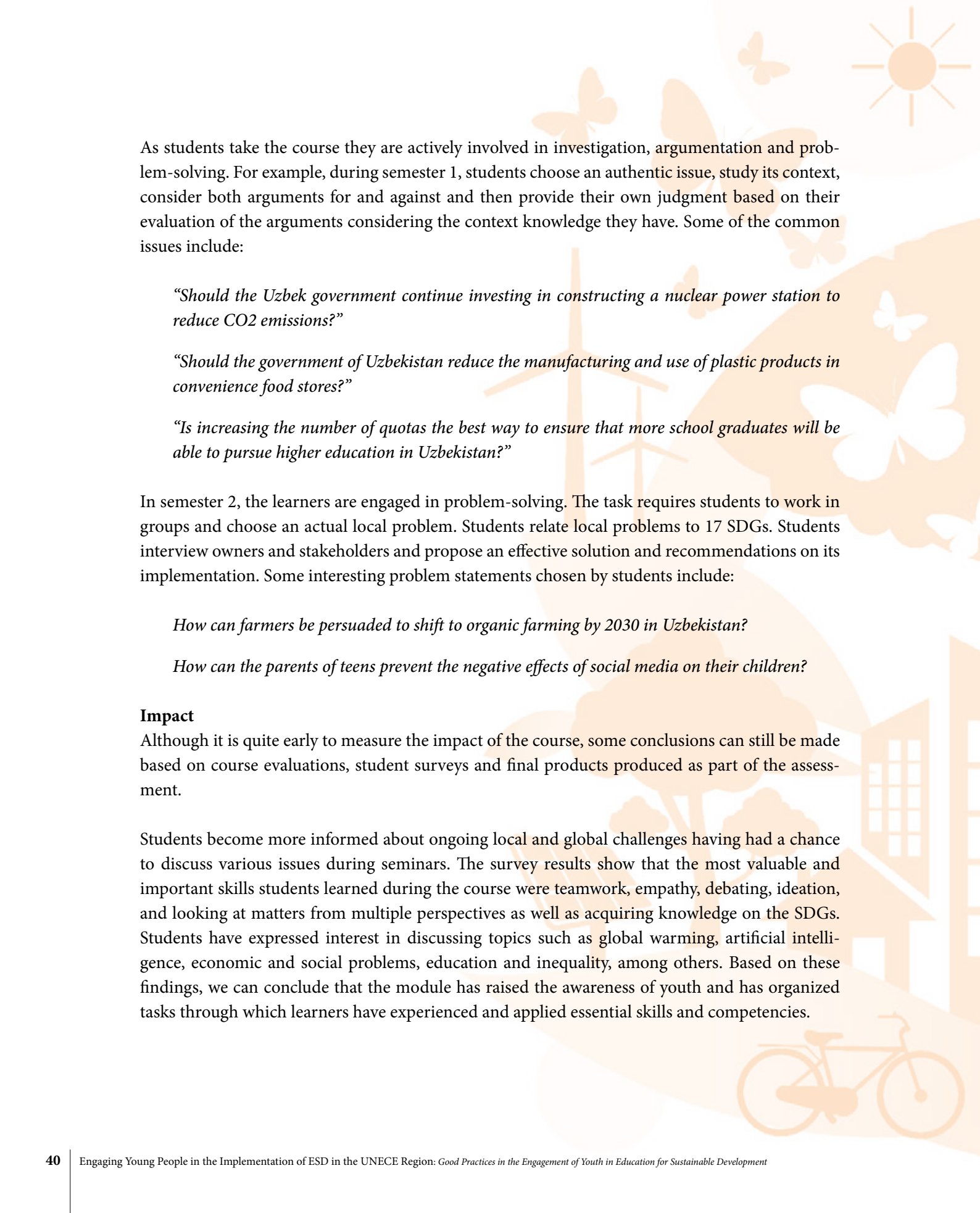
The approach to teaching and learning this module is not common in the practice of HE in Uzbekistan. Based on the authors' observations, the table below provides compares the *I, Citizen* module with traditional practices in the country.

	Traditional Approach	**I, Citizen**
Activity type	Lectures + Seminars	Seminars + Blended Learning
Approach	Teacher-centred	Student-centred
ESD integration	Covers some aspects of ESD	Covers all three dimensions of ESD (environmental/social/ economic)
Activities done by students	Data collection, report writing, presentations	Group work, projects, data collection and data analysis, argumentation, problem-solving, design thinking, an oral presentation and a report
Content	Does not integrate SDGs	Integrates SDGs
Skills and competencies	Academic skills	Academic skills, problem-solving, critical thinking, creativity, design thinking, group working, argumentation

Table 5.1
The I, Citizen Module with Traditional Practices in the Country.

Youth empowerment

Quality Education as one of 17 SDGs serves a fundamental role in achieving all of the goals set by the UN. HE can contribute by providing learners with opportunities to develop key competencies and skills such as problem solving, teamwork, inquisitive thinking and critical thinking. Below is the description of what activities students do during the module 'I, citizen' that allow the development of the above-mentioned competencies and skills.

As students take the course they are actively involved in investigation, argumentation and problem-solving. For example, during semester 1, students choose an authentic issue, study its context, consider both arguments for and against and then provide their own judgment based on their evaluation of the arguments considering the context knowledge they have. Some of the common issues include:

"Should the Uzbek government continue investing in constructing a nuclear power station to reduce CO2 emissions?"

"Should the government of Uzbekistan reduce the manufacturing and use of plastic products in convenience food stores?"

"Is increasing the number of quotas the best way to ensure that more school graduates will be able to pursue higher education in Uzbekistan?"

In semester 2, the learners are engaged in problem-solving. The task requires students to work in groups and choose an actual local problem. Students relate local problems to 17 SDGs. Students interview owners and stakeholders and propose an effective solution and recommendations on its implementation. Some interesting problem statements chosen by students include:

How can farmers be persuaded to shift to organic farming by 2030 in Uzbekistan?

How can the parents of teens prevent the negative effects of social media on their children?

Impact

Although it is quite early to measure the impact of the course, some conclusions can still be made based on course evaluations, student surveys and final products produced as part of the assessment.

Students become more informed about ongoing local and global challenges having had a chance to discuss various issues during seminars. The survey results show that the most valuable and important skills students learned during the course were teamwork, empathy, debating, ideation, and looking at matters from multiple perspectives as well as acquiring knowledge on the SDGs. Students have expressed interest in discussing topics such as global warming, artificial intelligence, economic and social problems, education and inequality, among others. Based on these findings, we can conclude that the module has raised the awareness of youth and has organized tasks through which learners have experienced and applied essential skills and competencies.

The major challenges in the implementation of the module in HE include:
- an emergency switch to remote teaching due to the Covid19 pandemic
- students' struggle in understanding the purpose of the module at the beginning of teaching
- 'free-riders' within student groups (in semester 2, students needed to work in groups for the completion of the coursework 2)
- issues with access to primary data collection due to lockdown measures.

Reflecting on the experience and feedback from lecturers and students, the following recommendations can be made:
- help lecturers and students understand the purpose of the module
- engage learners with real life issues and problems
- students should apply their learning to local issues/problems to increase their awareness and have opportunities to experience talking to owners and stakeholders
- encourage learners and lecturers to discuss local issues/problems.

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6. Integrating Esd Key Environmental Topics Through Informal Education to Raise Learners' Awareness in Unesco Associated Schools

Gayane Surenovna Poghosyan, Meri Grigoryan, Yelena Amiryan

ABSTRACT:

Nowadays the world is changing faster than ever before. The future is not predictable and young people face a number of challenges concerning environmental protection, social justice and a sustainable economy, which they have to tackle. The essential element to empower youth to become change agents and ensure meaningful participation in these processes is ESD because it engenders key qualities necessary to be action-oriented towards public benefit. The main goal of the 'Environmental Pollution' project is to provide students and secondary school teachers with information about sustainable development and develop relevant skills, abilities and competencies while teaching environmental thematic units through informal education. All this is carried out using project technology and ICTs. During one year, three UNESCO Associated Schools and 100 stakeholders take part in it. Learners acquire competencies in key ESD environmental topics and become active partners. The training seminars provided by the program build attitudes that prepare individuals and communities to collaboratively undertake positive environmental actions.

Keywords: sustainable development; key ESD environmental topics; informal education; knowledge; skills; competencies

Youth is considered to be the force shaping their environment. The youth of today need eccentric and innovative thinking to achieve the UN's 17 Sustainable Development Goals (SDGs). To make their ideas heard, young people should be empowered. They are empowered when they are supported to develop their knowledge, skills and competencies.

The main goal of the 'Environmental Pollution' project implemented in the framework of UNESCO's ASPnet 'Learning for the Future' program is to give learners and teachers of general education, knowledge of sustainable development and develop relevant skills, abilities and competencies by integrating environmental thematic units in general education through informal education. This is achieved through:

- the use of innovative educational environments and resources

- the development of relevant environmental thematic units on key ESD environmental topics
- applying project technology and ICTs to implement it
- developing competencies in key environmental topics on ESD
- choosing assessment strategies to measure the results of the training seminars.

Methodology

The UNESCO Chair on Education for Sustainable Development of the Centre for Ecological-Noosphere Studies of the National Academy of Sciences of the Republic of Armenia has actively been engaged in empowering young people by teaching key ESD environmental topics through informal education. Since 2014 the UNESCO Chair has been implementing a series of seminars and trainings on 'Environmental Pollution' in national and international UNESCO Associated Schools. This is an annual project with 3 UNESCO associated schools taking part.

Through informal education, learner-oriented training sessions are held with the use of active teaching methods. All seminars and training is carried out using digital tools and ICT. The project methodology integrates in itself a problem-solving approach, group methods, reflexive, presentational, research and other techniques. This approach is aimed at the development of the students' self-organization, self-education and comprehension of the educational activity from the position of a values-based approach.

The general structure of the seminars and trainings consists of three main stages:

- «the first stage includes seminars for learners in schools using project technology and ICTs

Figure 6.1
Learners in School

- the second stage consists of practical lessons including visits to Yerevan Zoo, Yerevan Botanical Garden, State Museum of Nature of Armenia, as well as listening to lectures on air, soil and water pollution and food safety from scientists and researchers and participating in scientific experiments in the Centre for Ecological-Noosphere Studies of NAS RA

Figure 6.2
Learners Receive Expert Talks

- the third stage is the preparation of group presentations on key ESD topics by each school. All learners, who complete the three stages receive a certificate of program completion on behalf of the UNESCO Chair on Education for Sustainable Development
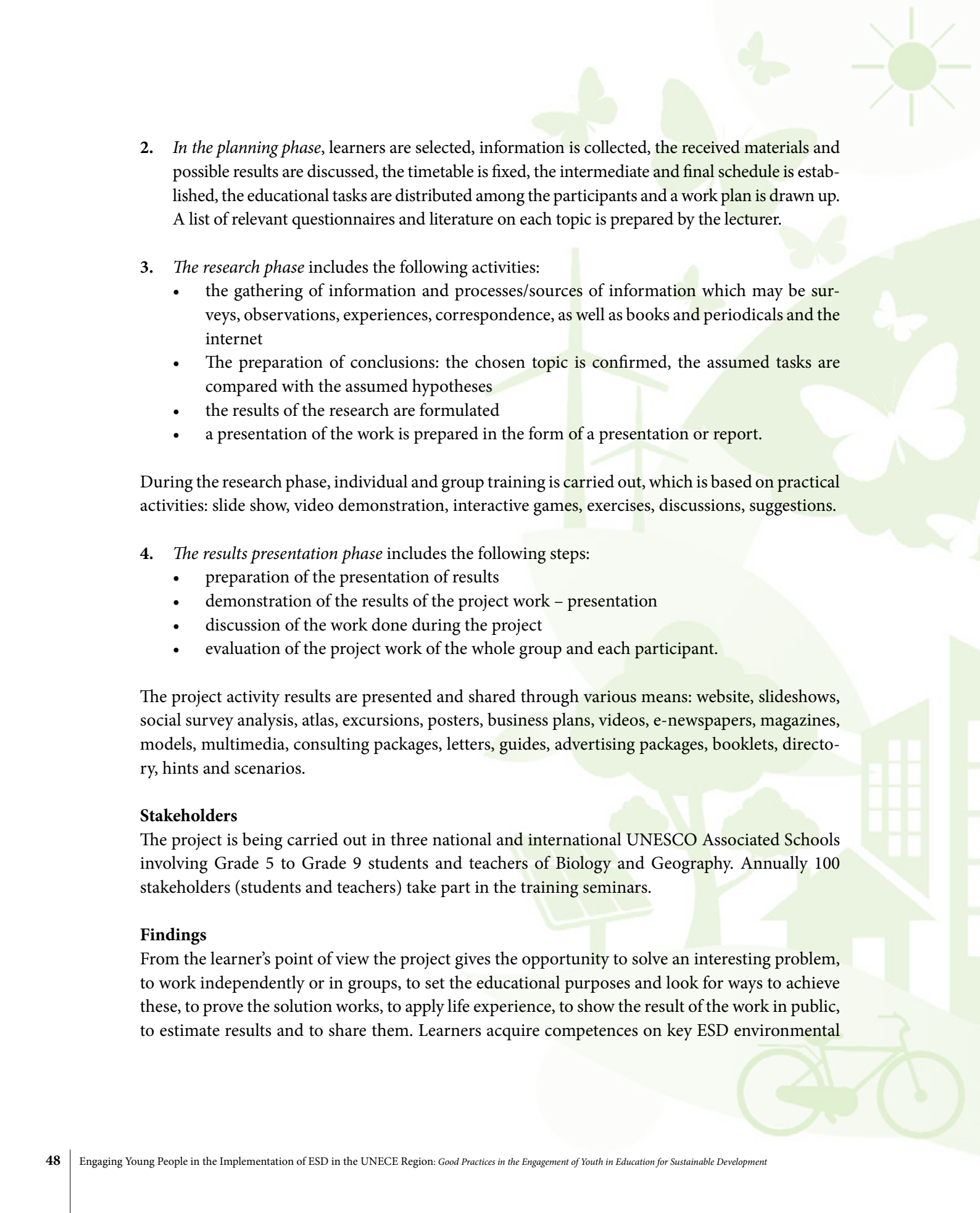
Figure 6.3
Learners Receive Certificates

The following approach is used during the training conducted by the UNESCO Chair: preparation, planning, organizational-research and presentation of results.

1. *In the preparatory phase*, the topics of environmental education are selected, taking into consideration that environmental education is a continuous dynamic and evolving process, without subject isolation but as something that is to be included in formal education. Key environmental topics, using project technology, have been integrated in Natural Science subjects.

   Individual and group research is conducted with the learners maintaining the traditional emphasis of teaching individual courses while creating opportunities for a multidimensional and cross-disciplinary analysis of life situations. Based on these considerations, the following key ESD environmental and other related topics have been selected for teaching: climate change, desertification, biodiversity conservation, ozone depletion, forest protection, environmental protection and renewable energy. The above-mentioned topics have been chosen considering that Armenia has joined the international ESD process and is responsible for its successful implementation.

2. *In the planning phase*, learners are selected, information is collected, the received materials and possible results are discussed, the timetable is fixed, the intermediate and final schedule is established, the educational tasks are distributed among the participants and a work plan is drawn up. A list of relevant questionnaires and literature on each topic is prepared by the lecturer.

3. *The research phase* includes the following activities:
   - the gathering of information and processes/sources of information which may be surveys, observations, experiences, correspondence, as well as books and periodicals and the internet
   - The preparation of conclusions: the chosen topic is confirmed, the assumed tasks are compared with the assumed hypotheses
   - the results of the research are formulated
   - a presentation of the work is prepared in the form of a presentation or report.

During the research phase, individual and group training is carried out, which is based on practical activities: slide show, video demonstration, interactive games, exercises, discussions, suggestions.

4. *The results presentation phase* includes the following steps:
   - preparation of the presentation of results
   - demonstration of the results of the project work – presentation
   - discussion of the work done during the project
   - evaluation of the project work of the whole group and each participant.

The project activity results are presented and shared through various means: website, slideshows, social survey analysis, atlas, excursions, posters, business plans, videos, e-newspapers, magazines, models, multimedia, consulting packages, letters, guides, advertising packages, booklets, directory, hints and scenarios.

Stakeholders
The project is being carried out in three national and international UNESCO Associated Schools involving Grade 5 to Grade 9 students and teachers of Biology and Geography. Annually 100 stakeholders (students and teachers) take part in the training seminars.

Findings
From the learner's point of view the project gives the opportunity to solve an interesting problem, to work independently or in groups, to set the educational purposes and look for ways to achieve these, to prove the solution works, to apply life experience, to show the result of the work in public, to estimate results and to share them. Learners acquire competences on key ESD environmental

topics and become active partners who are oriented to implementing activities with public benefit and to acquire research, communicative and cooperative skills.

From the teacher's point of view the project is a tool for development, training and education generating the abilities, skills and competences including the following stages: problem defining, goal-setting and planning of the activity, introspection and reflection, search and comprehension of information, development of research methods and the use of knowledge and skills in unusual situations.

The initiative manages to be innovative through the integration of key ESD environmental topics implementing project technology and ICTs through informal education in the general education system.
Through completion of the training seminars, learners are made aware of climate change, desertification, biodiversity conservation, ozone depletion, forest protection, environmental protection, alternative energy, air, water and soil pollution and other environmental issues.

They are also able to:
- explain the causes of environmental problems and their consequences
- See the causal links between changes in nature and human activity
- anticipate ecological problems
- collect and classify information materials.

This leads to a growing concern related to the protection of the natural environment, the necessity to live in harmony with nature as well as their role in solving environmental issues. The program emphasizes specific critical thinking skills central to science-questioning, investigating, forming hypotheses, interpreting data, analyzing, developing conclusions and solving problems. Learners acquire competencies in key ESD environmental topics. The environmental training provided enhances environmental knowledge, attitudes, values, as well as building skills that prepare individuals and communities to collaboratively undertake positive environmental actions.

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7. The Central Asian Leadership
    Program on Environment
    for Sustainable Development
    as a Flagship Esd Initiative
    Empowering Youth to Promote
    Sustainable Development
    In Central Asia

Zafar Makhmudov, Tatyana Shakirova

ABSTRACT:

The Central Asian Leadership Program on Environment for Sustainable Development (CALP) is a regional capacity-building initiative, undertaken since 2010, designed to equip young leaders of the Central Asian (CA) region with cutting-edge knowledge and innovative leadership methodologies in responding to global, regional and national environmental challenges. CALP is organized annually and involves young leaders of 25-40 years of age from governmental, academic, private and NGO sectors. CALP improves the capacity of 'new generation' managers to promote the role of youth in strengthening regional cooperation. CALP alumni tackle global and regional environmental challenges such as climate change, water management, gender equity and the green economy as well as post-COVID-2019 development with their high qualifications and skills for sustainable development.

Keywords: CALP, leadership, ESD, Youth, capacity building, SDGs

According to Agenda 2030 and the UN Sustainable Development Goals (SDGs)[1], it is assumed that by 2030, young people will be provided with the opportunity to acquire the knowledge and skills necessary for Sustainable Development (SD). The Central Asian Leadership Program on Environment for Sustainable Development (CALP) builds on achievements and lessons of the CAREC Young Leaders Program of 2006-2008 and UNEP Leadership Program implemented in Tongji University, Shanghai, China[2]. In 2010, the first CALP was designed for mid-level officials and comprised three dimensions: human, environment and SD[3]. Nowadays, CALP has become one of the successful examples of multi-pair partnership, cross-sectoral capacity building initiatives in the region of Eastern Europe, the Caucasus and Central Asia. After 12 years CALP remains a recognized platform for regional youth cooperation.

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[1] *https://sdgs.un.org/2030agenda*
[2] *https://unep-iesd.tongji.edu.cn/iesden/33/44/c13757a144196/page.htm*
[3] *https://carececo.org/en/main/ckh/publications/otchet-o-10-y-yubileynoy-tsapl_2/*

The CALP Program

CALP responds to global challenges and presents a comprehensive understanding of interlinkages of environment and development challenges at the global, regional, sub-regional, national and local levels. In addition to that, CALP meets needs of CA governments and stakeholder groups covering various SD themes depending on global and national priorities. CALP is organised annually in CAREC's HQ in Almaty, Kazakhstan and covers five countries of the CA sub-region: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Additionally, participants from Afghanistan joined CALP in 2013 and participated until 2021.

The overall goal of the Central Asian Leadership Program on Environment for Sustainable Development is to improve leadership capacity of mid-level managers and promote connectivity of the CA youth by providing a neutral regional youth dialogue platform for discussing various Sustainable Development (SD) challenges. CALP introduced the following innovative approaches[4]:

- *transparency* provided through the use of an electronic system of application and selection of participants

- *eco-friendliness* – a paperless approach through the use of a special CALP App.: *http:// calp.carececo.org/mobile/*

- *online learning* – welcome notes made by international experts via video-conferencing, and starting from 2020 during the COVID-19 pandemic; most of the presentations are online via the Zoom platform

- *openness* – partners from international organizations, civil and private sectors can moderate CALP sessions

- *innovation*: CALP lecturers from UN and other international, regional and national organisations and NGOs provide the latest innovative solutions to environmental challenges on national, regional, and global levels. Inputs of partners give an opportunity to introduce and replicate innovative practices, approaches and methods in the CA region.

The CALP methodology is based on multi-stakeholder, multi-national and cross-sectoral approaches; this helps to ensure a comprehensive understanding of environmental and SD issues from a regional perspective. CAREC is responsible for organizing, fundraising and coordination

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[4]*https://carececo.org/en/main/ckh/publications/otchet-o-12-y-tsentralno-aziatskoy-program-liderstva-po-okruzhay ushchey-srede-dlya-ustoychivogo-ra/*

with partners and conducting CALP. CALP's success was made possible due to close cooperation between partners on the issues of joint resource mobilisation, preparation of the concept and the program, the collection of applications and nominations, the selection of participants and conducting thematic sessions.

The CALP concept is a starting point of the CALP preparatory process. CAREC, in cooperation with partners and based on global priorities and national needs, develops a concept paper, disseminates it among partners and defines the duration and content of the CALP, the thematic focuses and the modules including theoretical and practical components as well as field trips.

Applications to the program can be made through two processes: self-applications and official nominations of civil servants by national partners. CAREC developed a special CALP App., an online mobile platform (*http://calp.carececo.org/mobilehttp://calp.carececo.org/*) that facilitates the use of an electronic application system. In addition, CAREC receives letters with official nominations of young civil servants. Selection is implemented by an online selection committee comprising representatives of CAREC branches from CA countries, program managers and international partners. Selected applicants are informed one month before the CALP starts. All CALP documents – the concept, agenda, list of applicants and list of speakers with Biographies – are available on the CALP mobile platform.

Youth and leadership
According to UN data[5], between 2015-2030 an estimated 1.9 billion young people are expected to turn 15. Given their high level of digital interconnectivity, young people are capable of contributing to the resilience of their communities by, among other things, proposing innovative solutions to societal challenges and driving social progress. Based on this, CALP was developed as a platform for leadership, which promotes participation of young leaders in environmental decision-making by developing their leadership skills and increasing their knowledge[6].

In the context of globalization, it is important that young people can make a significant contribution to solving complex socio-economic and environmental problems. CA countries face a number of similar environmental and socio-economic challenges as they transition towards a market economy. For strengthening regional cooperation, it is necessary to use the energy, willingness

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[5] *https://www.un.org/sustainabledevelopment/youth/*
[6] *https://carececo.org/en/main/ckh/publications/otchet-o-10-y-yubileynoy-tsapl_2/*

to change, creativity and innovative ways of thinking of the youth. Alumni of the CALP could be considered as agents of change, a 'new generation' of managers and promoters of regional cooperation on environmental and SD issues.

Young people represent a key stakeholder group that CAREC engages to help drive environmental transformations towards sustainability through collective leadership across the borders of Central Asia, with the understanding of collective leadership as "the capacity of a collective to catalyze change for the common good"[7].

Over a period of 12 years, more than 370 young people from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, and Afghanistan graduated from the CALP. The group "CALP alumni network" was established in 2017 and is moderated by CAREC on Facebook. CALP alumni demonstrate inspiring examples of volunteering and leadership both personally and collectively. CAREC cooperates with the Collective Leaderships Institute (CLI)[8], which shared with the CALP participants a modern theory of 'Collective Leadership'.[9]

Findings
CALP is an example of one of the most sustainable training programs on environment and SD for Youth, which provides sought after knowledge and capacity to young leaders and facilitates regional dialogue for their switching to SD. CALP, as a capacity-building initiative, enables young leaders to work cooperatively and comprehensively with different stakeholders.

CALP makes a valuable input to achieving the SDGs covering different SD themes. A special focus of the CALP involves providing quality training to young professionals, linking directly to SDG 4 'Quality Education' targets. We can therefore confirm that CALP is an example of a successful instrument of a multi-SDG, multi-country, multi-partner, multi-sectoral and multi-national initiative targeted at young people and opening up new professional horizons for the youth of Central Asia.

Leaders from Central Asia and Afghanistan use CALP as a neutral platform for dialogue, discussing advances and best practices in water, gender, climate change and other topics pertinent to SD.

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[7] *https://www.collectiveleadership.de/blog/article/the-future-of-leadership/*
[8] *https://www.collectiveleadership.de/*
[9] *11th CALP report 2020 devoted to post-COVID development https://carececo.org/en/main/ckh/publications/otchet- ob-11-y-innovatsionnoy-tsentralno-aziatskoy-program-liderstva-po-okruzhayushchey-srede-dlya/*

The publications *'CALP Alumni in addressing environmental challenges: success stories'* and *'CALP Alumni leadership stories'* have drawn public attention to environmental issues, personal responsibility, post-COVID-19 development and have facilitated outreach and awareness-raising as well as motivating a new generation of leaders[10].

Over the period 2010-2021, 12 CALPs were organised by CAREC and supported by UNEP, Government of Norway, OSCE Program Office in Nur-Sultan, OSCE Secretariat, USAID, World Bank, European Union, and Switch Asia SCP program. In Central Asia, a role of new generation managers with global thinking, regional vision, understanding of the importance of meaningful youth participation in regional cooperation and a readiness to embrace innovative approaches is becoming increasingly important. By focusing on youth and gender equity in its leadership training, CALP has successfully managed to create an inclusive network. This approach of inclusive leadership is key to achieving the SDGs.

The program has also improved dialogue in Central Asia and demonstrated the powerful role of leadership by equipping future decision-makers to understand complex environmental and sustainable development issues from a local and global point of view. As part of the capacity-building program they have also become skilled in diplomacy and can negotiate and mediate in a gender-responsive manner.

From year to year, CAREC receives more nominations from state bodies of CA countries, NGOs, and regional organizations, which confirms the recognition and relevance of the training program by national partners. Graduates of the CALP from Central Asia and Afghanistan work in water, environmental and energy agencies of the region, NGOs and academia and promote the values and benefits of regional cooperation in their daily work. The additional value of the CALP is the strengthening of young people's role, voice and significance in regional cooperation and more sustainable decision-making processes.

CALP shares European and Asian good practices on water, energy and other SD issues, scaling up in Central Asia and Afghanistan. It envisages replication mechanisms and has established a base for best practice sharing and exchange between and inside the CA countries and Afghanistan in the future.

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[10] *https://carececo.org/en/main/ckh/publications/vypuskniki-tsapl-vnosyat-vklad-v-reshenie-ekologicheskikh-problem/*

The added value for young people

CALP has improved the leadership capacity of young leaders, supported dialogue with stakeholders in Central Asia and Afghanistan, enhanced a policy dialogue on multiple SD challenges at the national and regional level and strengthened the action-oriented regional platform for going beyond preparatory activities (studies, etc.) and testing new approaches.

CALP alumni are demanded by national partners with their high qualifications and skills for sustainable development and after graduation from CALP, many of them received promotion in their ministries, agencies and NGOs. Many graduates have been appointed to key positions in various sectors: one of the CALP graduates went on to the position of Deputy General Director of the National Environmental Protection Agency (NEPA) of Afghanistan, a member of the first Organising Committee of the CALP network is now Deputy of the Oliy Majlis Parliament of the Republic of Uzbekistan, another alumnus is Deputy of the Mazhilis of Parliament of the Republic of Kazakhstan while another is a National UN Youth Volunteer. CAREC is proud of all of them![11]

Challenges and the way forward

A number of challenges have been identified through the implementation of the CALP Program:

Environmental challenges: lack of inter-sectoral and inter-agency cooperation at the national level; lack of inter-country cooperation at the regional level; lack of recognition of the youth's role in strengthening regional cooperation and the influence of youth on making more sustainable decisions.

Financial challenges: lack of recognition, promotion and support of the CALP at the global and regional levels and very limited financial resources to continue this youth leadership initiative in Central Asia.

Challenges on capacity building: lack of innovative approaches and programs, modern databases in the field of environment and ESD; lack of capacity building activities through the use of modern educational curricula, vocational trainings, development of ICT and digital learning skills and competences; lack of certified teachers and trainers to improve the skills of specialists in sustainable development, including in the digital learning sphere.

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[11] *https://carececo.org/en/main/ckh/publications/otchet-o-12-y-tsentralno-aziatskoy-program-liderstva-po-okruzhay ushchey-srede-dlya-ustoychivogo-ra/*

COVID-19 pandemic challenges: ongoing from 2020 with the related challenges and limitations of offline participation of young leaders.

To address these problems and through our experience with the CALP Program, several recommendations can be made:

Environmental recommendations:
To support regional dialogue on environmental and SD challenges in CA, promote the role of youth in strengthening regional cooperation and making more sustainable decisions. To request UN and other international organisations to help in promotion of the CALP as a regional youth initiative at the global and regional levels via publications, case studies, good practices examples, networking, and success stories.

Financial recommendations:
To request international organisations, donor-countries, international funds to provide sustainable financial support to CALP. To support the organisation of a Regional Forum of the CALP alumni network of 2010-2021 and show real examples of volunteering and leadership during the COVID-19 pandemic and discuss challenges and opportunities for regional and global networking and cooperation.

Recommendations on capacity building:
To introduce innovative approaches and programs, build capacity of a new generation through the use of modern educational curricula, vocational trainings, development of ICT and digital learning skills and competences. To build capacity of certified teachers and trainers to improve the skills of specialists in SD, including in the digital learning sphere.

COVID-2019 pandemic recommendations:
To provide financial and expert support to CALP, use opportunities for online and offline learning depending on the situation with the COVID-19 pandemic; provide for the participation of speakers from UN agencies, international organisations and academia.

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https://carececo.org/en/main/ - main CAREC web-site with information on all thematic directions and programs

https://carececo.org/en/main/search/index.php?q=CALP+reports – CALP reports from 2016 to 2021

https://carececo.org/en/main/ckh/publications/otchet-o-10-y-yubileynoy-tsapl_2/– 10th Anniversary CALP report 2019

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https://carececo.org/en/main/ckh/publications/otchet-o-12-y-tsentralno-aziatskoy-program-liderstva-po-okruzhayushchey-srede-dlya-ustoychivogo-ra/ –12th CALP report 2021 devoted to SCP, green economy and transition to circular economy

https://www.collectiveleadership.de/ – Collective Leadership Institute

https://www.facebook.com/groups/1706859609624642 – CALP alumni group 2010-2021 moderated by CAREC

8. Changing Young People´S Mindsets in Primary School Towards Achieving the Esd Goals at Global Level

Klavdija Stražar
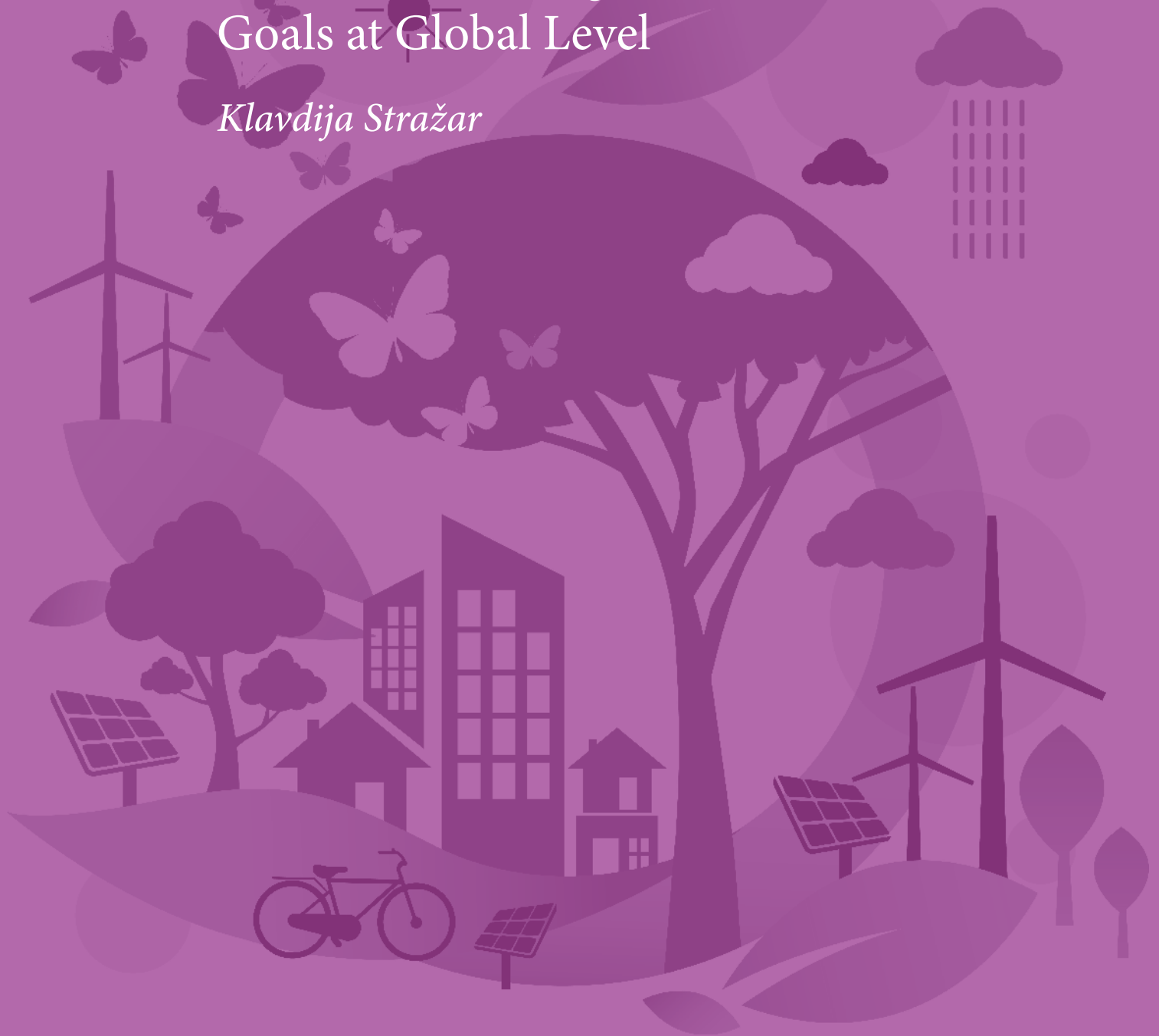
ABSTRACT:

The key objectives of the POGUM project are the development, testing, implementation, monitoring and evaluation of a comprehensive model of entrepreneurship in primary school and of open and flexible transition between primary school and the environment and empowering primary school pupils and practitioners (teachers, counsellors, other practitioners, managers and head teachers in primary schools) in the field of entrepreneurship competence development. We want to enable young people to have the mindset to be proactive and self-initiating by transferring knowledge and skills from the school environment to the outside world, which should contribute to the successful development of career orientation.

Keywords: ESD, Entrepreneurship Youth, Primary Education

The planet's growing population is projected to rise to 9.5 billion people by 2050. As a result, more and more serious problems are emerging, such as:

- Around 1.2 billion people still live in extreme poverty in the 21st century.
- The food system is overburdened.
- A child dies every four seconds from a disease that could otherwise have been prevented (UNIS, 2022)[1].

All of the above, and much more, have been troubling us for many years, and data suggests that humanity will struggle with many other ills in the future if we do not take the alarming state of our planet seriously, internalise it, and seek answers and solutions to the situation at hand.

Twenty-two years ago, world leaders launched the Millennium Development Goals (MDGs), which addressed poverty eradication from several different perspectives. They addressed hunger,

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[1] UNIS. (2022). Razvojni cilji tisočletja. *https://unis.unvienna.org/unis/sl/topics/2013/mdg.html*

disease, lack of adequate housing, exclusion and income poverty. At the same time, they supported gender equality, education and environmental sustainability. Such objectives have proven to be indispensable and, most importantly, have had an impact. The good results of poverty eradication measures have provided the basis and impetus for the new 2030 Agenda for Sustainable Development (2030 Agenda). The United Nations Sustainable Development Goals are built upon the following overarching topics: end poverty, end hunger, health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reducing inequality, sustainable cities and communities, responsible consumption and production, climate action, life in water, life on land, peace, justice, and strong institutions and partnerships to achieve the goals (UNIS, 2022)[2].

Millions of people around the world are responsible for achieving these goals, but it is not enough. The goals of sustainable development need to be internalized. It is important that they are understood by the youngest citizens. Young people are the ones who, in the process of growing up, start to assume many of society's tasks and responsibilities. Young generations need to be empowered to participate actively, to be ready to participate actively and to take decisions that will have an impact in the present and a strong imprint in the future, to be responsible and sensitive to societal issues. The education system has an important role to play in helping young people influence the development of society.

Finding solutions at the local level
We are very aware of the above-mentioned goals at Mirana Jarca Primary School in Ljubljana. Every school year we set development priorities that we actively pursue throughout the year. The selection of development priorities is based on the situation in society and, unfortunately, on the observations of all those involved in the school premises. Increasingly, the school is seeing:

- intolerance
- a lack of communication with each other
- non-cooperation
- poorer interpersonal relations and competition expressed in an unhealthy way through exclusion
- negative profiling occurring among pupils
- older pupils not helping each other enough in school work and rarely taking the initiative

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[2] UNIS. (2022). Razvojni cilji tisočletja. *https://unis.unvienna.org/unis/sl/topics/2013/mdg.html*

- insufficient interest in participating in school assignments and projects that require peer-to-peer networking
- a tendency for pupils to be individualistic.

In general, we see that as a society we often forget that we are more successful as a community in all areas of our lives if we connect with each other, share knowledge and help each other selflessly. The staff of the school are committed to realising a long-held vision of making the school the centre of the community. Not just a place to provide educational content for the pupils of our school, but a place where a range of activities are accessible to pupils, staff, parents, grandparents and residents of the local community. We want the school to become the centre of what is happening in the local community.
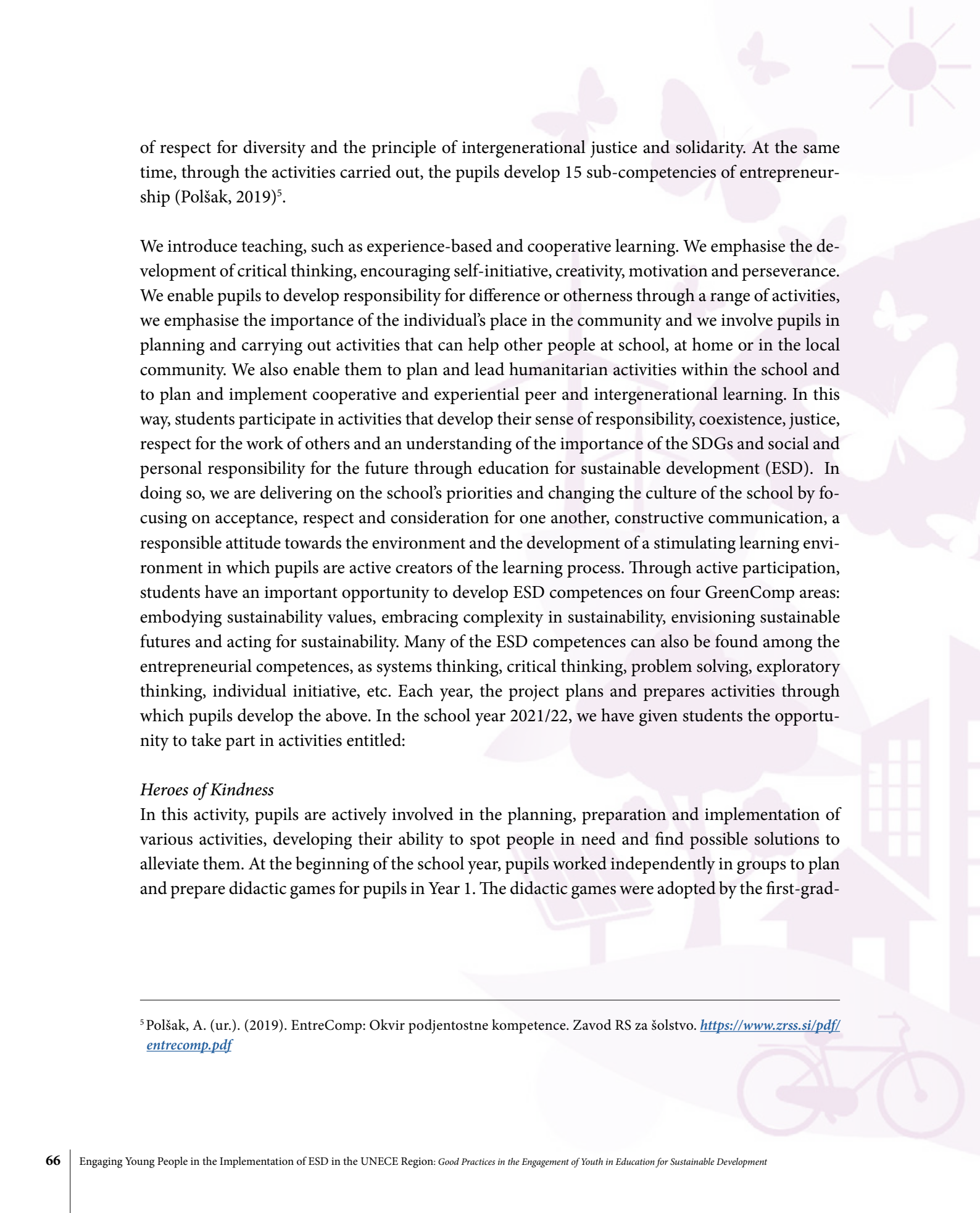
The opportunity to develop the school's priorities, with a focus on meeting pupils' needs and achieving the SDG Goals, was identified in a five-year ESF (European Social Fund) development project entitled Strengthening Entrepreneurship Competence and Promoting Flexible Transitions between Education and the Environment in Primary Schools (POGUM in Slovenian). The aim of the project is to develop, test, implement, monitor and evaluate:
- a comprehensive model of entrepreneurship in primary school
- flexible transitions between education and the environment.

POGUM aims to support and empower primary school pupils and practitioners (teachers, counsellors and head teachers) to develop entrepreneurship competences. The basis for the development of the Entrepreneurship Competence is the European EntreComp Competence Framework [3]. The project promotes a way of thinking about and understanding entrepreneurship as a capacity to develop innovation, creativity and proactivity of individuals and different groups (National Education Institute Slovenia 2021[4]). The work on the project is based on a challenge chosen by each school, pre-defined objectives, principles and guidelines. The challenge for our school was to design and implement activities that would enable pupils to exchange knowledge, cooperate with each other, strengthen empathy, develop and deepen a sense of solidarity, compassion and selfless help. Through activities, we develop the principle of respect and inclusion in the various spheres of action (in school and in life in general), the principle of cooperation and teamwork, the principle

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[3] Polšak, A. (ur.). (2019). EntreComp: Okvir podjetnostne kompetence. Zavod RS za šolstvo. *https://www.zrss.si/pdf/entrecomp.pdf*
[4] Slovenian Institute of Education (2021, April 8) POGUM. *https://www.zrss.si/projekti/projekt-pogum/*

of respect for diversity and the principle of intergenerational justice and solidarity. At the same time, through the activities carried out, the pupils develop 15 sub-competencies of entrepreneurship (Polšak, 2019)[5].

We introduce teaching, such as experience-based and cooperative learning. We emphasise the development of critical thinking, encouraging self-initiative, creativity, motivation and perseverance. We enable pupils to develop responsibility for difference or otherness through a range of activities, we emphasise the importance of the individual's place in the community and we involve pupils in planning and carrying out activities that can help other people at school, at home or in the local community. We also enable them to plan and lead humanitarian activities within the school and to plan and implement cooperative and experiential peer and intergenerational learning. In this way, students participate in activities that develop their sense of responsibility, coexistence, justice, respect for the work of others and an understanding of the importance of the SDGs and social and personal responsibility for the future through education for sustainable development (ESD). In doing so, we are delivering on the school's priorities and changing the culture of the school by focusing on acceptance, respect and consideration for one another, constructive communication, a responsible attitude towards the environment and the development of a stimulating learning environment in which pupils are active creators of the learning process. Through active participation, students have an important opportunity to develop ESD competences on four GreenComp areas: embodying sustainability values, embracing complexity in sustainability, envisioning sustainable futures and acting for sustainability. Many of the ESD competences can also be found among the entrepreneurial competences, as systems thinking, critical thinking, problem solving, exploratory thinking, individual initiative, etc. Each year, the project plans and prepares activities through which pupils develop the above. In the school year 2021/22, we have given students the opportunity to take part in activities entitled:

Heroes of Kindness
In this activity, pupils are actively involved in the planning, preparation and implementation of various activities, developing their ability to spot people in need and find possible solutions to alleviate them. At the beginning of the school year, pupils worked independently in groups to plan and prepare didactic games for pupils in Year 1. The didactic games were adopted by the first-grad-

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[5] Polšak, A. (ur.). (2019). EntreComp: Okvir podjentostne kompetence. Zavod RS za šolstvo. *https://www.zrss.si/pdf/entrecomp.pdf*

ers on the day of their admission to the school community. On the occasion of the International Day of Kindness celebrated on November 13, we talked to the pupils about kindness, acts of kindness and the purpose of such a day. Then, in groups, the pupils brainstormed and suggested ways in which they could brighten up the day with acts of kindness for the pupils and staff of the school and for the people of the community.

The pupils themselves suggested preparing letters for the elderly people in the school neighbourhood and delivering them to letterboxes. They drew a picture to illustrate the kind gesture and added a kind thought to the letters. The elderly responded kindly and sent thank-you notes to the school. After reading the letters, the teachers could sense the satisfaction and pride in the pupils. A group of pupils spontaneously suggested that they could bring stones of different sizes to school, paint them with colours and decorate them with a kind thought or drawing. Later, they implemented the suggestion and placed the painted stones along the paths around our school. Passers-by looked at the painted stones with kind thoughts (Ilić in Stražar, 2021)[6].

Figure 8.1
Making Stones with Beautiful Thoughts
(Source: Ilić, 2021)

Figure 8.2
Stones with Kind Thoughts
(Source: Ilić, 2021)

[6] Ilić, A. and Stražar, K. (2021). *Letna priprava, interesna dejavnost – JUNAKI PRIJAZNOSTI.* Osnovna šola Mirana Jarca.

Figure 8.3
Letter for Older Citizens in the Local
Community (SOURCE: Ilić, 2021)

Figure 8.4
Content of a Letter for Older Citizens in the Local
Community (SOURCE: Ilić, 2021)

In January, the pupils organised a small charity event. They initiated a collection of toys and board games for the patients at the Paediatric Clinic in Ljubljana. They drew up a plan for the campaign. They decided on a time period for collecting toys, prepared a promotion for the campaign, identified a place at the school where the material would be stored and prepared a plan for transporting the selected material to the Paediatric Clinic. Posters inviting people to take part were pasted on the walls of the school, the invitation was published on the school's website and the campaign was presented in all departments of the school. The campaign ran for 14 days and the school students and their parents responded in large numbers. We collected a large number of toys and didactic games. In the near future, the pupils would like to make board games for the Senior Citizens' Home to make their leisure time more enjoyable (Ilić in Stražar, 2021)[7].

The school's development priorities and the project's objectives are also being developed in regular lessons. In order to facilitate the exchange of knowledge and goods between different generations in the school and also between pupils, we have been thinking about a bigger charity event with the pupils in the home economics subject, entitled:

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[7] Ilić, A. and Stražar, K. (2021). *Letna priprava, interesna dejavnost – JUNAKI PRIJAZNOSTI.* Osnovna šola Mirana Jarca.
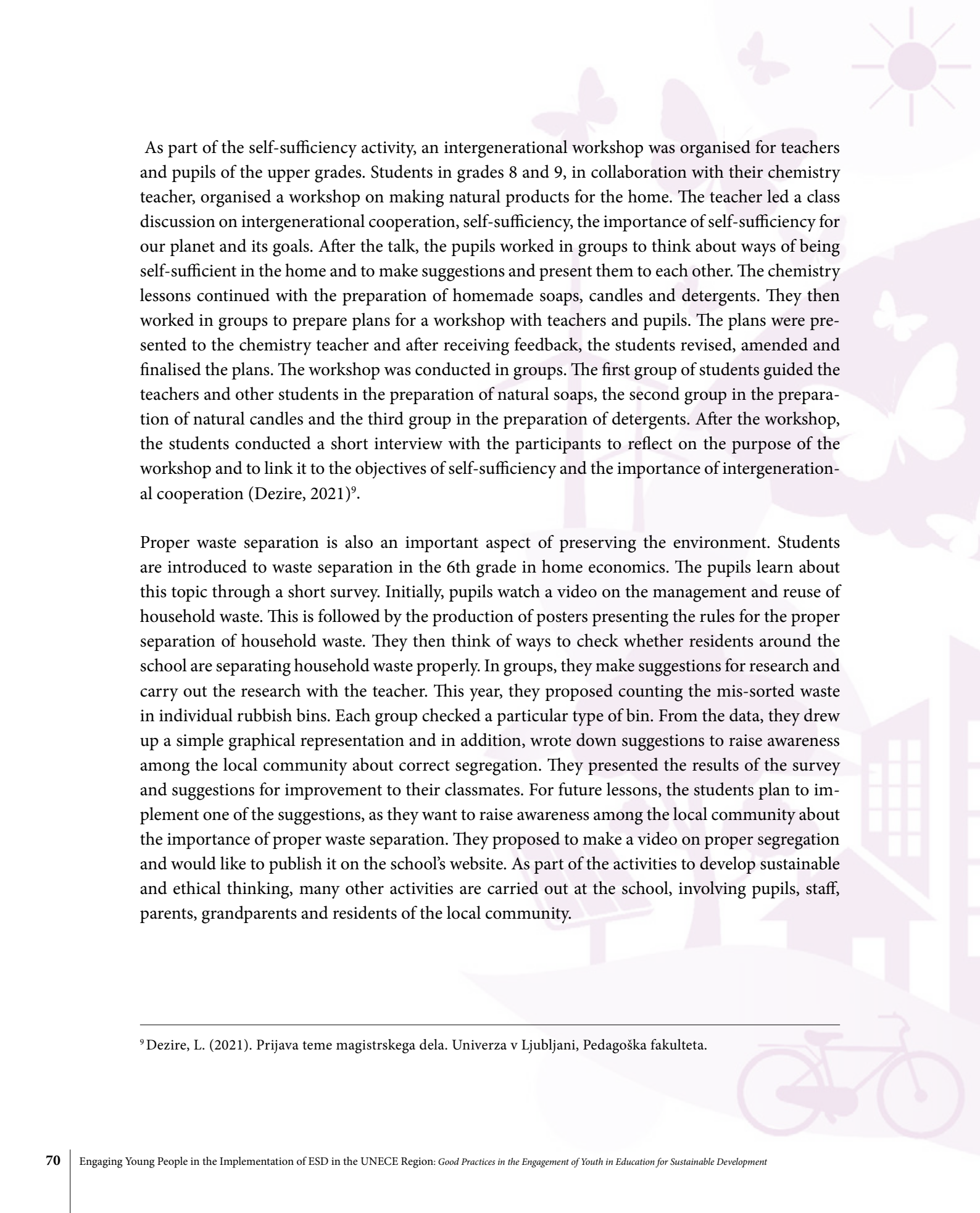
Children for Children

This charity campaign collects school supplies for children from socially disadvantaged backgrounds. Students watch a film in their home economics lessons, which shows the different hardships faced by people around the world. This will be followed by a discussion and reflection on poverty, diseases around the world, non-potable water and different educational opportunities. Based on the film and the discussion, students will reflect and make suggestions on how they could help themselves. This will be followed by a presentation of the charity campaign, inviting the pupils to participate. The pupils will work in groups to plan and organise the promotion of the charity campaign. They will think about the purpose of the campaign, the organisation of time and space and the promotion of the campaign. The group leaders will present the charity campaign plans and the pupils will evaluate them, suggest corrections and improvements and argue any concerns they may have about the planned steps. After the presentations and corrections, the pupils will design a class action plan and implement it according to the steps prepared in advance. The students will then evaluate their work orally and make notes on it. At the same time, they will plan and prepare a report, thanking them for their performance and publishing the result of the action on the school website and in the local newspaper.

Developing competence in ethical and sustainable thinking

The school strives to instil a sense of responsibility towards the environment and encourages pupils to think critically about the importance of self-sufficiency, conservation, biodiversity, the depletion of non-renewable resources, and personal attitudes towards the environment and how to change it through a variety of activities. In this way, we also develop the sub-competence of entrepreneurship, namely ethical and sustainable thinking. The school garden, which is regularly used in the compulsory and extended curricula, enables us to prepare such activities. In the classroom, pupils learn about the different ways of tending the school garden and about the plants and animals that can be included in the school garden. They plan and arrange the planting of different crops according to the season, prepare the soil for cultivation, shape the beds, prepare the name plates and harvest, store or use the produce in lessons at the appropriate time. In the autumn, they prepare pumpkin soup, salads and desserts using produce from the school garden according to a pre-selected recipe. The dishes are prepared and eaten independently. In doing so, they learn about basic cooking utensils, food processing and storage procedures, and develop their competence in cooperative and experiential learning (Munda, 2021)[8].

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[8] Munda, M. (2021). Letna priprava, interesna dejavnost – ŠOLSKI VRT. Osnovna šola Mirana Jarca.

As part of the self-sufficiency activity, an intergenerational workshop was organised for teachers and pupils of the upper grades. Students in grades 8 and 9, in collaboration with their chemistry teacher, organised a workshop on making natural products for the home. The teacher led a class discussion on intergenerational cooperation, self-sufficiency, the importance of self-sufficiency for our planet and its goals. After the talk, the pupils worked in groups to think about ways of being self-sufficient in the home and to make suggestions and present them to each other. The chemistry lessons continued with the preparation of homemade soaps, candles and detergents. They then worked in groups to prepare plans for a workshop with teachers and pupils. The plans were presented to the chemistry teacher and after receiving feedback, the students revised, amended and finalised the plans. The workshop was conducted in groups. The first group of students guided the teachers and other students in the preparation of natural soaps, the second group in the preparation of natural candles and the third group in the preparation of detergents. After the workshop, the students conducted a short interview with the participants to reflect on the purpose of the workshop and to link it to the objectives of self-sufficiency and the importance of intergenerational cooperation (Dezire, 2021)[9].

Proper waste separation is also an important aspect of preserving the environment. Students are introduced to waste separation in the 6th grade in home economics. The pupils learn about this topic through a short survey. Initially, pupils watch a video on the management and reuse of household waste. This is followed by the production of posters presenting the rules for the proper separation of household waste. They then think of ways to check whether residents around the school are separating household waste properly. In groups, they make suggestions for research and carry out the research with the teacher. This year, they proposed counting the mis-sorted waste in individual rubbish bins. Each group checked a particular type of bin. From the data, they drew up a simple graphical representation and in addition, wrote down suggestions to raise awareness among the local community about correct segregation. They presented the results of the survey and suggestions for improvement to their classmates. For future lessons, the students plan to implement one of the suggestions, as they want to raise awareness among the local community about the importance of proper waste separation. They proposed to make a video on proper segregation and would like to publish it on the school's website. As part of the activities to develop sustainable and ethical thinking, many other activities are carried out at the school, involving pupils, staff, parents, grandparents and residents of the local community.

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[9] Dezire, L. (2021). Prijava teme magistrskega dela. Univerza v Ljubljani, Pedagoška fakulteta.

Our main goal is to empower pupils to take action in the field of ESD and environmental protection. We want our students to be equipped with the knowledge, competences and attitudes to make a significant contribution to change in the field of ESD. For the following school years, we want our pupils to identify various opportunities for the development of activities in the field of sustainable development and environmental protection both in the local community and at schools. While we also want the students to independently plan, prepare and successfully implement such activities with the help of the local community.

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9. Youth as Sustainability Agents in the Mediterranean: the Mio-Ecsde Approach

Michael Scoullos, Vicky Malotidi
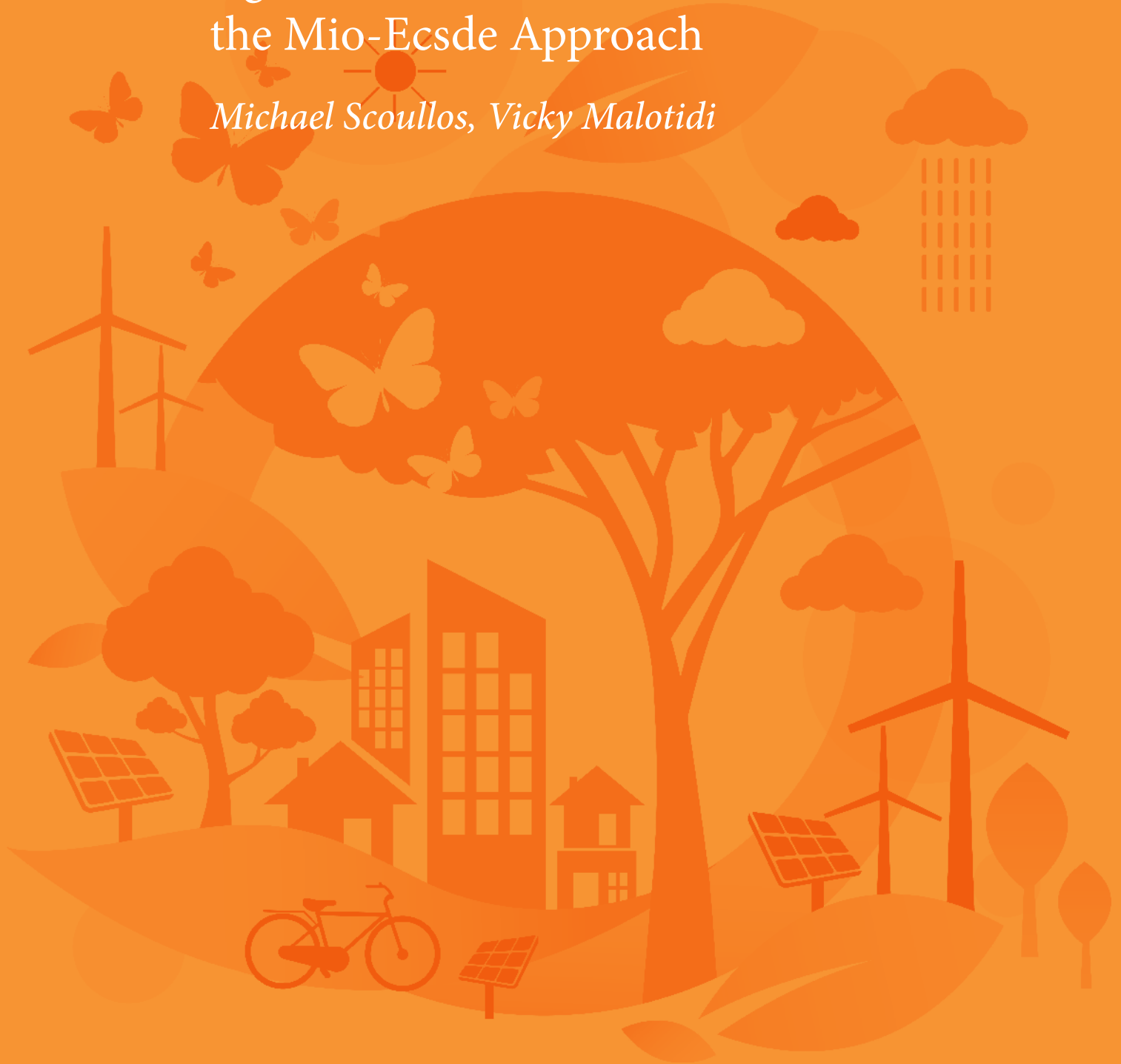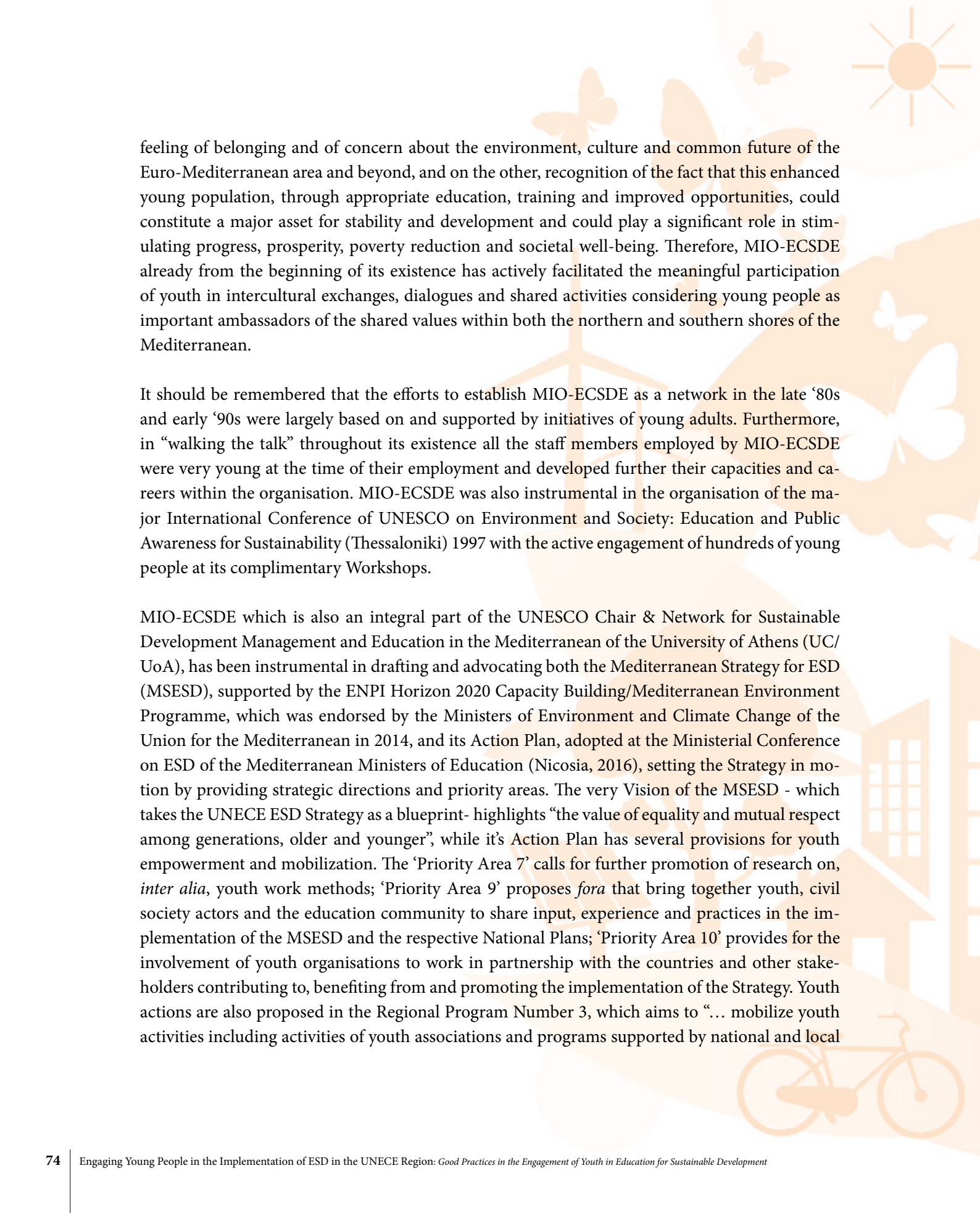
ABSTRACT:

This article presents the experience of the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE) in dealing with different aspects related to youth deduced from its 30 year involvement with young people, focusing in particular on ESD initiatives. MIO-ECSDE has benefited from the initiatives of young people and empowers them to become active sustainability agents in a systematic and effective way through a variety of approaches and actions. These include policy formulation, advocacy, networking, capacity building of educators and a variety of formal, non-formal and informal educational interventions and activities.

Keywords: Youth, Education for Sustainable Development, networking, non-formal education, policy

In May 2021 the global educational community launched the new framework for education for sustainable development 'ESD for 2030' calling for ESD to be a core component of all education systems at all levels by 2025 and committed to taking concrete steps to transform learning for the survival of our planet through effective policies, professional training and civic engagement. In this new ESD era the role of youth is amplified and placed at the centre of all the major international and regional ESD policy frameworks developed recently, namely: The European Council Recommendation on learning for environmental sustainability (2021), the Youth COP26 (2021), and the expected Strategic Implementation Framework of the UNECE Strategy on ESD (2021- 2030). All of them acknowledge not only the urgency for youth preparedness, education and training, but also recommend the active participation of young people in the formulation and implementation of critical policies and initiatives, asking them to be co-creators and even leaders in the ESD transformative processes.

MIO-ECSDE has been a pioneer in advocating and promoting the role of youth in the Euro-Mediterranean region, where youth comprises nearly 60 per cent of the population. The widely different distribution of youth in the North and South of the region requires on the one hand, facilitation of interregional and intercultural exchanges in building among all young people of the region a

feeling of belonging and of concern about the environment, culture and common future of the Euro-Mediterranean area and beyond, and on the other, recognition of the fact that this enhanced young population, through appropriate education, training and improved opportunities, could constitute a major asset for stability and development and could play a significant role in stimulating progress, prosperity, poverty reduction and societal well-being. Therefore, MIO-ECSDE already from the beginning of its existence has actively facilitated the meaningful participation of youth in intercultural exchanges, dialogues and shared activities considering young people as important ambassadors of the shared values within both the northern and southern shores of the Mediterranean.

It should be remembered that the efforts to establish MIO-ECSDE as a network in the late '80s and early '90s were largely based on and supported by initiatives of young adults. Furthermore, in "walking the talk" throughout its existence all the staff members employed by MIO-ECSDE were very young at the time of their employment and developed further their capacities and careers within the organisation. MIO-ECSDE was also instrumental in the organisation of the major International Conference of UNESCO on Environment and Society: Education and Public Awareness for Sustainability (Thessaloniki) 1997 with the active engagement of hundreds of young people at its complimentary Workshops.
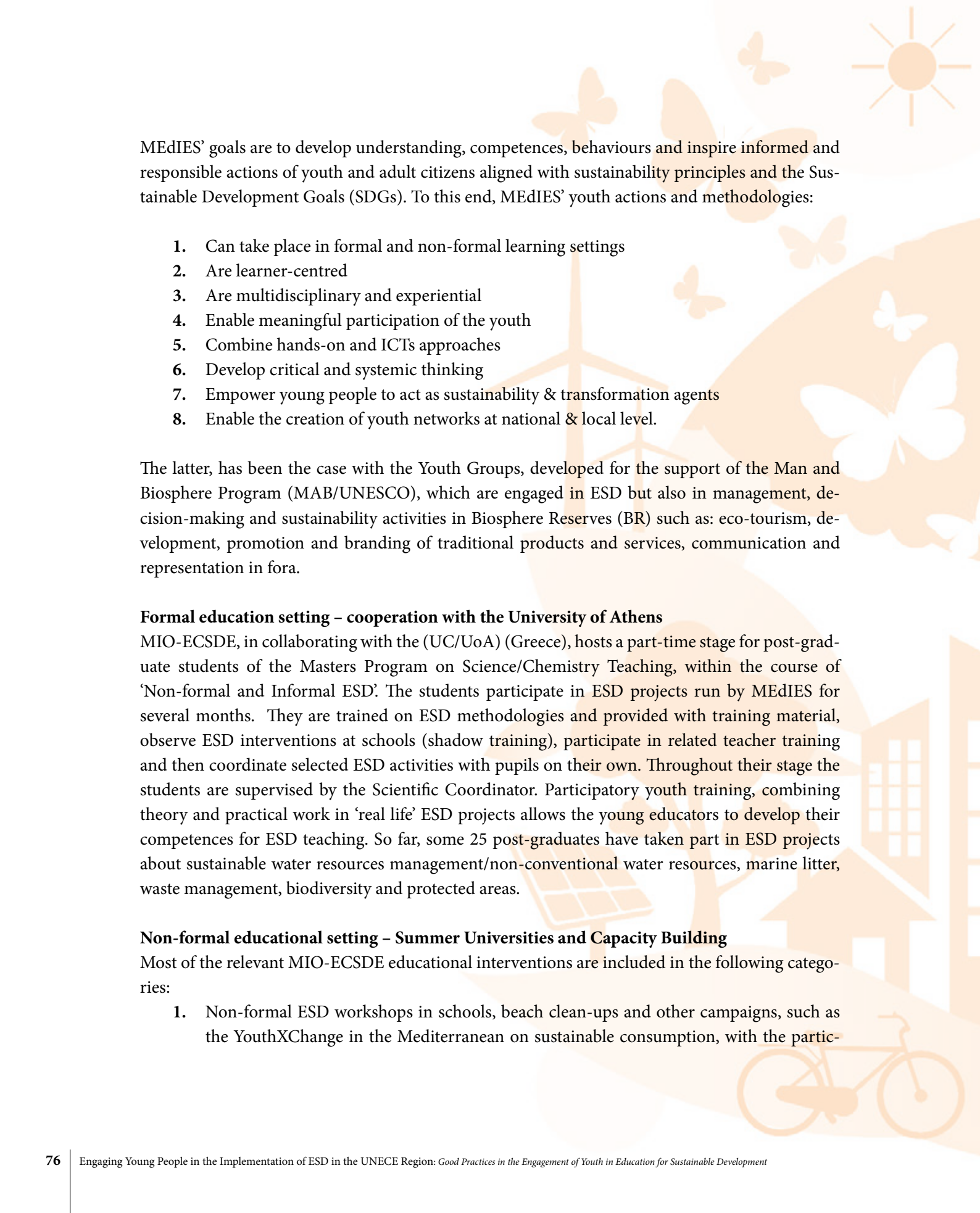
MIO-ECSDE which is also an integral part of the UNESCO Chair & Network for Sustainable Development Management and Education in the Mediterranean of the University of Athens (UC/UoA), has been instrumental in drafting and advocating both the Mediterranean Strategy for ESD (MSESD), supported by the ENPI Horizon 2020 Capacity Building/Mediterranean Environment Programme, which was endorsed by the Ministers of Environment and Climate Change of the Union for the Mediterranean in 2014, and its Action Plan, adopted at the Ministerial Conference on ESD of the Mediterranean Ministers of Education (Nicosia, 2016), setting the Strategy in motion by providing strategic directions and priority areas. The very Vision of the MSESD - which takes the UNECE ESD Strategy as a blueprint- highlights "the value of equality and mutual respect among generations, older and younger", while it's Action Plan has several provisions for youth empowerment and mobilization. The 'Priority Area 7' calls for further promotion of research on, *inter alia*, youth work methods; 'Priority Area 9' proposes *fora* that bring together youth, civil society actors and the education community to share input, experience and practices in the implementation of the MSESD and the respective National Plans; 'Priority Area 10' provides for the involvement of youth organisations to work in partnership with the countries and other stakeholders contributing to, benefiting from and promoting the implementation of the Strategy. Youth actions are also proposed in the Regional Program Number 3, which aims to "… mobilize youth activities including activities of youth associations and programs supported by national and local

authorities". The above mentioned two documents have played an important role in influencing and inspiring other youth relevant regional and national policies and initiatives, *inter alia*, the "Union for the Mediterranean (UfM) Youth Strategy 2030 – Euro-Mediterranean Youth towards a common goal", adopted by the UfM Senior Officials in Barcelona, 9 December 2021. It is noteworthy that MIO-ECSDE provides the Technical Secretariat of the Mediterranean Committee of ESD in which, apart from the Mediterranean countries involved (Cyprus is currently chairing it) UNESCO, UNECE, UNEP/MAP, UfM and local authorities participate, following and coordinating the implementation of the Strategy at regional level. Additionally, MIO-ECSDE contributed with comments in several other ESD & Youth related policy documents such as the Global water Partnership Youth Engagement Strategy (2015), the expected Strategic Implementation Framework of the UNECE Strategy on ESD (2021- 2030), the Proposal for a European Council for Education for Environmental Sustainability (2021), the Gender & Youth Policy of the EU-WES Project (2021).

The MIO-ECSDE ESD Initiatives for Youth: Goals, Networking & Methodologies

MIO-ECSDE is a Federation of 133 NGOs from the entire Mediterranean region active in the fields of environment and sustainable development. Through its Mediterranean Education Initiative for Environment & Sustainability (MEdIES), it promotes ESD systematically in the Mediterranean region and beyond by means of capacity building, development of educational resources and networking. MEdIES was launched in 2002 at the Johannesburg Summit for Sustainable Development as a UN Type II Initiative and soon after, received its final format as an e-network of some 6,000 educators, trainers, youth trainers and young people engaged in mobilizing people of all ages towards sustainability.

Youth is at the very heart of MEdIES actions that are aiming for responsible, environmentally literate, democratic and ethical global citizens who make informed choices and engage in committed actions based on the values of sustainability. MEdIES, as a regional network, provides the platform for discussion, exchange, cooperation and co-creation, bringing in experiences and know-how from various contexts. Regional networking value lies particularly in the ability to organize the joint action of youth together with other stakeholders, not only coming from the educational sector – schools, universities, students, educators – but also from NGOs, local associations, management bodies, inter-governmental bodies as well as the Circles of Mediterranean Parliamentarians & Journalists (COMPSUD & COMJESD) facilitated by MIO-ECSDE. In addition, through regional networking the global SD/ESD agenda is made more youth-specific and context relevant to members. Thus, networking is a key practice of MIO-ECSDE through which not only ESD is communicated and promoted among and/or for young people but also action and co-responsibility are enabled towards identified common priorities and opportunities.

MEdIES' goals are to develop understanding, competences, behaviours and inspire informed and responsible actions of youth and adult citizens aligned with sustainability principles and the Sustainable Development Goals (SDGs). To this end, MEdIES' youth actions and methodologies:

1. Can take place in formal and non-formal learning settings
2. Are learner-centred
3. Are multidisciplinary and experiential
4. Enable meaningful participation of the youth
5. Combine hands-on and ICTs approaches
6. Develop critical and systemic thinking
7. Empower young people to act as sustainability & transformation agents
8. Enable the creation of youth networks at national & local level.

The latter, has been the case with the Youth Groups, developed for the support of the Man and Biosphere Program (MAB/UNESCO), which are engaged in ESD but also in management, decision-making and sustainability activities in Biosphere Reserves (BR) such as: eco-tourism, development, promotion and branding of traditional products and services, communication and representation in fora.

Formal education setting – cooperation with the University of Athens
MIO-ECSDE, in collaborating with the (UC/UoA) (Greece), hosts a part-time stage for post-graduate students of the Masters Program on Science/Chemistry Teaching, within the course of 'Non-formal and Informal ESD'. The students participate in ESD projects run by MEdIES for several months. They are trained on ESD methodologies and provided with training material, observe ESD interventions at schools (shadow training), participate in related teacher training and then coordinate selected ESD activities with pupils on their own. Throughout their stage the students are supervised by the Scientific Coordinator. Participatory youth training, combining theory and practical work in 'real life' ESD projects allows the young educators to develop their competences for ESD teaching. So far, some 25 post-graduates have taken part in ESD projects about sustainable water resources management/non-conventional water resources, marine litter, waste management, biodiversity and protected areas.

Non-formal educational setting – Summer Universities and Capacity Building
Most of the relevant MIO-ECSDE educational interventions are included in the following categories:
1. Non-formal ESD workshops in schools, beach clean-ups and other campaigns, such as the YouthXChange in the Mediterranean on sustainable consumption, with the partic-

ipation of a very large number of school students, scouts, youth organisations, etc. in various Mediterranean countries.

2. Organisation of Summer and Hybrid Universities focusing on *"Integrated Approaches and Sustainable Management of Biosphere Reserves"* in cooperation with the UNESCO Regional Bureau for Science and Culture in Europe (Venice Office), the UC/UoA, the Hellenic National Committee of MAB/UNESCO and local organisations. In this framework, a major Resource Book has been produced (ESD in BRs and other special designated areas), five 'live' Summer Universities have been organised (Amfissa, Greece, 2014; Samothraki, Greece, 2016; Sardinia, Italy, 2017; Parnon, Greece, 2018; Central Balkan, Bulgaria, 2019) while in 2020 and 2021, two Universities were organised in a hybrid format due to the COVID-19 pandemic including a 'live' phase with a small number of participants (Asterousia, Crete, Greece) and a dedicated four-week e-course.

3. In-service Capacity Building on ESD for young educators. This includes approximately 50 trainings in Greece, Cyprus, Malta and all the non-EU countries of the Mediterranean region organized within the framework of EU funded projects, H2020-CB/MEP, SWIM/H2020, WES, ERASMUS+, etc.

Impact and way forward

The MIO-ECSDE and MEdIES commitment to engaging youth in ESD has so far produced significant and impactful results:

- Seven policy papers promoting ESD and youth participation in ESD activities, programs and initiatives produced and advocated with visible policy results
- Five Summer Universities and two Hybrid Universities successfully organised in cooperation with a large number of local, national and international partners, increasing the competences and knowledge of more than 450 young managers, post-graduates and practitioners from the Mediterranean and beyond on topics related to SD/SDGs/ESD
- Around 50 in-service capacity building trainings on ESD, reaching approximately 2,500 young educators
- 25 post-graduates of the University of Athens were trained in non-formal and informal ESD in the framework of their masters studies
- A large number of awareness raising, media campaigns and activities on SD/SDGs, etc. involving more than 25,000 young people from various Euro-Mediterranean countries
- A large amount of educational material has been produced addressing youth specifically (e.g. the YouthXChange) and indirectly. All resources are open and free on the MEdIES webpage.

For the training sessions and the Summer/Hybrid Universities, the evaluations that have been carried out have shown satisfaction among the majority of participants (95%) stating that they obtained important insight and skills useful for their studies and/or professions. In addition, the youth involved in MIO-ECSDE's participatory ESD activities repeatedly requested the follow-up and scaling-up of the activities and even more opportunities to participate actively in co-shaping policies and programs. In the framework of 'ESD for 2030', the upcoming Strategic Implementation Framework of the UNECE Strategy on ESD (2021- 2030) and the ongoing process of updating the Action Plan of the MSESD, MIO-ECSDE is determined to further strengthen partnerships and synergies and mobilize the required human and financial resources for creating opportunities for youth's meaningful engagement in ESD policies, campaigns and other activities.

Figure 9.1 Snapshots from our Summer Universities & Youth Events

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10. The Youpan: Conquering The (German) Structures

Martin Hagemeyer, Nicolas Klasen,
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ABSTRACT:

The German Youth Panel on Education for Sustainable Development (youpaN) is the official body for youth to participate in the ESD implementation process in Germany. Founded in 2017 it was established as a measure for implementing UNESCO GAP ESD in Germany and it is part of the German National Platform for ESD. All members are part of one of the six ESD expert forums. Additionally, the Panel organises its own conferences and members participate in other relevant events for ESD stakeholders. This process shows how young people can meaningfully participate in a national ESD strategy and influence political processes. The effective support youpaN is receiving is important to enable this work. However, the panel still has to face some challenges such as trying to fit into processes which are not designed for young volunteers or trying to better represent the general society among its membership.

Keywords: meaningful youth participation, accessibility, intersectionality, ESD, sustainability, implementation

Since 2017, the German Youth Panel on Education for Sustainable Development (youpaN) has been the official body through which youth participate in the ESD implementation process in Germany. It can therefore effectively bear witness to how meaningful youth participation can work in the field of ESD. In this article we explore the background to the establishment of the youpaN and its history, elaborate on the structure of the youpaN, explain its activities, state its goals and visions and finally, critically discuss and analyse the work of the youpaN.

Background and History

To understand the establishment of the youpaN, one needs to go back to the start of the UNESCO Global Action Program (GAP) on ESD in 2015 in Germany. For its implementation, the German Federal Ministry for Education and Research (BMBF) established a National Platform on ESD as the supreme steering body with six ESD expert forums in line with all areas of the education system[1]. The national implementation process is designed as a multistakeholder process. However,

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[1] National Platform on Education for Sustainable Development, 2017, p. 3

Figure 10.1
The YoupaN Youth Representatives.
© Christopher Zentgraf

even though the empowerment and mobilisation of youth plays an important part of UNESCO GAP as priority action area 4[2], and although some individual young people were taking part, no formal youth participation was incorporated in this multistakeholder process which was a big point of discussion for many participating actors. Together, the National Platform and its bodies developed and adopted the National Action Plan for ESD in 2017[3]. Through effective lobbying, the above-mentioned actors managed to include a formal youth participation body, the youpaN[4]. The youpaN is funded through a temporary grant from the Federal Ministry of Education and Research paid to the Stiftung Bildung (a private foundation campaigning for better education and youth participation). The need to reapply for the funding at the end of 2019 and 2021 led to some restructuring of the project and an increase in staff supporting the youpaN.

How we work

Initially, a selection committee, consisting of representatives from different youth organisations, chose 20 people to be a part of the new body. A similar selection process is applied until today and has so far taken place four times (once each year) to restock the youpaN's members and increase membership to 25 in 2018 and 30 in 2021. Today, the youpaN consists of 30 volunteer members between the ages of 16 and 26 from all over Germany and is supported by professional staff from

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[2] UNESCO, 2014, p. 15
[3] National Platform on Education for Sustainable Development, 2017, p. 3
[4] National Platform on Education for Sustainable Development, 2017, p. 70 f.

the Stiftung Bildung. The youpaN has one seat with full voting rights on the National ESD Platform and all members are part of one of the six ESD expert forums. The youpaN itself meets four times a year to discuss its strategy and work; apart from that, members meet online or at relevant events. Each member can remain a member until the age of 27. Apart from our work as part of the official ESD implementation bodies, we are completely free in deciding how we work together and what we do.

Our engagement
What we do
Every year we organize two youth future conferences, named youcoN. One youcoN focuses mainly on other close-to-youth ESD actors; this helps us to exchange on current trends and issues regarding ESD. The second annual youcoN aims to address a broader young audience in which its key topic of sustainability is related to ESD. Over the course of the years, we have reached over 600 adolescents and over 150 organizations and institutions have participated in the conferences.

Figure 10.2
YoucoN 2021. © Julius Schreiner

Members of the youpaN also actively participate in various conferences of other relevant stakeholders like NGOs, foundations or ministries as guest or keynote speakers, as workshop hosts or simply as attendees. In this way we reach out to wider parts of society, especially to older generations that get to know our goals as we discuss current challenges like digitization, migration or ecologic problems with them. These activities take place partially on an international level, such as at the UNESCO World Conference on ESD in 2021 where we actively contributed to the outcome of the Berlin Declaration[5].

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[5] UNESCO, 2021

Figure 10.3
Side Event of the UNESCO World Conference on ESD 2021
©BMBF/BILDKRAFTWERK/Kurc

The youpaN members also strongly promote ESD via social media. For us this is highly important to reach even more adolescents. We are currently working on a new publication, through which we aim to address an academic and interested civic audience. The youpaN members are very active within the national ESD forums and the National Platform on ESD. We delegate one member for the national platform who is equipped with voting rights. In the expert forums, the youpaN is represented with around five members per forum. In the national platform we were able to initiate and coordinate a resolution on ESD and Corona which recommends ESD as a way out of the crisis in the education system, reinforced by Covid[6]. This resolution was the first of its kind to be published by the National Platform. In addition, on our intervention, a working group within the National Platform has been established that deals with the topics of youth engagement and necessary free spaces for ESD implementation.

Regarding political lobbying the youpaN members have gathered a lot of experience and have enjoyed some success.. We hosted our own lobby event with members of the German parliament which is going to be repeated. We are involved in further lobby events and actions. We are regularly in touch with politicians working on ESD, including the Federal Minister of Education and have been requested for parliamentary expert hearings. In 2021, we were asked by the Federal Ministry of the Environment to give our assessment on the revised Climate Protection Act.

What we want to achieve
Generally, the youpaN campaigns for the rapid implementation of all relevant German ESD declarations, proclamations and signings, especially the new UNESCO program "ESD for 2030". In

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[6] National Platform on Education for Sustainable Development , 2020

particular, the youpaN stresses two transformations, as stated in the Preamble of the Berlin Declaration[7]:

- Firstly, we want economies to transform socially and ecologically to realize a social lifestyle that is coherent with the concepts of climate justice and human rights
- Secondly, addressing all educational institutions, we want to see a whole-institution approach applied so that students can experience a fulfilled vision of a sustainable and peaceful future.

These transformations must be induced by education. The youpaN members see many deficiencies in current education systems including inequality in learning opportunities, regular discrimination, insufficient educator capacities, insufficient digitisation and unsatisfactorily equipped learning facilities. To fix these issues, the youpaN demands that ten per cent of German GDP ought to be spent on education and research[8]. We are convinced it is crucial to empower young people to become leaders for sustainability. However, this engagement should not be one-sided; besides knowledge, young people must be given the power to change relevant structures. Meanwhile, the engagement of young people in society should be more appreciated by society and governments[9].

Discussion and Outlook

How can meaningful youth participation take place?

Our activities have an enormous influence on the implementation of ESD in Germany as we can directly influence decision-making processes through our engagement. In this way, we manage to bring young people's perspectives directly into the various forums of the National Platform on ESD and the National Platform itself. Through our suffrage, we can influence processes directly. Through our engagement, we are well known by many stakeholders for ESD in Germany, which enables us to participate and actively impact other events related to ESD as well. This not only enables us to exchange with other ESD actors and politicians, but also allows us to exchange ideas with other young people. Thereby, we are enabled to reflect our work and it allows us to link our demands with other initiatives. In the long run, this will increase the social pressure to significantly strengthen the implementation of ESD.

We are significantly supported in this by the Stiftung Bildung that works daily to strengthen civil society's commitment to education and to promote participation and diversity in education. In particular, the youth participation team (*Team für Jugendbeteiligung*) supports us financially and

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[7] UNESCO, 2021, p. 1 f.
[8] youpaN, 2020, p. 11
[9] youpaN, 2020, p. 4

organisationally, thanks to the funding of the Federal Ministry of Education and Research. Constant exchange and many conversations ensure that youpaN does the substantive work while the youth participation team supports us structurally. Precisely because we members of the youpaN all work on a voluntary basis, it is extremely profitable for us to have competent and appreciative support.

However, there are also challenges that remain and minimise our contribution to the implementation of ESD. Firstly, we lack effective voting power. As youth we are still very underrepresented in the National Platform or other ESD related bodies where there are many more people who are representing the perspective of an older generation. Our influence is further disadvantaged by our position as volunteers. Most members of such bodies pursue their role through their full-time employment and it is part of their working time. Therefore, meetings often take place during core time, during which we as volunteers often have other duties such as school, study or work. Thus, we cannot always attend all meetings. As a result, we cannot always use our suffrage, which leads to an imbalance. We would therefore like to see more awareness for our voluntary position in the future, so that this will not be the case. Although we have the possibility to influence the decisions of the National Platform, the decisions aren't legally binding but only contribute to the political discourse. However, this may then have an impact on concrete measures. Another challenge concerns the composition of the youth panel itself. We are currently asking ourselves how well we can represent the perspectives of all young people in the ESD process. This question arises from the fact that we ourselves are increasingly confronted with the awareness that we do not represent the average of all young people in Germany. Socio-political engagement, especially among young people, is still a privilege.

In order to be able to get involved, certain resources are needed, especially enough (free-)time. Time which cannot be invested in employment, family support or learning. Additional barriers, such as not being fluent in German or English or having a cognitive or physical impairment, are a particular disadvantage. Thus, intersectional barriers decrease participation in volunteering. This is not compatible with our understanding of inclusive and democratic youth participation, which is why we are currently exploring ways in which we can remove such barriers. Our aim is to give all young people the possibility to participate at youpaN. However, this is an aspect that does not only concern us as a sustainability youth panel but also occurs in other areas, which is why we would like to see and seek structural solutions.

Conclusion
In summary, our youpaN is a good example for meaningful youth participation. Although there are remaining challenges in terms of effectiveness and accessibility, with the support of the Stiftung Bildung and others, we can focus on these remaining challenges. It is also important to notice that there are already implemented structures to integrate the youth perspective in the national ESD

process. Therefore, it would be conducive to build and strengthen similarly implemented youth participation structures in other countries.

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11. From Youth Awareness to Action: The Case of The Eit Climate-Kic Young Innovators Program in Cyprus

Stylianos Yiatros, Andreas Pastides, Soulla Karra, Andri Ioannou
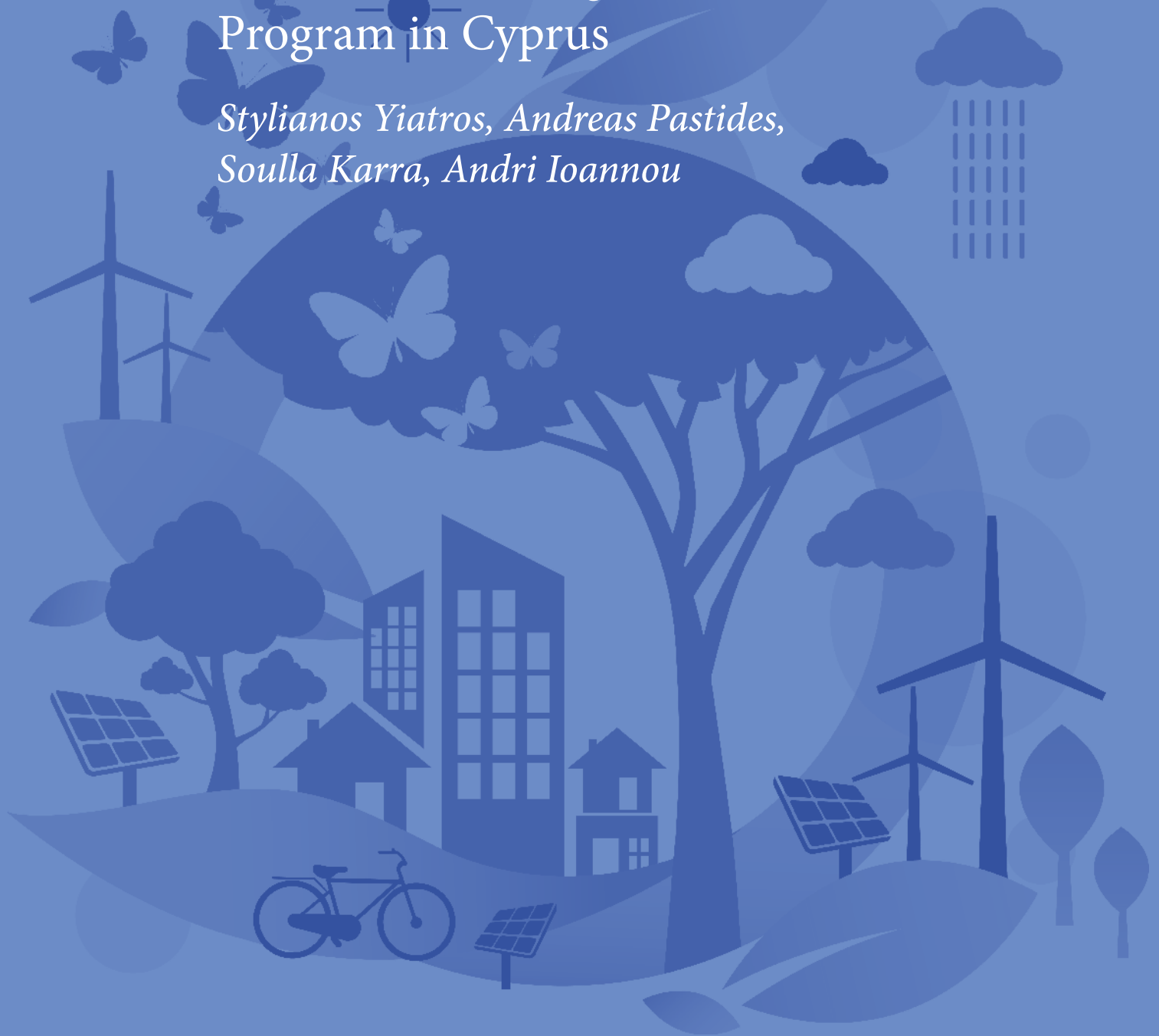
ABSTRACT:

Sowing the seeds of ESD in K-12 school systems has been pivotal in creating the student movement of 'climate strikes' that have dominated international news across the globe. Students across Europe and the globe are aware of the climate emergency and are taking to the streets to demand action. Moving from awareness to action, Young Innovators, a pioneering program launched by EIT Climate-KIC, aims to empower young people to use systems thinking and climate innovation approaches in order to contribute to local and regional challenges faced by their community. The implementation of the pilot in high schools (12-18 year olds) in the Republic of Cyprus in 2020 is presented here, highlighting the effect this intervention had on teachers and students alike, as well as lessons learned for scaling up the program across ESD-related curricula in Cyprus.

Keywords: Climate crisis, challenge-based learning, problem-based learning, systems innovation, entrepreneurial mindset

In the last few years, we have seen students and young people across the globe participating in street protests over the lack of action in fighting the consequences of climate change. Climate strikes are organised via social networks in cities across the world as young people demand immediate action to stop and decelerate global warming (Molder et al, 2021). Student engagement and increased awareness amongst youth can be attributed to exemplary quality work in ESD at different educational levels as students learn about the consequences of climate change as well as the human factors that give rise to the cause (Kadji-Beltran et al, 2013; Laurie, R. et al, 2016). Youth demands to be heard and policy leaders have started listening. How do you move from protest to positive action? How can you propose solutions that address the causes and not the symptoms of a problem? This is where the Young Innovators program of the European Institute of Innovation and Technology (EIT) – Climate Knowledge Innovation Community (KIC) program comes into play (*https://younginnovators.climate-kic.org*). The program empowers youth to take a systemic approach to identifying and breaking down challenges while working towards the development of long-lasting solutions. The work presented herein describes the Young Innovators program and how that was implemented in Cyprus in 2020.

EIT Climate-KIC Young Innovators program

EIT Climate-KIC is the European Union's largest public private initiative for creating solutions to adapt to and/or mitigate the effects of climate change. This Knowledge Innovation Community is based on the knowledge triangle of research, education and innovation, boosting local, regional and international partnerships across Europe. The EIT Climate-KIC strategy document 'Transformation in time' (EIT Climate-KIC, 2019) leverages systems innovation as an approach to tackle the consequences of climate change focussing on 12 impact goals across 4 themes: Urban Transitions, Sustainable Land Use, Sustainable Production Systems, and Decision Metrics and Finance. EIT Climate-KIC interventions focus on local and regional policy, industry and academia while also offering educational programs for postgraduate students and young professionals on cleantech entrepreneurship and systems innovation for climate related solutions (Tonks & Lockie, 2020). The climate strikes from school children and undergraduate students have indicated that youth show a high interest and support to climate action but beyond awareness, they might be missing the skills and competencies to understand the complex underlying issues of the challenges that climate change is posing. This would only add to their anxiety for inaction and lead to frustration or the development of point-innovation solutions without delivering the expected impact (Pickering et al, 2020). The Young Innovators program aims to fill this gap, by (a) empowering students to take climate action and responding to their desire to make a difference, (b) helping young people articulate their message to their community and society, (c) developing a systemic view on current challenges in climate and sustainability matters (Berry et l, 2018), (d) fostering experience-based and Problem-based learning and (e) introducing systems thinking (De Vicente Lopez & Matti, 2016) to both youth and their teachers alike. The Young Innovators program was piloted as an experimental program in 2018 in 6 European countries and 22 schools, reaching 604 students. Since then, the program has expanded to more than 20 countries across Europe, America and Asia aiming to engage more than 3,000,000 young people by 2030 (EIT Climate-KIC, 2022).

Young Innovators in Cyprus

In Cyprus the program was first piloted in 2020 by the EIT Climate-KIC Hub partners in Cyprus, the Cyprus University of Technology (CUT) and the Cyprus Energy Agency (CEA) with the support of the Centre for Systems Solutions (CRS) in Poland. The program had 4 stages and each local program had some flexibility within this framework to adjust their program to cater for the needs of their communities. In stage 1, teachers and educators from secondary schools were recruited via open calls on social media and circulars from the Ministry of Education and Culture. In the case of Cyprus, the scope of the call was open to different subject areas because (i) climate change challenges are interdisciplinary, and (ii) we aimed to explore leverage points across the educational system where this type of intervention could work. The Train-the-Trainer program introduced the Systems Thinking Visual Toolbox via a challenge/problem learning approach, that

teachers would later need to use in stage 2. Additionally, the Train-the-Trainer program presented methods to come up with a local challenge that is pertinent to climate change. It is important to receive feedback at this stage from the teachers and educators themselves on how they would see this intervention fitting within their curricula.

In stage 2, the schools' interventions with students took place. Teachers who participated in stage 1 worked with the local coaches to prepare workshops and challenges for their students. The intervention began with a Social Simulation created by the CRS (CRS, 2019). The simulation, known as New Shores, enabled students to pose as islanders, whose individual and collective actions and inactions had consequences to the economy, society and the environment. This simulation set the scene for the rest of the workshops through the quick turnaround of events on the simulated island which could lead the community to prosperity, inequality or even destruction due to climate change related disasters. The follow-up sessions brought students closer to home, discussing local challenges with local challenge owners. The themes varied from water consumption to energy consumption to the generation of waste within the school or in some cases, where the school community was linked with a local industry, the teachers were encouraged to engage with them to introduce a relevant challenge.

Using specific canvasses from the Visual Toolbox, sticky notes and markers, the students explored particular dimensions of the challenge as shown in Figure 11.1.

Figure 11.1
The Pentagonal Problem Canvas and Figure

Figure 11.2
The Cover Story Canvas. Both Canvasses have been Adapted from the EIT Climate-KIC Visual Toolbox to Facilitate Group Brainstorming, Analysis and Planning of Innovative Solutions to Challenges.

Stage 3 involved the wrap up of the classroom interventions with a hack event called the Young Climathon. The Young Climathon is an 8-12-hour event where students in groups are called to develop solutions on a particular theme and present them to an independent jury. The Young Climathon was open to all students, not just the ones who participated in stage 2, and was conducted in association with a local challenge owner. For the 2020 program the challenge owners came from the food and waste management industry to create innovative solutions to tackle food waste. The participating student teams presented their solutions on the Cover Story canvas as a visioning and back-casting exercise, seeking to identify a particular problem emanating from the grand challenge, envisioning a future with the problem solved and outlining the steps taken to achieve it. Other than thinking in systems, this hack event offers students the opportunity to learn from each other, interact with real stakeholders from local authorities, industry, academia, etc. and develop excellent presentation skills with minimal props to express their group work. At the end of the pitching competition, the winning team is invited to the next stage
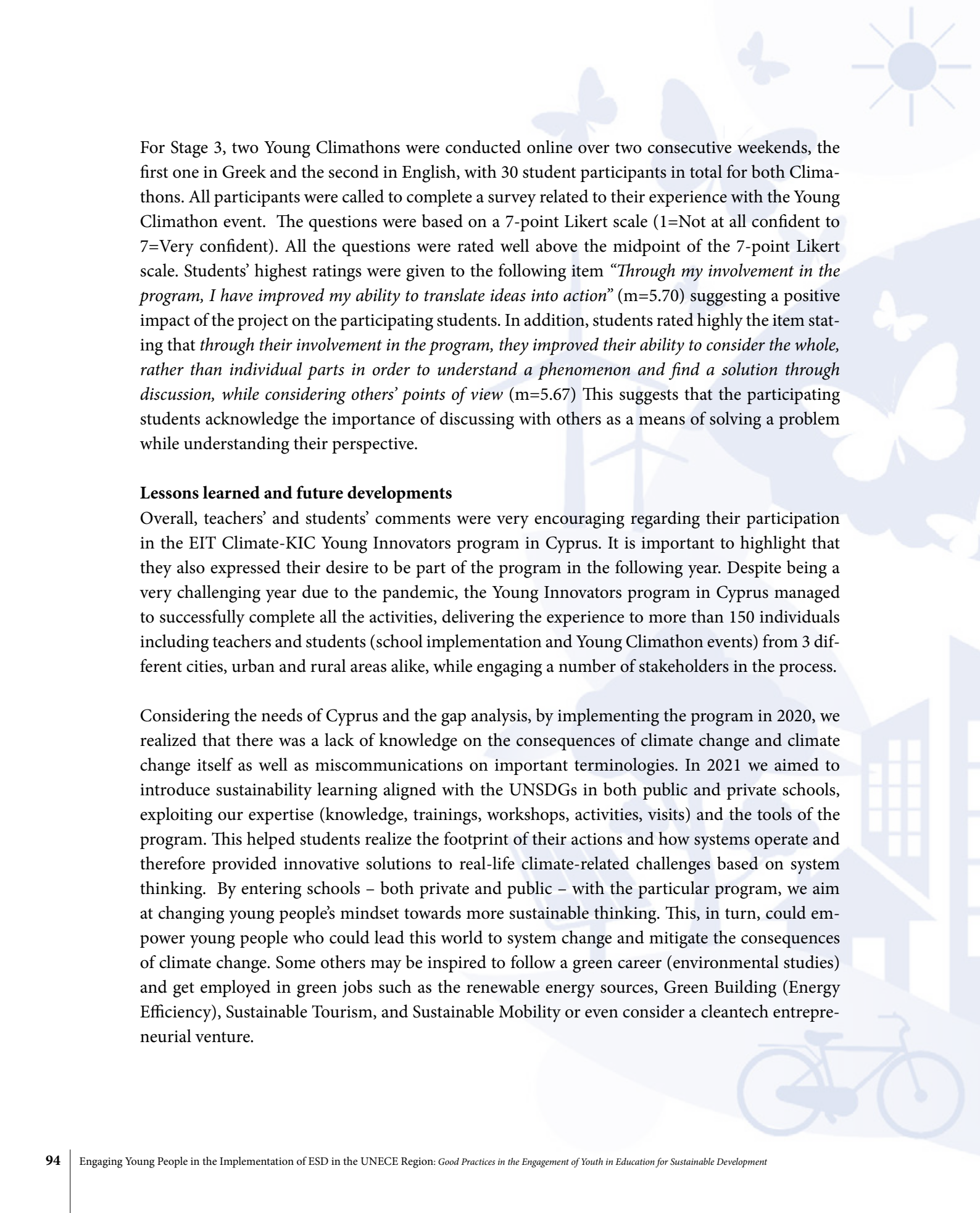
Finally Stage 4, 'the Young Changemakers', includes mentoring by the local EIT Climate-KIC partners and other experts, to develop their idea further and hopefully see it to fruition.

Implementation of the program in Cyprus in 2020 and feedback
The unrolling of the global pandemic affected the 2020 pilot with disruption in school life forcing

some stages to go into a face-to-face/online hybrid set up or even completely online. Specifically, 21 secondary school teachers participated in the teacher training: 14 teachers from the private sector and 7 teachers from the public sector. 19 out of the 21 secondary school teachers were female and coming from diverse subject areas such as Languages, Geography, Sciences and Design & Technology. Teachers attended two online and one face-to-face session. A few weeks after the completion of the training, all teachers received a questionnaire to be completed online based on their experience with the program, for both the online and face-to-face sessions. Only seven out of 21 teachers completed the questionnaire. Overall, teachers assessed the training workshops very highly, highlighting the importance of the authentic scenarios given to work with on the canvases during the face-to face meeting. Teachers also mentioned that they might need more time to discuss their ideas and that the face-to-face meeting was more effective than the online sessions. Further, all teachers agreed that the workshop achieved the objective of preparing them to implement the program and the presented tools in their classroom. The majority of teachers agreed to some degree that the knowledge and information gained from participation in this workshop met their expectations. Lastly, teachers mentioned that the knowledge and information gained from their participation in the workshops might be useful and applicable in their teaching.

In stage 2, a total of five schools (three public and two private schools), 11 teachers (eight of whom had received the training) and 121 students (59 from the public and 62 from the private sector) participated in the implementation phase; this was conducted in October-November 2020. After the completion of the program, students completed a survey based on their experience with program. The survey included questions about the EIT Climate-KIC Young Innovators program overall experience, their opinion about the Visual Toolbox (canvases) and the social simulation "New Shores". A total of 67 students completed the survey. The questions were based on a 5-point Likert scale. The choices ranged from Strongly Agree to Strongly Disagree (1= Strongly disagree to 5= Strongly agree). Students strongly believed that the EIT Climate-KIC Young Innovators program helped them think before acting because now they knew that their actions could affect the environment in many ways (m=4.13) and allowed them to exploit existing knowledge when necessary (m=4.8). They also thought that the program was quite interesting (m=4.08) and interactive (m=4.08) and helped them think of the consequences of their actions. In relation to the Visual Toolbox, students believed that the canvases helped them sharpen their critical thinking around a problem (m=4), understand the multidimensional nature of a problem (m=3.94) and see a problem from different points of view (m=3.94). Finally, students believed that the social simulation encouraged teamwork (m=4), helped them understand that cooperation is quite important when taking decisions for the benefit of a community and the environmental impact of their footprint (actions). It is worth mentioning that all means were rated well above the midpoint of the 5-point Likert scale.

For Stage 3, two Young Climathons were conducted online over two consecutive weekends, the first one in Greek and the second in English, with 30 student participants in total for both Climathons. All participants were called to complete a survey related to their experience with the Young Climathon event. The questions were based on a 7-point Likert scale (1=Not at all confident to 7=Very confident). All the questions were rated well above the midpoint of the 7-point Likert scale. Students' highest ratings were given to the following item *"Through my involvement in the program, I have improved my ability to translate ideas into action"* (m=5.70) suggesting a positive impact of the project on the participating students. In addition, students rated highly the item stating that *through their involvement in the program, they improved their ability to consider the whole, rather than individual parts in order to understand a phenomenon and find a solution through discussion, while considering others' points of view* (m=5.67) This suggests that the participating students acknowledge the importance of discussing with others as a means of solving a problem while understanding their perspective.

Lessons learned and future developments

Overall, teachers' and students' comments were very encouraging regarding their participation in the EIT Climate-KIC Young Innovators program in Cyprus. It is important to highlight that they also expressed their desire to be part of the program in the following year. Despite being a very challenging year due to the pandemic, the Young Innovators program in Cyprus managed to successfully complete all the activities, delivering the experience to more than 150 individuals including teachers and students (school implementation and Young Climathon events) from 3 different cities, urban and rural areas alike, while engaging a number of stakeholders in the process.

Considering the needs of Cyprus and the gap analysis, by implementing the program in 2020, we realized that there was a lack of knowledge on the consequences of climate change and climate change itself as well as miscommunications on important terminologies. In 2021 we aimed to introduce sustainability learning aligned with the UNSDGs in both public and private schools, exploiting our expertise (knowledge, trainings, workshops, activities, visits) and the tools of the program. This helped students realize the footprint of their actions and how systems operate and therefore provided innovative solutions to real-life climate-related challenges based on system thinking. By entering schools – both private and public – with the particular program, we aim at changing young people's mindset towards more sustainable thinking. This, in turn, could empower young people who could lead this world to system change and mitigate the consequences of climate change. Some others may be inspired to follow a green career (environmental studies) and get employed in green jobs such as the renewable energy sources, Green Building (Energy Efficiency), Sustainable Tourism, and Sustainable Mobility or even consider a cleantech entrepreneurial venture.

Building on our previous experience and feedback from students as well as experts from the Unit for ESD of the Ministry of Education & Culture in Cyprus, the program has continued, attracting more schools to deliver the intervention while creating partnerships with other organisations and local challenge owners such as the Cyprus Marine & Maritime Institute, the Republic of Cyprus Commissioner for the Environment and Junior Achievement. The aim of these partnerships is not just to offer challenges to the students but also to join forces in developing streamlined programs that support climate systems innovation and ESD in general for learners of different age groups.

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12. Youth in the Burja Wind - to be the Wind of Change

Vanja Debevec, Urška Milač, Rozana Mužica, Antonella D'Amico

ABSTRACT:

The program Youth in the Burja Wind is an educational program of the Municipality of Ajdovščina in Slovenia designed to foster youth engagement in the society and implement the principles of sustainable development in everyday life of youngsters and their families. The program has been implemented by the Institute for Youth Policy since 2019.
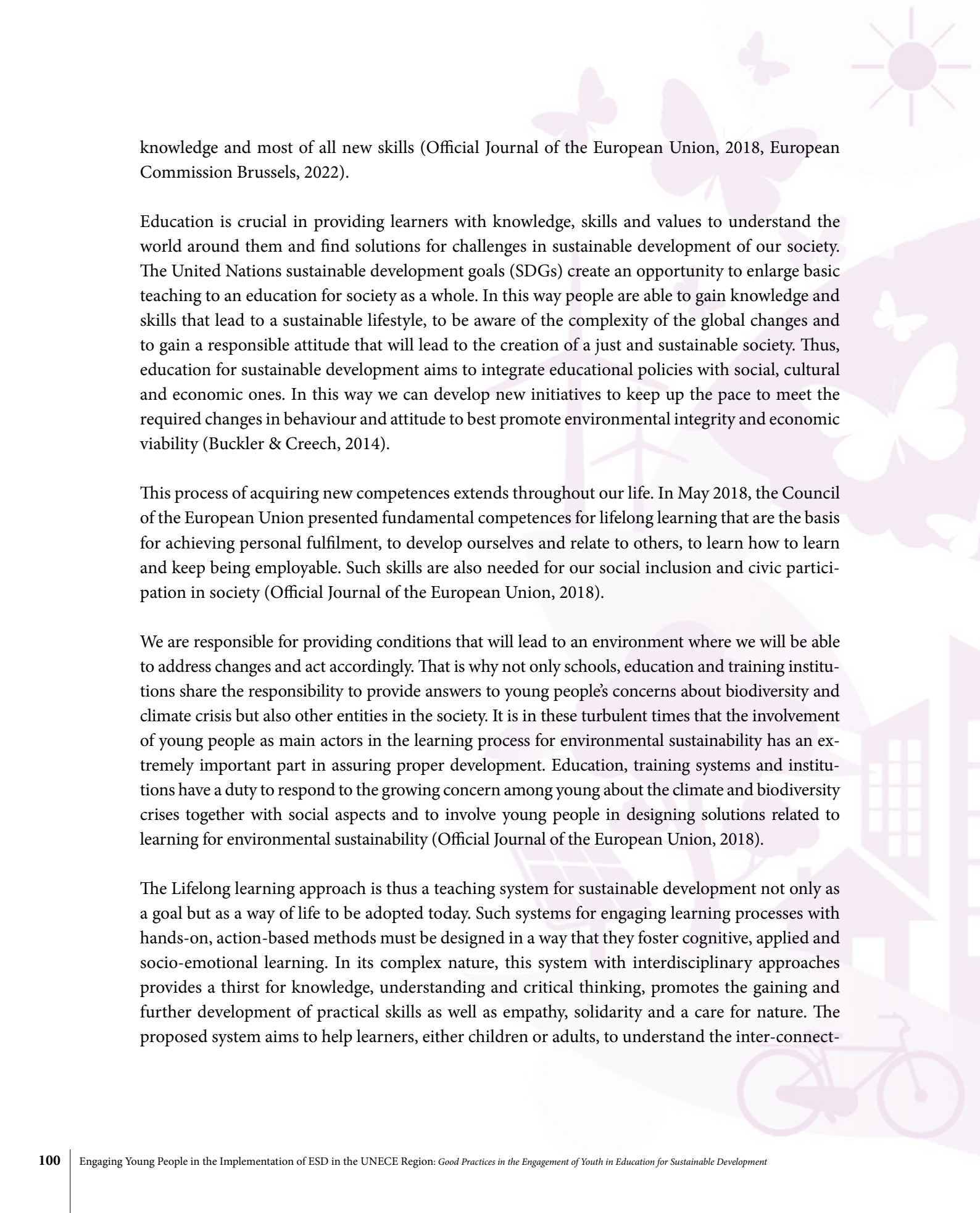
Children and young people between 3 and 21 years of age participate in the program on a voluntary basis. The interactive approach of learning by doing is focused on activities in four segments: charity work; health and active lifestyles; social interaction; care for the environment, natural and cultural heritage. They can engage with society, develop solidarity towards marginalized groups and competencies for their potential professions and adopt responsible attitude for their healthy lifestyle and a sustainable environment. The program is implemented in close cooperation with key stakeholders: schools, public and private institutions and organizations. In this way an inclusive society is formed creating values of cooperation that underlay the economic, cultural and natural aspects of sustainability.

Keywords: participation, volunteering, education for sustainable development, community

Our responsibility in times of changes

A group of third grade pupils of one of the smallest branch elementary schools in the Municipality of Ajdovščina in Slovenia gave me a special present last June. It was a jar of strawberry marmalade they had prepared in the school kitchen. But it was not just a story of how they grew their garden, how they accompanied the kitchen's chef in the process under the vigilant eye of their teacher and prepared jars and labels that really made this marmalade special. It was the pride in their eyes, this powerful feeling that makes you grow after a good deed, when you know it resulted in a change you have created.

Our world today is facing changes in technology, climate, economy, nature and society. We need to shape our lives and actions by constant adaptation to these changes. In this way we need new

knowledge and most of all new skills (Official Journal of the European Union, 2018, European Commission Brussels, 2022).

Education is crucial in providing learners with knowledge, skills and values to understand the world around them and find solutions for challenges in sustainable development of our society. The United Nations sustainable development goals (SDGs) create an opportunity to enlarge basic teaching to an education for society as a whole. In this way people are able to gain knowledge and skills that lead to a sustainable lifestyle, to be aware of the complexity of the global changes and to gain a responsible attitude that will lead to the creation of a just and sustainable society. Thus, education for sustainable development aims to integrate educational policies with social, cultural and economic ones. In this way we can develop new initiatives to keep up the pace to meet the required changes in behaviour and attitude to best promote environmental integrity and economic viability (Buckler & Creech, 2014).

This process of acquiring new competences extends throughout our life. In May 2018, the Council of the European Union presented fundamental competences for lifelong learning that are the basis for achieving personal fulfilment, to develop ourselves and relate to others, to learn how to learn and keep being employable. Such skills are also needed for our social inclusion and civic participation in society (Official Journal of the European Union, 2018).

We are responsible for providing conditions that will lead to an environment where we will be able to address changes and act accordingly. That is why not only schools, education and training institutions share the responsibility to provide answers to young people's concerns about biodiversity and climate crisis but also other entities in the society. It is in these turbulent times that the involvement of young people as main actors in the learning process for environmental sustainability has an extremely important part in assuring proper development. Education, training systems and institutions have a duty to respond to the growing concern among young about the climate and biodiversity crises together with social aspects and to involve young people in designing solutions related to learning for environmental sustainability (Official Journal of the European Union, 2018).
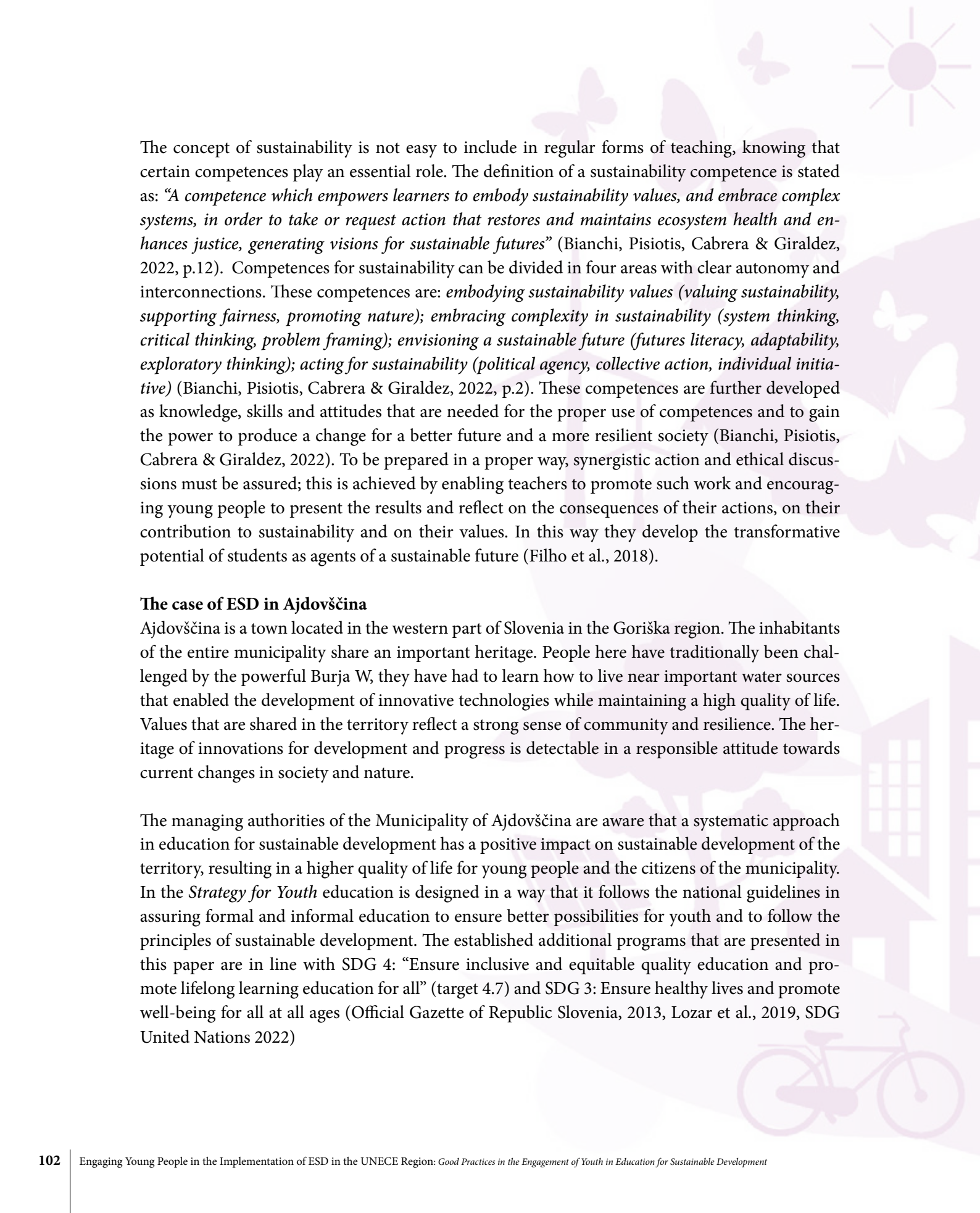
The Lifelong learning approach is thus a teaching system for sustainable development not only as a goal but as a way of life to be adopted today. Such systems for engaging learning processes with hands-on, action-based methods must be designed in a way that they foster cognitive, applied and socio-emotional learning. In its complex nature, this system with interdisciplinary approaches provides a thirst for knowledge, understanding and critical thinking, promotes the gaining and further development of practical skills as well as empathy, solidarity and a care for nature. The proposed system aims to help learners, either children or adults, to understand the inter-connect-

edness of economic, social and cultural and natural components (Duran, Gogan, Arten, Duran, 2015). Many previous attempts in teaching sustainable development were focusing merely on understanding and knowing. By adopting competence-based education we can also develop sustainability skills and know-how for responsible actions, to actually take actions and to create the right conditions for them at the local, national and global level. The emphasis is put on the capacity to act after understanding issues in nature, culture and society and their interlinkages (Debevec, 2012, Official Journal of the European Union, 2018, European Commission Brussels, 2022).

To be able to comprehend the need for resilience in times of change, young people need to be given the possibility to understand its importance in relation to the natural environments and social-ecological systems in which they live and work. Education that is implemented to foster resilience encompasses upgraded education for the environment through critical thinking and action skills (Johnston et al., 2009). When faced with challenges for youth in urban social-ecological systems, youth engaged in such a model of learning will demand and shape environmental quality and community well-being (Badjura, Dragić May & Debevec, 2019, Krasny, Tidball & Sriskandarajah, 2009). The effects of such education are also indirect and strongly affect other citizens and stakeholders through understanding and fostering resilience in natural, rural and urban areas.

The aim of such education systems is the creation of a society that is ready to adapt to new conditions. This involves complex, coherent and synergistic actions, designed to prevent the diminution and degradation of natural resource (Badjura, Dragić May &Debevec, 2019, Krasny, Tidball & Sriskandarajah, 2009) while at the same time considering natural and cultural heritage as treasures of traditional knowledge and stimuli for sustainable solutions (Beltram, Kebe & Debevec Gerjevič, 2009). Education for sustainable development is a part of this implementation in communities at local, regional, national and global levels. Various actors such as citizens, entrepreneurs, NGOs, media and politicians, play an important part in reaching the territorial synergy that is needed for the successful implementation of education for sustainable development and its implementation (Krasny, Tidball & Sriskandarajah, 2009).

The successful implementation of sustainable development can only take place when the dynamic of an environment and its social components in a given territorial system is known. In designing sustainable development strategies and policies for a territory, the values of the place, encompassing society and environment, are key elements for all actors. Sustainable development can be considered the target and ultimate goal of the process we are trying to establish in the community. The concept that helps us recognise and promote our values, that appears as the result of interlinkages between environment, economy, culture and society, is sustainability (Krasny, Tidball & Sriskandarajah, 2009).

The concept of sustainability is not easy to include in regular forms of teaching, knowing that certain competences play an essential role. The definition of a sustainability competence is stated as: *"A competence which empowers learners to embody sustainability values, and embrace complex systems, in order to take or request action that restores and maintains ecosystem health and enhances justice, generating visions for sustainable futures"* (Bianchi, Pisiotis, Cabrera & Giraldez, 2022, p.12). Competences for sustainability can be divided in four areas with clear autonomy and interconnections. These competences are: *embodying sustainability values (valuing sustainability, supporting fairness, promoting nature); embracing complexity in sustainability (system thinking, critical thinking, problem framing); envisioning a sustainable future (futures literacy, adaptability, exploratory thinking); acting for sustainability (political agency, collective action, individual initiative)* (Bianchi, Pisiotis, Cabrera & Giraldez, 2022, p.2). These competences are further developed as knowledge, skills and attitudes that are needed for the proper use of competences and to gain the power to produce a change for a better future and a more resilient society (Bianchi, Pisiotis, Cabrera & Giraldez, 2022). To be prepared in a proper way, synergistic action and ethical discussions must be assured; this is achieved by enabling teachers to promote such work and encouraging young people to present the results and reflect on the consequences of their actions, on their contribution to sustainability and on their values. In this way they develop the transformative potential of students as agents of a sustainable future (Filho et al., 2018).

The case of ESD in Ajdovščina

Ajdovščina is a town located in the western part of Slovenia in the Goriška region. The inhabitants of the entire municipality share an important heritage. People here have traditionally been challenged by the powerful Burja W, they have had to learn how to live near important water sources that enabled the development of innovative technologies while maintaining a high quality of life. Values that are shared in the territory reflect a strong sense of community and resilience. The heritage of innovations for development and progress is detectable in a responsible attitude towards current changes in society and nature.

The managing authorities of the Municipality of Ajdovščina are aware that a systematic approach in education for sustainable development has a positive impact on sustainable development of the territory, resulting in a higher quality of life for young people and the citizens of the municipality. In the *Strategy for Youth* education is designed in a way that it follows the national guidelines in assuring formal and informal education to ensure better possibilities for youth and to follow the principles of sustainable development. The established additional programs that are presented in this paper are in line with SDG 4: "Ensure inclusive and equitable quality education and promote lifelong learning education for all" (target 4.7) and SDG 3: Ensure healthy lives and promote well-being for all at all ages (Official Gazette of Republic Slovenia, 2013, Lozar et al., 2019, SDG United Nations 2022)

The involvement of the community in these education activities assures several benefits. A high level of community participation is obtained as well as collaboration that ensures the sharing of resources and knowledge. Young people are offered a powerful tool for increasing community resilience through the fostering of a sense of community, self-efficacy and action coping. The most important fact is also the promotion of volunteering. In this way people can build up their values and make a difference, use their knowledge and improve skills, improve job prospects and foster the protective and social role of the community (Johnston et al. 2009).

Youth in the Burja Wind is a program of the Municipality of Ajdovščina, based on a step-by-step teaching system of accomplishing tasks that requires certain social engagement and reflection. The program encourages the active voluntary participation of children and youth in local life and the creation of solidarity and a more inclusive society.
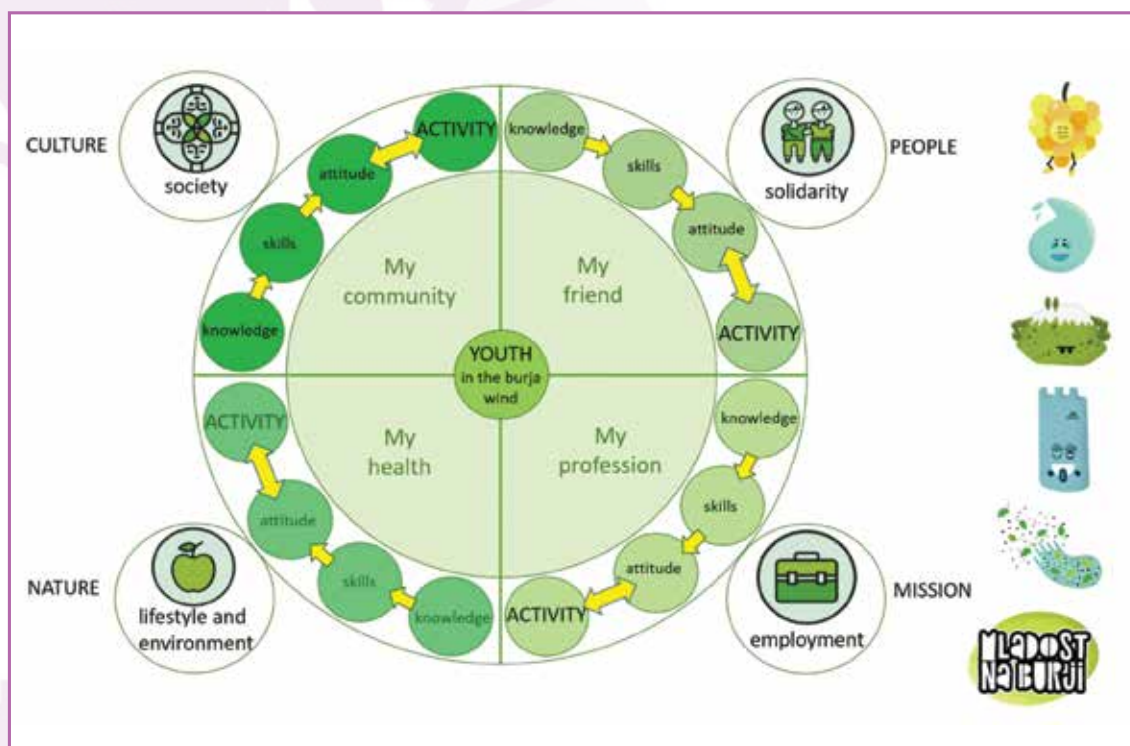

Figure 12.1
Program Youth in Burja Wind - an Integrative Approach to Teach Sustainability (Archive of Institute for Youth Policy)

We belong to the valley of Hubelj

The program *Youth in the Burja Wind* aims at bringing up children and youth to become active, socially responsible individuals with a developed sense of community and empathy for others. At the same time, they are encouraged to grow into independent, enterprising, responsible and highly employable individuals who can make a living from their work. Their lessons and practical activities are oriented towards the implementation of a healthy lifestyle and major concern for the environment and natural and cultural conservation.

The *Youth in the Burja Wind* is a program designed for children from pre-school education and young people up to the age of 21. The program encourages children and young people to volunteer and be active in the local community; participants are involved in activities that aim to educate them into solidary or communal, responsible and active individuals who, through their voluntary socially beneficial activities, co-create a more resilient local environment and strengthen their competencies in various fields. The participants with their volunteer work demonstrate active involvement in society and help create a better environment for life and development.

Through various activities in the field of "My community" (engaging in society), "My Friend" (solidarity with more vulnerable groups), "My profession" (competences for entrepreneurship and chosen profession), "My health" (healthy lifestyle and environmental protection) the participants develop a sense of responsibility towards themselves, others and the community, learn about professions and take care of their health and the environment. In this way, they grow into responsible, solidary, inclusive individuals living in the environment they are helping to co-create. Throughout a program year, participants have to implement at least 3 simple activities in each category. Simple activities can be replaced by 1 ambitious activity. The difficulty of the activities increases with age. Opportunities for the involvement of children and youth in socially useful activities are created in schools as well as in the environment itself. The Institute for Youth Policy plays an important part of managing the program and providing for opportunities in the local community through a democratic approach and communication with teachers and other stakeholders such as public institutions and NGOs. All activities are noted in a special booklet in a form of a diary, received by everyone who joins the program.

In order to strengthen the sense of belonging to the local environment, the individual stages of the program are named after local landmarks and the badges received by participants after completing appropriate stages are designed as such. Preschool children receive Grozdek, the badge representing grapes; children between 6 and 8 years of age receive Hubelj, the badge representing the river in Ajdovščina; from the age of 9 to 11 years children are given the badge representing Čaven, a mountain above Ajdovščina; children between 12 and 14 years old perform activities to receive the

badge Kastra that is representing the famous town fortress built in Roman times. The badge with the symbol of the Burja Wind is reserved for the group of participants in the age category between 15 and 21 years.

Figure 12.2
Children Learning about Processing of the Grapes.

We are part of the local community

The program follows the principle of creating equal opportunities for children and youth to accomplish activities regardless of their families' economic or social position. In order to fulfil this requirement, the participants under the age of 12 participate in the program as groups, usually as classes. In this way possible differences due to economic status, place of residence, language barriers or opportunities for integration into society, are erased.

The program further encourages individuals who are already active in a particular field to participate in other activities, for example: an athlete is encouraged to carry out activities in the field of charity work, social interaction, solidarity, community, and skills for professional growth.

The activities enable stakeholders in the community to participate actively. They provide events, workshops, training courses or present their work and results that benefit the community. Stakeholders interact with schools and are connected to children and their families. The program encourages young people to get to know the work of key stakeholders and to get involved in their work on a voluntary basis. The program is based on the awareness that understanding the function/work of individual institutions and organizations and consequently understanding the community in which we live, strengthens the belonging to the environment, developing responsible attitudes towards nature, community and people.

Figure 12.3
Children Mapping Activities,
Natural and Cultural Heritage
in the Municipality

The program further encourages children and young people to come up with new activities that follow the objectives of the program, to participate with new ideas and suggestions. This program is developing a sense of responsibility towards themselves, others and the community, teaching them about professions and how to take care of their health. In this way they grow into responsible, socially concerned, inclusive individuals living in the very environment that they are helping

to create. The participants not only learn about their environment and society, but also learn about the process of making a difference and develop sustainability skills. The reflection of individual actions is also very important. The diaries play a crucial part as do the web page and Facebook where children and their families can follow the social life of the Municipality of Ajdovščina with an emphasis on their opportunities for active participation.

By encouraging children and young people to participate in the activities of the *Youth in the Burja Wind* program, the municipality sets the long-term goal of educating and empowering active citizens. By implementing exploratory thinking and political agency, participants are encouraged to become independent and self-confident people, involved in social activities in a responsible way to assure the creation of a sustainable community.

This innovative approach to education is the first of its kind to be implemented in Slovenia. There are 3,449 students in the Municipality from pre-school to secondary school (Republic of Slovenia Statistical Office, 2019). Half of them are engaged in the program every year. The program that connects schools and communities is regularly evaluated by teachers, the program coordinator and the municipality.

We create our society

Youth in Burja Wind creates the opportunity to learn how to be resilient in times of change and to be innovative in the creation of new changes for a prosperous society.

Participation in the program is on a voluntary basis while activities can be selected according to the interests of an individual and the possibilities provided by the local community. The most effective way of learning and developing the sustainability competences is through active participation, immediate observation of the results and of their impact on the community. The values of the initiative for youth are presented through the education of active citizens that will ultimately contribute to responsible actions and the resilience of society on a global level.

Along with advances in technology, the program is facing challenges to strengthen the sustainability values in younger generations. By doing this their parents and other citizens adopt a suitable attitude in order to create a resilient society. The program will be presented to other municipalities in order to establish a network of education and community-based programs, where together we will foster the adaptability and future literacy of young people. It is our most important sustainability competence that we hope will serve as a model; that is, to enable children and young people to be proud of their life and work and to keep our promise for a sustainable life with new opportunities for the future that we are creating together.

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13. Learning English Easily and Independently with the New Easy Enjoyable English Program

Lola Adilova

ABSTRACT:

During the pandemic many parents and students were unhappy with the fact that they did not understand school material so a group of students, led by a teacher, developed the Easy Enjoyable English program. The main goal of the program is to teach first graders to practice English independently or with their parents. This mobile app is entertaining, interesting and colorful, which enhances the imagination and raises interest in the lessons; exercises are also designed to help to reinforce the lesson. In addition, there are auditory pictures that pronounce the English phrase and with it, its translation into Russian and Uzbek. The main practicality of this program is that it is adapted to the school curriculum, which allows teachers to use it to set assignments and teach lessons.

Keywords: new program, self-study, help for parents, new methods of teaching, changes in education system

In recent years, Uzbekistan has seen unprecedented changes in various spheres, including educational institutions and decrees to build new schools and open new institutions. Before 2015, English was taught only after elementary school so that the child would not get too tired but this method greatly hindered learning the language in more detail. In middle school, children usually go through their teenage period when they review their life and they can dramatically change themselves and their goals. A child who is not accustomed to learning a language from childhood may not want to learn a language but will strive for another, easier path.

Fortunately, every school has now begun to teach English, starting with the first grade. There are special, large books with illustrations, short phrases and words, which they can learn through the help of older teachers or parents. With *Easy Enjoyable English* first graders can learn the language on their own. Learning a language has never done any harm. The more languages you know, the more you can experience the world in its pristine form. Language is a bridge between different cultures. When you study a language willingly or unwillingly you get a glimpse of its culture and can become interested in it. As we all know, English is an international language and more than half of

the population of our planet speak it to a certain degree. Most information found on the internet is in English, programs are created in the same language, online lessons and video lectures from different universities in the world on YouTube are in English. Even when voice-overs are done, people prefer to hear the real voice of lecturers. Despite the fact that we ourselves are from another nationality, English surrounds us everywhere: the names of cafes, learning centres and even many everyday words are borrowed words from English. It is for this reason, to make life easier for the new generation, that our President Sh. Mirziyoyev called on all parents and teachers to start teaching children English at an early age. Some think that the older a child is, the harder it is for them to learn something new, believing that because every year the brain absorbs more and more information, it becomes a little harder for teenagers and seniors to learn something new. But it is important to remember that children love variety so they should not be asked to simply memorize information. It is necessary to interest and show a desire to children to learn the language on their own or with their parents.

Pursuing this goal, an English and Literature professor, Sadikova S.M., together with her group of young, ambitious and aspiring students, developed a program designed for first graders, who are just beginning to make their first steps towards their future. This program is not only suitable for online learning, but also face-to-face learning. This program can be a great help for young teachers who are eager to give knowledge to the new generation.
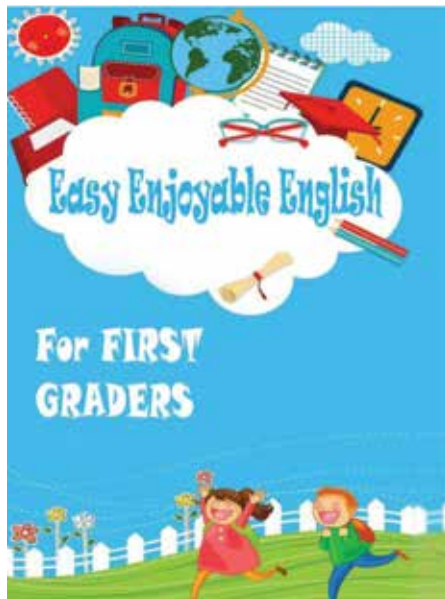
Figure 13.1
Easy English Book 1

The four main aims of this project are:
- To improve the effectiveness of teaching English in elementary schools and to create visual e-learning resources for elementary students to learn English on their own
- To create a mobile application in English for elementary school and connect it to the Play Market Internet system, which helps students who wants to learn independently to install the program as an application
- To not only reach elementary school students through this application, but also their parents who can become a support and encouragement for their children and as a nice bonus, they can learn English themselves as well as their children
- To improve the quality of learning in schools and help teachers teach children English easily by making it fun.

Expected results from the Easy Enjoyable English program:

A mobile app was created that teaches English in elementary grades. It contains phrases and words that are divided into sections by topic. There is also a set of exercises that help the child to better remember the material and understand the topic. In addition, students can hear the pronunciation of phrases and words along with a translation in Russian and Uzbek. By clicking on the desired phrase or word, you can hear the English pronunciation and translation of the word or phrase. This helps the student learn on their own, while understanding what they are doing and listening to it.

Using a mobile app to enhance English language learning in elementary schools:
- expands students' imagination
- provides visualization
- increases interest in the lesson
- allows students to study independently
- increases the quality and effectiveness of education
- allows parents who don't speak English, to develop their skills with their children - because learning something new doesn't look at age
- works effectively for both online and offline learning.

Practical relevance of the project:

The relevance of our project is that the program is effective in both distance and traditional forms of learning. In a pandemic environment, the transfer of students to distance learning has caused a number of problems. In particular, the inability of students to do their own homework in English, their parents' lack of the necessary language skills and their inability to fully master the various topics. It is because of these problems that children have no interest in learning. It's more profitable for them to go and watch something on YouTube than to sit and learn something they don't

understand and aren't interested in. Therefore, it is better to develop together than leave them to learn on their own.

Scientific novelty of the project:
The novelty of the research is that there are many tools, programs and textbooks available for learning English but this is a mobile application, which can be studied independently and which is adapted to the school curriculum. This mobile app is created in a simple and understandable form for schoolchildren and provides all the knowledge and skills that elementary school students need.

**Methods of teaching language to children**
Games are considered one of the most effective methods of teaching. Children, especially between the ages of five and nine, tend to play games in real life and are usually familiar with the conditions, structure, rules - this greatly increases the positive emotions and they will be even more interested in learning the language. If the games are in the form of a competition, then the children may become more resourceful in order to win the prize, which is likely to come in handy in life in the future. In addition, games increase children's self-confidence as they not afraid of punishment or criticism but can freely practice the language they are learning.

Psycholinguistic characteristics of junior high school students are characterized by a limited memory and rapid forgetting; there is a predominance of mechanical memory over logical. By learning a foreign language in class, young students try to repeat some of the statements they hear; this is supported by the mobile application. It is very important to begin foreign language learning with listening and speaking, so the next step is to determine the appropriate tools and techniques to use in the classroom. This should take into account their physical, social, emotional, and cognitive developmental characteristics such as short-term memory, attention span instability, visual abilities, and predisposition to difficult forms of brain function. It is important to remember that children listen first before they speak.

This program can be seen as a promising direction toward a bright future for a new generation. After all, they will be learning a language in a more enjoyable way and being in schools with new technology is sure to help them build the future they want.
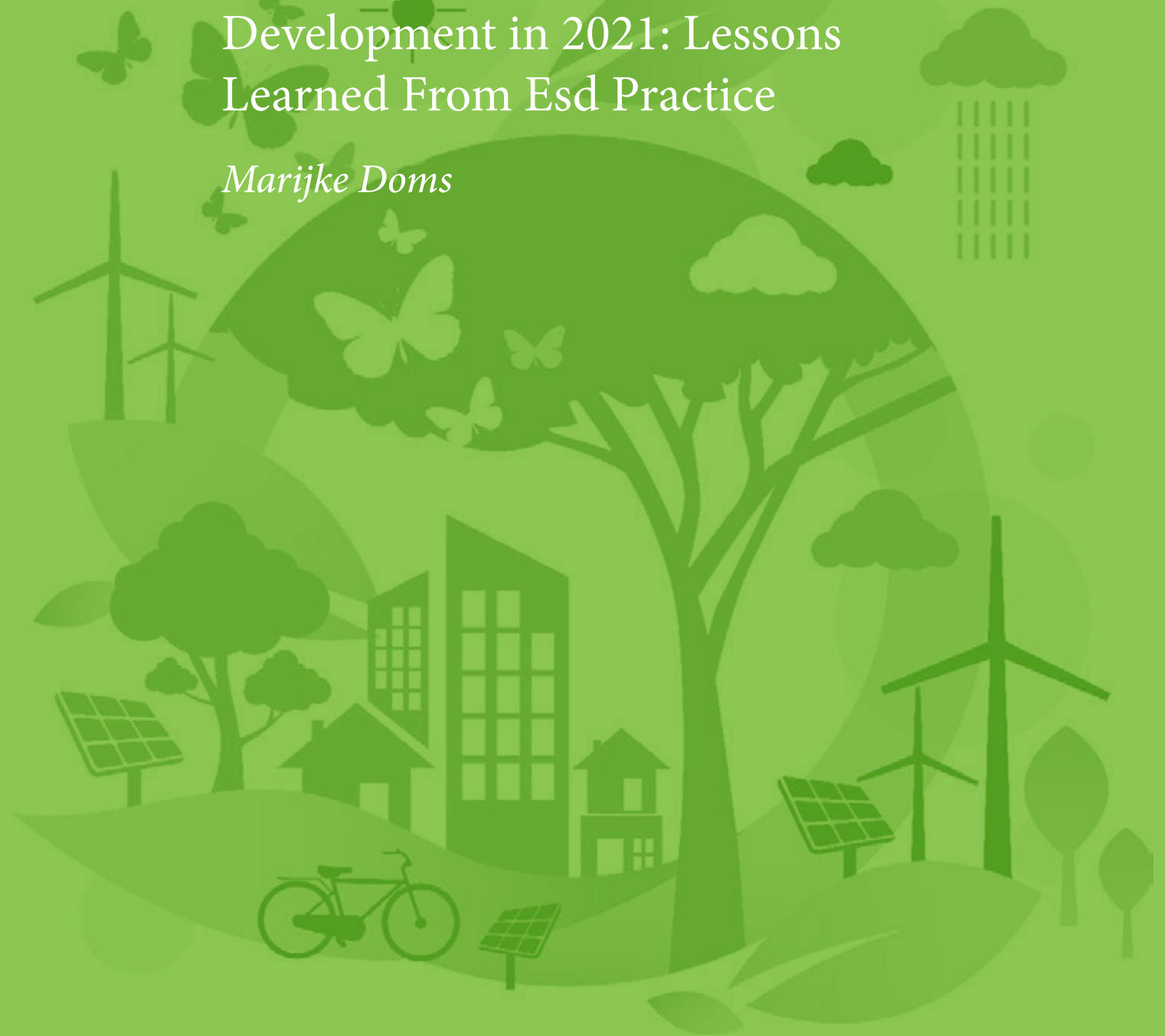
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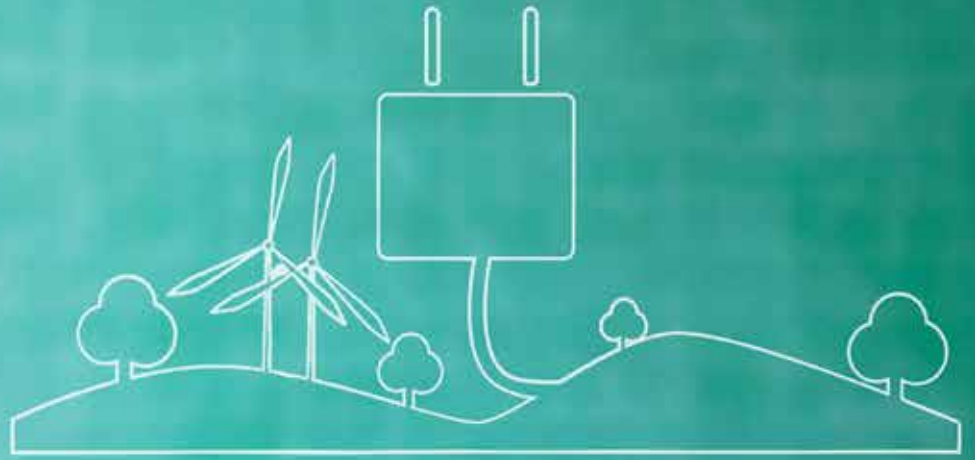
14. Act4Change's Project Rave Engages Youth to Radically Change their Impact on Sustainable Development in 2021: Lessons Learned From Esd Practice

Marijke Doms

ABSTRACT:

In this paper, Belgian youth organization Act4Change reports on its first experience facilitating Project RAVE. Project RAVE is an innovative ESD trajectory for Belgian youngsters who have an interest in sustainability yet lack the necessary competencies and concrete projects to actively contribute to sustainable change. During the learning journey, they acquire membership of a community of like-minded youngsters plus the key competencies which allow them to take action as a sustainable changemaker.

In 2021, the design, coaching, facilitation and follow-up of Project RAVE were all realized by the young volunteers of Act4Change. While the pilot case realized most of the learning objectives, it also offered insight on some relevant challenges and limitations when this form of ESD is almost fully carried out by youngsters.

Act4Change is a Belgian NGO founded in 2011. Since its foundation, it has been empowering young people, aged between 18 and 35, to participate in the transition to an environmentally, socially and economically sustainable society. Act4Change creates safe, inspiring and action-oriented learning environments in which young adults develop key competencies to contribute to sustainable change.

For Act4Change, young people are a lever of change. The need for a transition towards more sustainability is most deeply felt by younger generations as they will also have to deal most thoroughly with the consequences of any global inertia regarding sustainability issues. However, in general, traditional school systems do not sufficiently provide youngsters with either the thematic knowledge, emotional resilience nor sustainability competencies to create the necessary impact.

To fill this gap, Act4Change offers a wide range of non-formal learning activities, thus allowing youngsters to grow in confidence and take on sustainable action themselves. By focusing on

collaborative learning methods and by accommodating a network of like-minded youngsters, an open space is created where learning accompanies fun. This not only advances the ESD process but also enhances feelings of resilience and connectedness among all the young people involved, both the volunteers who organize activities as well as participants in these activities.

For many years, Act4Change as an organization has been fully supported by volunteer work both in terms of governance and execution. The board of directors, organization of activities, strategy, communication and finances have all been in the hands of a group of about thirty young, unpaid enthusiasts. This organizational structure proved to be economically efficient yet not sustainable in the long run. Eventually, the available capacity of the volunteers did not meet the level of quality and consistency desired for its ESD-activities.

As a result, many interesting initiatives (masterclasses, leadership trajectories, learning networks) risked either lack of quality or causing burn-out for the volunteers involved, when they still attempted to match their volunteer commitments to a more general work-life balance. Moreover, for many years, all Act4Change activities arose from the ideas and needs of the volunteer group in place at any given time. Thus, the general track record of the organization lacked coherence and continuity. As the years passed, the call for professionalization and a more integrated, structured approach became more prominent. In 2021, Act4Change reoriented its mission to the organization of a four-month, multidimensional learning trajectory, 'Project RAVE'.

Project RAVE
A. Conceptualization
Project RAVE is an action-oriented skills lab which immerses young people for four months in an ESD framework, that strengthens their resilience and arms them to deal with complex global problems such as climate change, biodiversity loss and inequality. The name 'Project RAVE' derives from the Dutch 'Project RAdicale VErandering', or 'Project Radical Change'. Throughout the learning cycle, in-depth, personalized training is facilitated to develop eight key competencies. These were also listed by UNESCO (2017) as the specific attributes individuals need for action and self-organization, to engage constructively and responsibly with today's world.[1]

Every learning activity of the trajectory focuses on either critical reflection, systems thinking, anticipatory competency, collaboration competency, strategy competency, normative competency,

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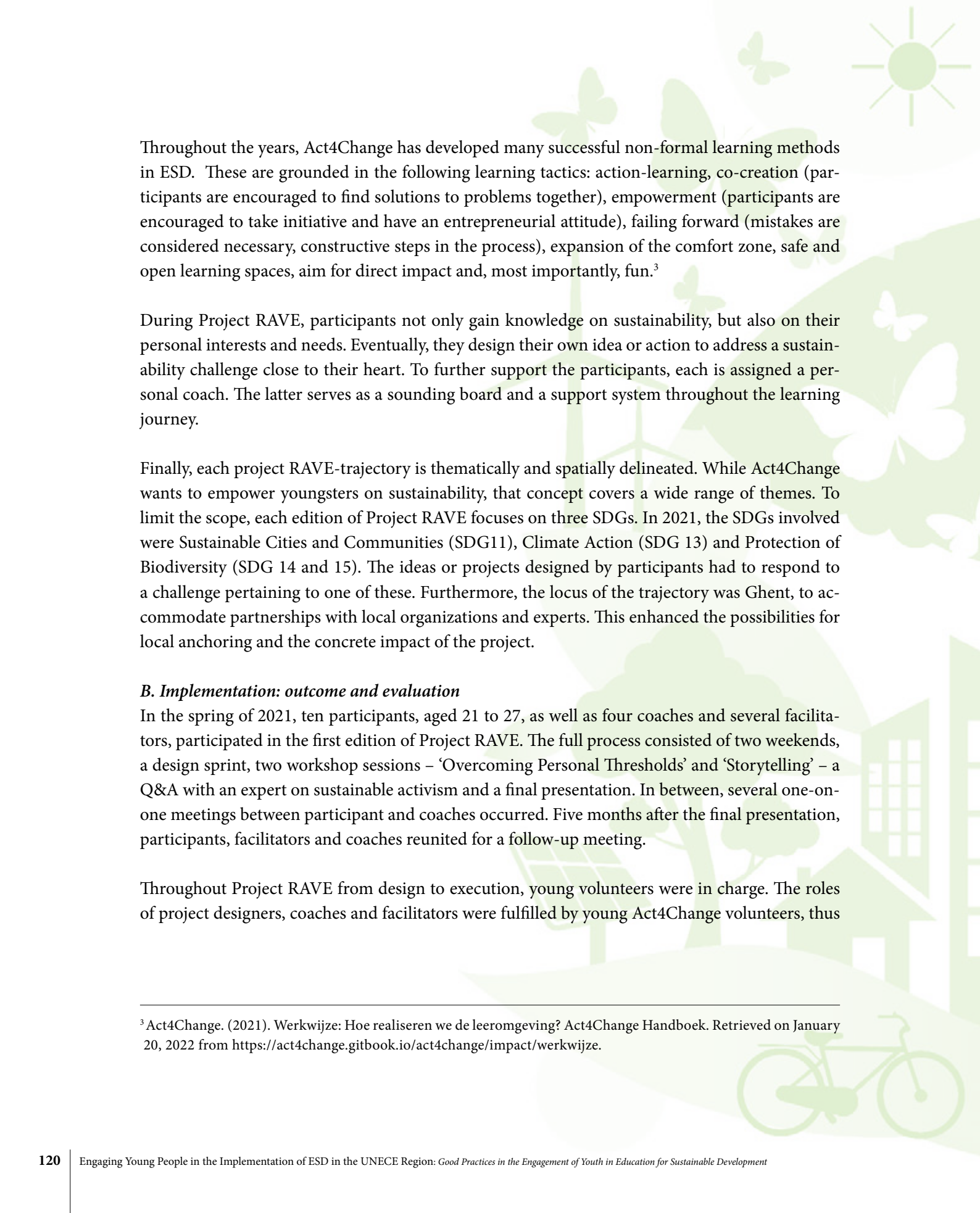
[1] UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives.* https://www.unesco.de/sites/default/files/2018-08/unesco_education_for_sustainable_development_goals.pdf.

self-awareness, integrated problem-solving competency, or a mix of these. Thus, a learning cycle in four phases is completed, where the participant first is *inspired* on sustainable action, then *explores* his/her knowledge and skills, *deepens* these and finally *creates* his/her own projects and actions (see figure 2.)[2]

Figure 14.1
Eight Key Competencies

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[2] It is important to note that, after completion of the trajectory, the participant has not finalized one's personal learning journey. (S)he has however risen to another level, where the cycle can repeat itself through new encounters, experiences and learning opportunities as an entrepreneur or within Act4Change as a coach, alumni or volunteer.

Throughout the years, Act4Change has developed many successful non-formal learning methods in ESD. These are grounded in the following learning tactics: action-learning, co-creation (participants are encouraged to find solutions to problems together), empowerment (participants are encouraged to take initiative and have an entrepreneurial attitude), failing forward (mistakes are considered necessary, constructive steps in the process), expansion of the comfort zone, safe and open learning spaces, aim for direct impact and, most importantly, fun.[3]

During Project RAVE, participants not only gain knowledge on sustainability, but also on their personal interests and needs. Eventually, they design their own idea or action to address a sustainability challenge close to their heart. To further support the participants, each is assigned a personal coach. The latter serves as a sounding board and a support system throughout the learning journey.

Finally, each project RAVE-trajectory is thematically and spatially delineated. While Act4Change wants to empower youngsters on sustainability, that concept covers a wide range of themes. To limit the scope, each edition of Project RAVE focuses on three SDGs. In 2021, the SDGs involved were Sustainable Cities and Communities (SDG11), Climate Action (SDG 13) and Protection of Biodiversity (SDG 14 and 15). The ideas or projects designed by participants had to respond to a challenge pertaining to one of these. Furthermore, the locus of the trajectory was Ghent, to accommodate partnerships with local organizations and experts. This enhanced the possibilities for local anchoring and the concrete impact of the project.

B. Implementation: outcome and evaluation
In the spring of 2021, ten participants, aged 21 to 27, as well as four coaches and several facilitators, participated in the first edition of Project RAVE. The full process consisted of two weekends, a design sprint, two workshop sessions – 'Overcoming Personal Thresholds' and 'Storytelling' – a Q&A with an expert on sustainable activism and a final presentation. In between, several one-on-one meetings between participant and coaches occurred. Five months after the final presentation, participants, facilitators and coaches reunited for a follow-up meeting.

Throughout Project RAVE from design to execution, young volunteers were in charge. The roles of project designers, coaches and facilitators were fulfilled by young Act4Change volunteers, thus
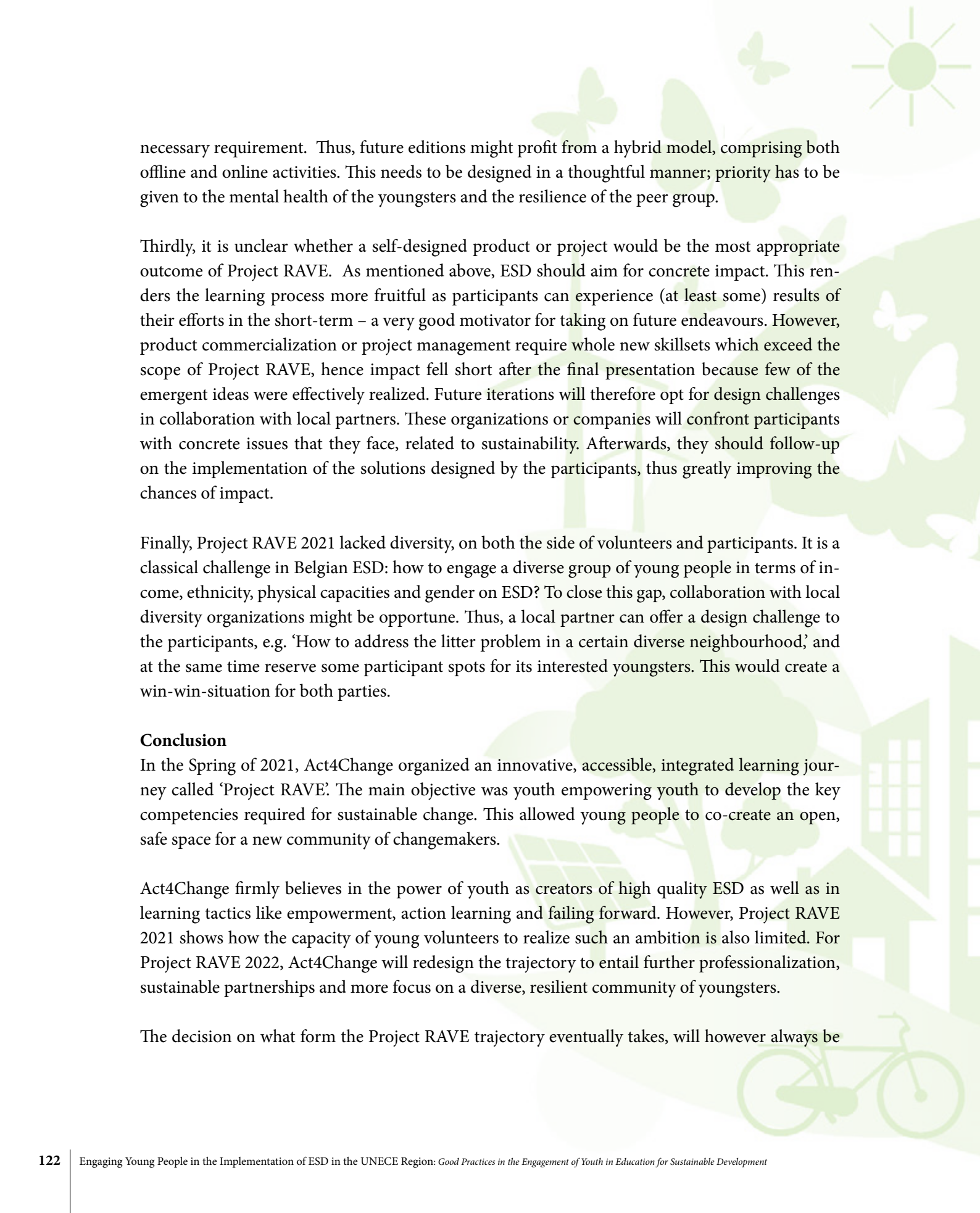
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[3] Act4Change. (2021). Werkwijze: Hoe realiseren we de leeromgeving? Act4Change Handboek. Retrieved on January 20, 2022 from https://act4change.gitbook.io/act4change/impact/werkwijze.

they had the opportunity to improve their skills in storytelling, project management, facilitation and ESD in general. These youngsters were supported professionally, however, by one community manager and one business manager. Thus, on the one hand, internal continuity was guaranteed, even when some volunteers left the process early and had to be replaced. On the other, the volunteers could focus on their core responsibilities, as the professionals took care of administration, communication and project management or provided back-up when necessary.

So, what was the outcome of this first edition of Project RAVE? To begin with, many learning objectives were realized. Participants and volunteers greatly appreciated the focus on the key competencies, the activating approach and the efforts to build a community of like-minded youngsters. Also, the support of the coaches was highly valued. Participants felt empowered to make concrete, sustainable impact and found ways to do so that fitted with their personal situation. Two group projects were designed: a biodiversity box and an inspirational tool on a sustainable way-of-life. The participants and coaches continue to stay in touch after the project.

However, the pilot version also revealed several challenges for this form of ESD. Firstly, while the explicit attempt was made to alleviate pressure and workload for the volunteers, the time and energy demanded still exceeded the capacity of the volunteer group involved. In particular, the facilitators of the learning activities – not all equally experienced in non-formal ESD – reported excessive stress as they had to combine the design and facilitation of quality ESD with a job or study. Many felt that they lacked the time and required skills to realize the task in an energizing manner. From this, Act4Change learned that while empowerment, action-learning and failing forward are important values in ESD learning, a sufficient amount of coaching and support is still required to protect youngsters from unhealthy stress and anxiety. In response, Act4Change will hire an educational manager in 2022. Thus, volunteers still participate heavily in the ESD-design of Project RAVE but the professional will have the final educational responsibility. Furthermore, the facilitation of the most complex, in-depth sessions will be outsourced to freelance professionals. Volunteer energy can then be invested and grow where it fits best the needs of the individual (be it facilitation, the creation of safe spaces, logistics or communication) without unnecessary external pressure.

Secondly, Project RAVE occurred in Spring 2021, i.e. in the middle of the COVID-pandemic; hence, due to Belgian COVID-policy, most of the learning activities occurred online, which put a great strain on the process of community-building. It also caused stress or 'checking-out' on the part of some participants. Online tools can be an efficient and low-threshold means, useful for short check-ins or meetings of a more matter-of-fact-purpose. For the creation of a genuine peer-to-peer connection however, as well as for in-depth personal learning, offline contact is a

necessary requirement. Thus, future editions might profit from a hybrid model, comprising both offline and online activities. This needs to be designed in a thoughtful manner; priority has to be given to the mental health of the youngsters and the resilience of the peer group.

Thirdly, it is unclear whether a self-designed product or project would be the most appropriate outcome of Project RAVE. As mentioned above, ESD should aim for concrete impact. This renders the learning process more fruitful as participants can experience (at least some) results of their efforts in the short-term – a very good motivator for taking on future endeavours. However, product commercialization or project management require whole new skillsets which exceed the scope of Project RAVE, hence impact fell short after the final presentation because few of the emergent ideas were effectively realized. Future iterations will therefore opt for design challenges in collaboration with local partners. These organizations or companies will confront participants with concrete issues that they face, related to sustainability. Afterwards, they should follow-up on the implementation of the solutions designed by the participants, thus greatly improving the chances of impact.

Finally, Project RAVE 2021 lacked diversity, on both the side of volunteers and participants. It is a classical challenge in Belgian ESD: how to engage a diverse group of young people in terms of income, ethnicity, physical capacities and gender on ESD? To close this gap, collaboration with local diversity organizations might be opportune. Thus, a local partner can offer a design challenge to the participants, e.g. 'How to address the litter problem in a certain diverse neighbourhood,' and at the same time reserve some participant spots for its interested youngsters. This would create a win-win-situation for both parties.

Conclusion
In the Spring of 2021, Act4Change organized an innovative, accessible, integrated learning journey called 'Project RAVE'. The main objective was youth empowering youth to develop the key competencies required for sustainable change. This allowed young people to co-create an open, safe space for a new community of changemakers.

Act4Change firmly believes in the power of youth as creators of high quality ESD as well as in learning tactics like empowerment, action learning and failing forward. However, Project RAVE 2021 shows how the capacity of young volunteers to realize such an ambition is also limited. For Project RAVE 2022, Act4Change will redesign the trajectory to entail further professionalization, sustainable partnerships and more focus on a diverse, resilient community of youngsters.

The decision on what form the Project RAVE trajectory eventually takes, will however always be

in the hands of the young volunteers. According to Act4Change, any attempt at ESD for youth will lack success if the youth cannot take full ownership of their own, personal learning process.

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UNESCO (2017). Education for Sustainable Development Goals: Learning Objectives. *https://www.unesco.de/sites/default/files/2018-08/unesco_education_for_sustainable_development_goals.pdf.*

15. Youth and Climate Innovation Program: Youth Leadership and Community- Oriented Esd Practices In Ukraine

Valentyna Kyrychenko, Maryna Dyachenko, Karina Mishura
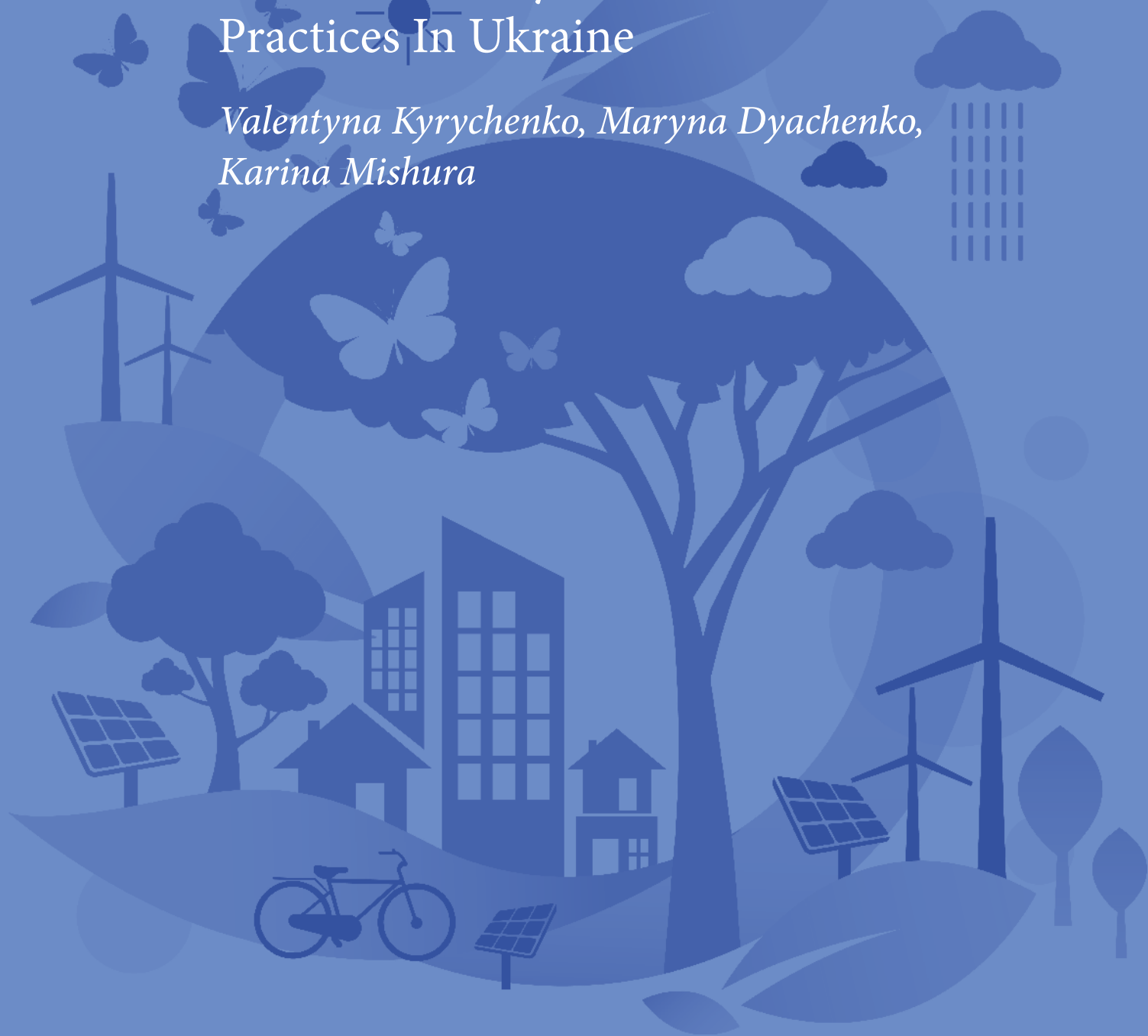
ABSTRACT:

Youth occupy a unique role in ESD being the driving power for sustainable transformations. Unlike other environmental challenges, the most severe impacts of climate change will affect future generations who will be forced to address the threat and make radical transitions. In 2019 the UNFCCC, GEF SGP and other partners launched the global Youth and Climate Innovation Program. In Ukraine the program has generated five innovative and visible youth-led projects that serve as the best practices for youth engagement in the sustainable development agenda and in climate actions in particular. Together with traditional forms of education, the program has opened new horizons that provide young people with a new learning environment in which they act jointly for the community and create social transformation. In the longer-term, it will result in broader youth engagement in ESD and policy influence, climate actions as well as green economic development.

Keywords: ESD and Youth Climate Actions

Education for Sustainable Development (ESD) empowers learners of all ages with the knowledge, skills and values to address global challenges, including climate change, biodiversity loss, land degradation, water pollution, poverty and inequality. Youth occupy a unique role in ESD being the driving power for sustainable transformations. Unlike other environmental challenges, the most severe impacts of climate change will affect future generations who will be forced to address the threat and make radical transitions. The current generation is the first generation that can see not only the accumulated impact of climate change crises but also, perhaps, the last generation that can turn the tide and enact the much-needed transitions. This not only requires that young people have to be appropriately educated and prepared for transitions towards a more sustainable world, but their active participation and innovative ideas are needed now, during the formulation of critical policies, as major decisions of today will influence, if not define the future of for today's youth and ultimately shape the world. In this context, Climate Change Education (CCE) is already a separate and top-priority branch of ESD; youth climate actions and engagement in the decision-making process are recognized as an urgent priority.

In 2019 the United Nations Framework Convention on Climate Change (UNFCCC), the Global Environmental Facility's Small Grants Program (GEF SGP) and other partners launched the Youth and Climate Innovation Program aimed at developing a broader partnership initiative to connect and support local, national and global youth climate actions and bridge the gap between local activities and global processes to achieve greater scale and impact. The partners aim to empower youth through awareness raising and capacity building by supporting practical local climate action, fostering knowledge-sharing and, through the exchange of good practices, showcasing youth climate action at the global level. The program's goals are complementary to the issues and needs of ESD, in particular CCE, and contribute to the improvement of the educational system and other mechanisms to enable young people to learn, live and work in a more prosperous, innovative and sustainable environment. It is a timely and critical initiative aiming to support youth engagement efforts in the context of climate change by showcasing practical solutions and demonstrate youth climate action to contribute to the implementation of the UN-wide youth engagement strategy. GEF SGP in Ukraine was selected as one of 11 countries piloting the program.

Young people in Ukraine are increasingly aware of the seriousness of climate change and the impacts affecting them. They have enthusiasm and passion to contribute to climate action. However, youth, especially from rural communities, very often face barriers to implement their ideas due to a lack of awareness, education, skills and funding. This program addressed these issues by supporting the empowerment and engagement of young people to implement climate action through training, awareness and practical projects. Between 2020 and 2021, the GEF SGP in Ukraine has supported five creative, inspiring and innovative youth-led projects that foster youth leadership, learning, sustainability and self-reliance, as well as having the potential for scaling up through national policies and frameworks. The program focused on two main themes: (i) awareness raising on skills and competencies of young people to lead climate action on local, national and global levels and (ii) the creation and promotion of 'green' jobs for the young generation.

The projects had a special focus on implementing ESD, raising youth awareness, creating new learning opportunities and supporting outreach initiatives implemented by young people on local, national and regional levels. In close cooperation with civil society organizations (CSOs), local authorities and educational institutions, youth-led initiatives managed to establish a Youth Climate Centre in Chernihiv, a Youth Centre for Climate Action Initiatives in Zaporizhya and a Youth-led Environment Monitoring Centre in Slovyansk, Donetsk region. As youth have a deep knowledge and understanding of what is meaningful and valuable to their communities, a common goal of the centres is to provide youth with the opportunity to develop and implement their own on-the-ground initiatives and solutions, empower youth for climate actions, disseminate knowledge, develop new educational tools and promote ESD. To strengthen professional skills and provide

new learning opportunities for rural youth, internally displaced persons (IDPs) and local youth leaders the Educational Program 'Youth-led Community Sustainable Development' was launched in cooperation with the Partnership Network on ESD in Ukraine, GEF SGP in Ukraine and the Bavarian Environment Agency. The School of Social Leadership, supported by Taras Shevchenko Kyiv National University, Friedrich Ebert Fund and GEF SGP in Ukraine, became one of the leading platforms for ESD promotion. The School has created a long-term framework for the development of a smart agroecology with green school entrepreneurship as a practical tool for engaging young people in food security, health and sustainable lifestyle initiatives at the community level. In general, the Youth and Climate Innovation Program implemented over 20 outreach events, six trainings, five workshops, a knowledge fair and a study visit as well as three national forums. In the age of COVID-19, digital education and online knowledge tools received special attention. Several national educational platforms were enhanced with new online-courses, information materials and interactive activities developed with youth and for youth; these were dedicated to climate action, social inclusion and green entrepreneurship. It is worth adding that two videos showcasing the establishment of youth-led micro-initiatives on a plant nursery and reforestation in the

Figure 15.1
National Forum-2021 'Youth for Environment - The Future We Want!'

Zhytomyr region were included in the top 30 best international youth videos within the Earthbeat project competition 'Restoration of Balance with Nature', and were presented during the COP26 Climate Summit.

Another important Program component was focused on youth capacity development and includes CSO-Government Dialogues on youth and climate issues with national and global policy and program linkages. As a result, four youth associations were legally established, five youth networks were strengthened and about 30 new partnerships were developed. In addition, the youth movement 'Community Compost Local – Youth Actions!' started its operation in Ukraine. The projects also helped develop the ability of young people to influence policies related to climate change through targeted training and participation in national, regional and global networks. The GEF SGP Youth Advisory Group (YAG) in Ukraine has been established and is operating on a permanent basis including up to 20 youth leaders from various regions, in particular representatives of rural youth and IDPs. YAG aims to build capacities in the development and implementation of local strategies and action plans for sustainable community development, as well as ESD, to ex-

Figure 15.2
Inception Workshop of Youth Movement 'Community Compost Local -Youth Actions!

change experience and scaling up results at the national and international levels. One of the tools for youth engagement in decision-making and influencing policy is the participation of the GEF SGP Youth Advisory Group representatives in the Public Council to the Ministry of Ecology and Natural Recourses of Ukraine and other youth advisory bodies. Through this Program the voices of Ukrainian youth were heard at the national, regional and international levels. Among the most influential events are the UN Working Group on Climate Change (July 2020), an online panel on Youth Climate Action (UNDP NDC Support Program and the Global Youth Program, July-August 2020), a series of DIGITAL BRIDGE 2.0 online training sessions (September 2020), Eastern partners youth conference 'Youth for Environment', Regional Forum on Sustainable Development for UNECE Region (March 2021), 10th ECOSOC Youth Forum (April 2021), Discussion with Ambassadors: decarbonization, COP26 and green economy (British Embassy and DiXi Group, April 2021),16th meeting of the UNECE Steering Committee on ESD (May 2021) and others. The youth activists were able to reach large audiences, share knowledge, demonstrate innovations and potential for regional or global policy influence.

In line with the strong outreach and capacity development components, the Youth and Climate Innovation Program has piloted practical, economically sustainable community-based initiatives addressing climate change and improving livelihoods for youth. Three newly established youth centres focus on sustainable community development solutions, renewable and energy efficiency technologies that result in youth employment and support youth entrepreneurship as well as youth-led initiatives that implement nature-based solutions to climate change; this leads to income generation and improved livelihoods. Specifically, the centre in Donetsk region has established a community environment monitoring system; the Youth Climate Centre in Chernihiv has built an energy efficient building for its purposes and the centre in Zaporizhya has created a solar-powered educational space. Moreover, nine youth-led micro-projects were supported and implemented in six regions of Ukraine aimed at showcasing practical climate solutions such as the establishment of a nursery for rare species of plants or a plastic-free school community. In total, the initiatives have created over 20 'green' jobs and developed green skills and competencies for over 500 young people. In particular, new jobs are focused on the methodology of agrotherapy that facilitate the involvement of youth with disabilities in ESD processes. The involvement of new youth leaders and organizations from the regions has expanded the Partnership Network's capacity to promote ESD on the ground, share experiences and best practices, and involve young people in national and international activities.

The Youth and Climate Innovation Program has generated innovative and visible youth-led projects, which serve as an inspiration and example for youth engagement in the sustainable development agenda and, in particular, for climate action. Together with the traditional forms of

Figure 15.3
Tree Planting Action of the Youth Centre for Climate Action Initiatives in Zaporizhya

education, the program has opened new horizons that provide young people with a new learning and development environment in which, while preserving their individual identity, they are encouraged to act jointly for the community and make personal and collective choices for the much-needed changes towards social transformation. In the longer-term, this will result in broader youth engagement in ESD and policy influence, climate action and the development of a green and circular economy.

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16. The Duurzamestudies.nl Initiative: Facilitating the Choice of a Sustainability-Oriented Degree Program in the Netherlands

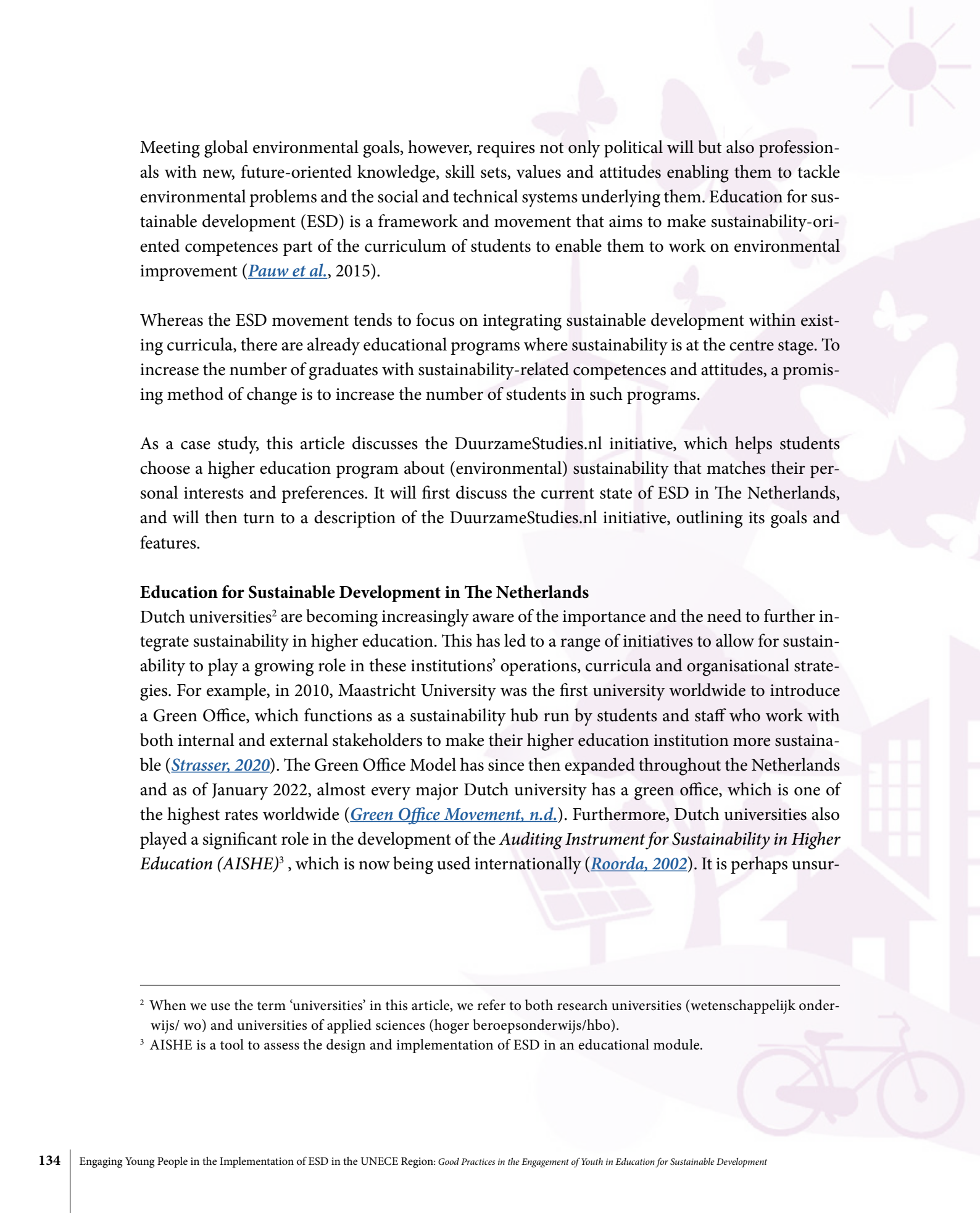*Tiffanie Septier, Soemano Zeijlmans*

ABSTRACT:

Meeting global environmental goals requires not only political will but also professionals with new, future-oriented knowledge, skill sets, values and attitudes enabling them to tackle environmental problems and the social and technical systems underlying them. To increase the number of young professionals with sustainability-related competences and attitudes, a promising method of change is to increase the number of students enrolled in such sustainability-centred programs. As a case study, this article discusses the DuurzameStudies.nl initiative, which helps students choose a higher education program about environmental sustainability that matches their personal interests and preferences. As an online platform, DuurzameStudies.nl allows visitors to browse through more than 100 associate, bachelor and masters degrees in the Netherlands and filter these based on educational level, education type, location, institution, language, start date, duration and areas of interest.

Keywords: youth initiative; education for sustainable development; sustainable study programs; study choice;

In September 2015, the international community outlined 17 Sustainable Development Goals (SDGs) through which they aimed *'to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity'* ([UNDP, 2015](#)). The environmental goals in particular have gained significant traction amongst youth in The Netherlands; through movements like Fridays For Future Nederland, young people have started to make their voices heard and have become more involved in the environmental policy process. The rise of such groups is a telling example of how environmental sustainability has become a topic of interest among today's youth who are calling on governments to take action on the environmental crises ([*Fridays For Future Nederland, n.d.*](#)).

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[1] SDG 7: Affordable and Clean Energy, SDG 13: Climate Action, SDG 14: Life below Water, SDG 15: Life on Land, as well as other goals that have environmental components

Meeting global environmental goals, however, requires not only political will but also professionals with new, future-oriented knowledge, skill sets, values and attitudes enabling them to tackle environmental problems and the social and technical systems underlying them. Education for sustainable development (ESD) is a framework and movement that aims to make sustainability-oriented competences part of the curriculum of students to enable them to work on environmental improvement (*Pauw et al.*, 2015).

Whereas the ESD movement tends to focus on integrating sustainable development within existing curricula, there are already educational programs where sustainability is at the centre stage. To increase the number of graduates with sustainability-related competences and attitudes, a promising method of change is to increase the number of students in such programs.

As a case study, this article discusses the DuurzameStudies.nl initiative, which helps students choose a higher education program about (environmental) sustainability that matches their personal interests and preferences. It will first discuss the current state of ESD in The Netherlands, and will then turn to a description of the DuurzameStudies.nl initiative, outlining its goals and features.

Education for Sustainable Development in The Netherlands
Dutch universities[2] are becoming increasingly aware of the importance and the need to further integrate sustainability in higher education. This has led to a range of initiatives to allow for sustainability to play a growing role in these institutions' operations, curricula and organisational strategies. For example, in 2010, Maastricht University was the first university worldwide to introduce a Green Office, which functions as a sustainability hub run by students and staff who work with both internal and external stakeholders to make their higher education institution more sustainable (*Strasser, 2020*). The Green Office Model has since then expanded throughout the Netherlands and as of January 2022, almost every major Dutch university has a green office, which is one of the highest rates worldwide (*Green Office Movement, n.d.*). Furthermore, Dutch universities also played a significant role in the development of the *Auditing Instrument for Sustainability in Higher Education (AISHE)*[3] , which is now being used internationally (*Roorda, 2002*). It is perhaps unsur-

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[2] When we use the term 'universities' in this article, we refer to both research universities (wetenschappelijk onderwijs/ wo) and universities of applied sciences (hoger beroepsonderwijs/hbo).
[3] AISHE is a tool to assess the design and implementation of ESD in an educational module.

prising therefore, that three out of the top ten most sustainable universities in the *UI GreenMetric* are from The Netherlands (*UI GreenMetric, 2021*).

This regard for sustainability has further translated into more attention being focused on integrating (environmental) sustainability in curricula. According to data from DuurzameStudies. nl, most major Dutch universities have at least one bachelor program and one masters program focusing on sustainability (*DuurzameStudies.nl, 2022*). We also observe the emergence of sustainability-oriented specialisations within pre-existing programs, such as the 'Oceans, the Environment and Sustainability' specialisation in the Masters in International Law program at Utrecht University. More recently, Radboud University Nijmegen has been the first university to publicly announce that it will include ESD in every curriculum, across all disciplines (*Radboud University, 2021*). To a large extent, the increase in the offer of sustainability-focused programs is the result of increased demand among (prospective) students (UNESCO, 2018). This is promising news, as it would mean that attention to sustainability in higher education can be increased as demand for sustainability-focused programs grows.

However, despite a growing demand for sustainability-focused study programs, we observed two limiting factors that can reduce the interest in such programs. Firstly, throughout the interactions that the Duurzamestudies.nl Team has had with (prospective) students, we found that it is difficult to get an overview of sustainability-focused study programs in The Netherlands (*DuurzameStudies.nl, 2022*). Interested students had to browse each university program catalogue individually to get an overview of the available study programs and find a matching one. The existing centralised databases covering sustainability-focused programs were either outdated, incomplete and/or could not be adjusted to users' personal preferences (such as academic interest and degree).

Secondly, environmental sustainability is sometimes conceptualised as an academic interest within the 'hard' sciences such as chemistry and biology, instead of a central theme that spans across multiple disciplines (*Zeijlmans, 2020*). This leads to the false assumption that studying sustainability is reserved for students who completed their high school education focusing on 'Nature & Technology' or 'Nature & Health'[4] or who completed a bachelor's degree in the hard sciences. By creating an overview of all the available studies in the different fields, DuurzameStudies.nl helps

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[4] In Dutch high schools, children choose one or two profiles which determine the subjects they will follow: Economy & Society, Culture & Society, Nature & Technology, and Nature & Health.

make these studies more accessible and debunk the myth that studying sustainability is reserved for people with an interest in the 'hard' sciences.

Together, these two limiting factors can increase the time investment for students for finding a sustainability-focused study program. While we observe that youth are getting more engaged with environmental sustainability, and that universities are increasing their offer of sustainability-focused education, the matchmaking between sustainability-oriented students and sustainability-oriented study programs can be improved.

DuurzameStudies.nl: facilitating youth's choice for a sustainable study program
To bridge the sustainability interest of youth and the sustainability programs provided by higher education institutions in The Netherlands, we launched DuurzameStudies.nl in October 2021. This website is a collaboration between Studenten voor Morgen (Students for Tomorrow), a Dutch student-led organisation striving to make higher education institutions in the Netherlands more environmentally sustainable, and Goodrise, a student-led social enterprise aiming to make the environmental movement more impactful. We have also gained significant help from several volunteers.

DuurzameStudies.nl acts as a centralised database for all higher education programs in The Netherlands that focus on environmental sustainability; its target users are aged between 16 and 25 and looking for a sustainability-focused program to follow. Visitors can browse through more than 100 associate, bachelor and masters degrees and filter these based on educational level, education type, location, institution, language, start date, duration and areas of interest. Every study program has a dedicated page with more details such as the possible specialisation areas and course description.

Furthermore, as the website's aim is to encourage youth to engage in tackling global challenges, it also offers a page with opportunities for them to get involved with local environmental initiatives. We believe that youth can also learn necessary skills through practice so facilitating access to these opportunities is a key to stimulating youth environmental impact.

Since DuurzameStudies.nl serves as a centralised database for higher education programs, it has to ensure that it provides an up-to-date and qualitative overview of the study programs available in the Netherlands. Higher education institutions that wish to have their study program added to the database have to demonstrate that the study meets the following criteria:

a. The study program is a full degree program (associate, bachelor or masters) that is at least partly taught in The Netherlands (we aim to expand to minor subjects in the future)

b. At least one formal specialisation, or the whole program, is focused on nature, environmental sustainability, or broader sustainable development. The main aim of the specialisation or program should be to teach its students valuable skills and knowledge that aim to equip the students to keep the Earth within its planetary boundaries

c. The program is accredited by the Accreditation Organisation of the Netherlands and Flanders (NVAO).

Higher education institutions have to submit a form containing the information about the program's design and its curriculum as well as answer a questionnaire outlining how and why the study meets the above mentioned criteria. To keep the interpretation of the criteria constant and to avoid greenwashing of study programs, the inclusion of study programs is at the discretion of the DuurzameStudies.nl team. The DuurzameStudies.nl team reviews the information submitted by the higher education institutions as well as conducting extra research through publicly available information about the studies. After review, the higher education institution is notified of the decision and, if favourable, the program is added to the DuurzameStudies.nl website.

As of January 2022, almost every major Dutch university has collaborated with DuurzameStudies.nl to list their sustainability-focused programs.[5] The website exceeds one hundred listings. Currently, we are still working with several universities to include their studies, a process we aim to finalise by May 2022. Once this is completed, the team wishes to expand to include the minor programs offered across the Netherlands as well as the vocational education programs. In the second half of 2022, we wish to make an English version of this website available (SustainableStudies.nl) in order to make the platform accessible to international students as well.

Conclusion
In conclusion, the growth in youth environmental movements and in the increased offer of sustainability-focused programs reflect the interests of the young generation to learn about the global challenges that the world is facing. Higher education institutions are key in the transmission of sustainability-related knowledge to a generation of new young professionals and are therefore a petri-dish for the development of sustainable solutions driven by today's youth. DuurzameStudies.nl serves as a tool to enhance ESD by facilitating matchmaking between youth with an interest in

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[5] Dutch: middelbaar beroepsonderwijs (mbo)

sustainability and suitable study programs that match their interests. By increasing the number of students that register for a sustainability-oriented study program, this youth initiative aims to significantly increase the amount of graduates that have the right knowledge, skills, attitudes and values to contribute to sustainable development.

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17. Challenges and Ways Forward in the Implementation of Education for Sustainable Development
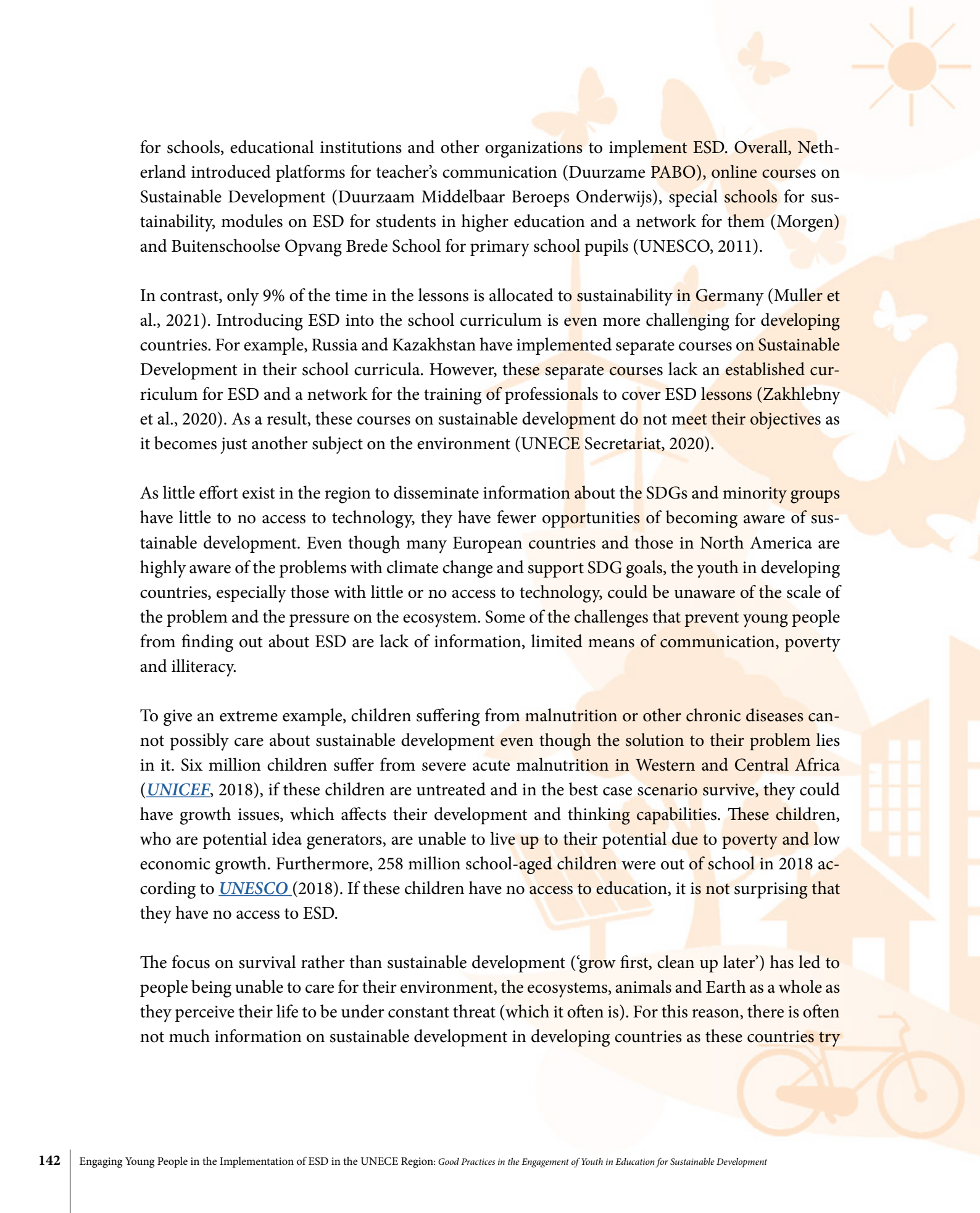
Munira Zakirova

ABSTRACT:

Under one roof, all countries around the world are facing problems of climate change, poverty and inequality. Education for sustainable development (ESD) is a key driver to empower youth to overcome these problems, yet the implementation of ESD also has its challenges. With the world divided into developed, richer countries and developing, poorer countries, it is hard to evenly introduce ESD as developing nations face economic problems that keep them from concentrating on the enhancement of sustainable development. This situation urges a combination of economic growth and sustainable development. Another issue is ensuring self-confidence among young people to encourage them to speak to up and share ideas. There is also a need for cooperation on the international level and an eco-centric attitude to achieve true sustainable development. This article includes some recommendations to overcome the challenges faced.

Keywords: Education for Sustainable Development (ESD), Sustainable Development (SD), regional disparity, Ecocentrism, Altruism

Through its widespread promotion, education for sustainable development (ESD) has been implemented successfully to some degree in several countries in the UNECE region. Yet one of the biggest challenges remains regional disparity. While some nations have actively implemented ESD into their educational systems, other nations have been lagging behind. Countries such as the USA, Netherlands, and the UK incorporated ESD into schools, higher education institutions, formal and non-formal education successfully (Muller et al., 2021; Martin et al., 2015; UNESCO, 2011). One of the examples in the USA is the US Partnership for Sustainable Development to incorporate ESD in higher education institutions, different organizations and government bodies. The group supported the Powershift youth campaign to enable the shift to clean energy, NextGEN and Young Invincibles to provide opportunities for young people to express their ideas (*US Partnership, 2022*). The Netherlands developed the Learning for Sustainable Development (LfSD) program, which brings together teachers, lecturers and managers and develops programs
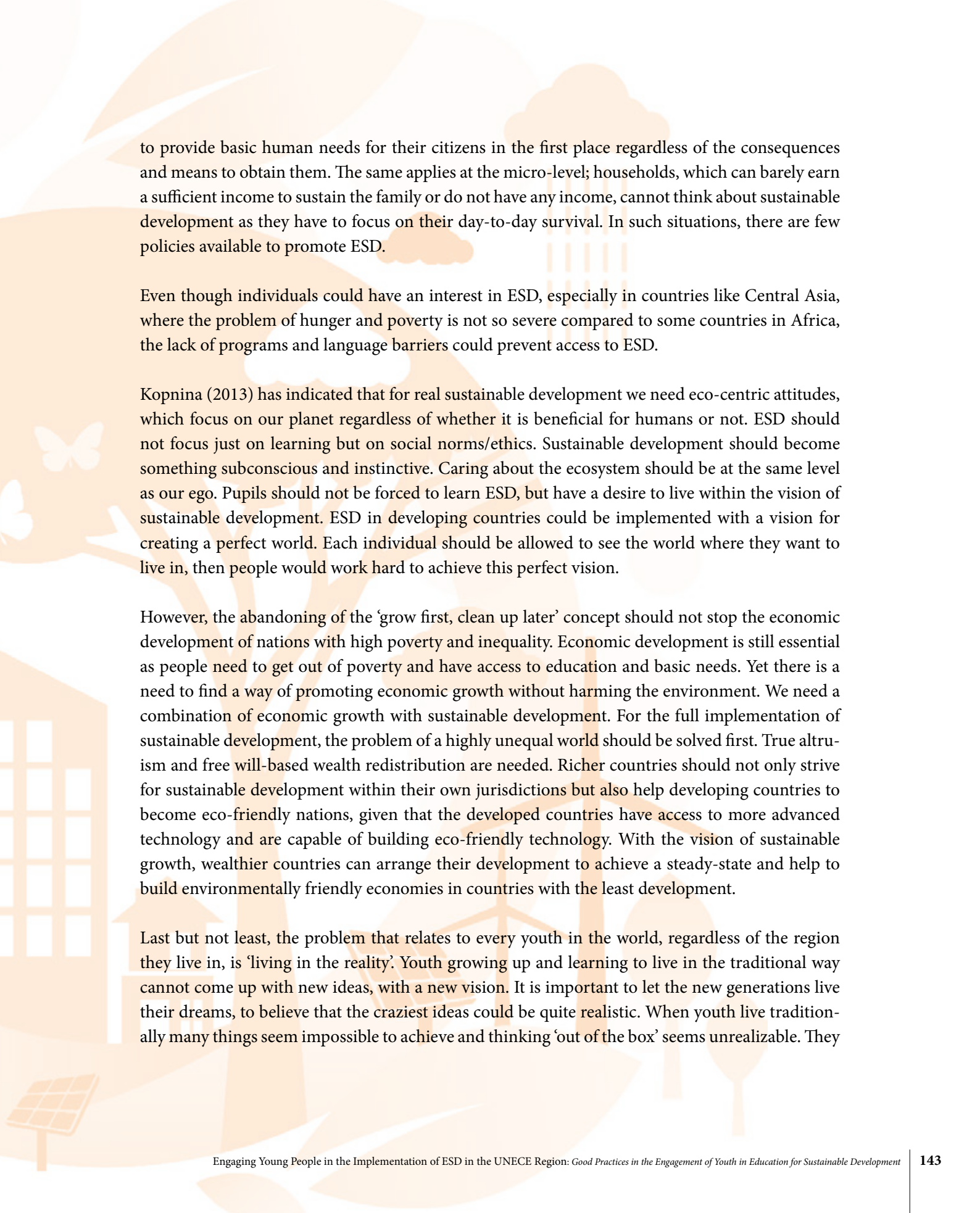
for schools, educational institutions and other organizations to implement ESD. Overall, Netherland introduced platforms for teacher's communication (Duurzame PABO), online courses on Sustainable Development (Duurzaam Middelbaar Beroeps Onderwijs), special schools for sustainability, modules on ESD for students in higher education and a network for them (Morgen) and Buitenschoolse Opvang Brede School for primary school pupils (UNESCO, 2011).

In contrast, only 9% of the time in the lessons is allocated to sustainability in Germany (Muller et al., 2021). Introducing ESD into the school curriculum is even more challenging for developing countries. For example, Russia and Kazakhstan have implemented separate courses on Sustainable Development in their school curricula. However, these separate courses lack an established curriculum for ESD and a network for the training of professionals to cover ESD lessons (Zakhlebny et al., 2020). As a result, these courses on sustainable development do not meet their objectives as it becomes just another subject on the environment (UNECE Secretariat, 2020).

As little effort exist in the region to disseminate information about the SDGs and minority groups have little to no access to technology, they have fewer opportunities of becoming aware of sustainable development. Even though many European countries and those in North America are highly aware of the problems with climate change and support SDG goals, the youth in developing countries, especially those with little or no access to technology, could be unaware of the scale of the problem and the pressure on the ecosystem. Some of the challenges that prevent young people from finding out about ESD are lack of information, limited means of communication, poverty and illiteracy.

To give an extreme example, children suffering from malnutrition or other chronic diseases cannot possibly care about sustainable development even though the solution to their problem lies in it. Six million children suffer from severe acute malnutrition in Western and Central Africa (_UNICEF_, 2018), if these children are untreated and in the best case scenario survive, they could have growth issues, which affects their development and thinking capabilities. These children, who are potential idea generators, are unable to live up to their potential due to poverty and low economic growth. Furthermore, 258 million school-aged children were out of school in 2018 according to _UNESCO_ (2018). If these children have no access to education, it is not surprising that they have no access to ESD.

The focus on survival rather than sustainable development ('grow first, clean up later') has led to people being unable to care for their environment, the ecosystems, animals and Earth as a whole as they perceive their life to be under constant threat (which it often is). For this reason, there is often not much information on sustainable development in developing countries as these countries try
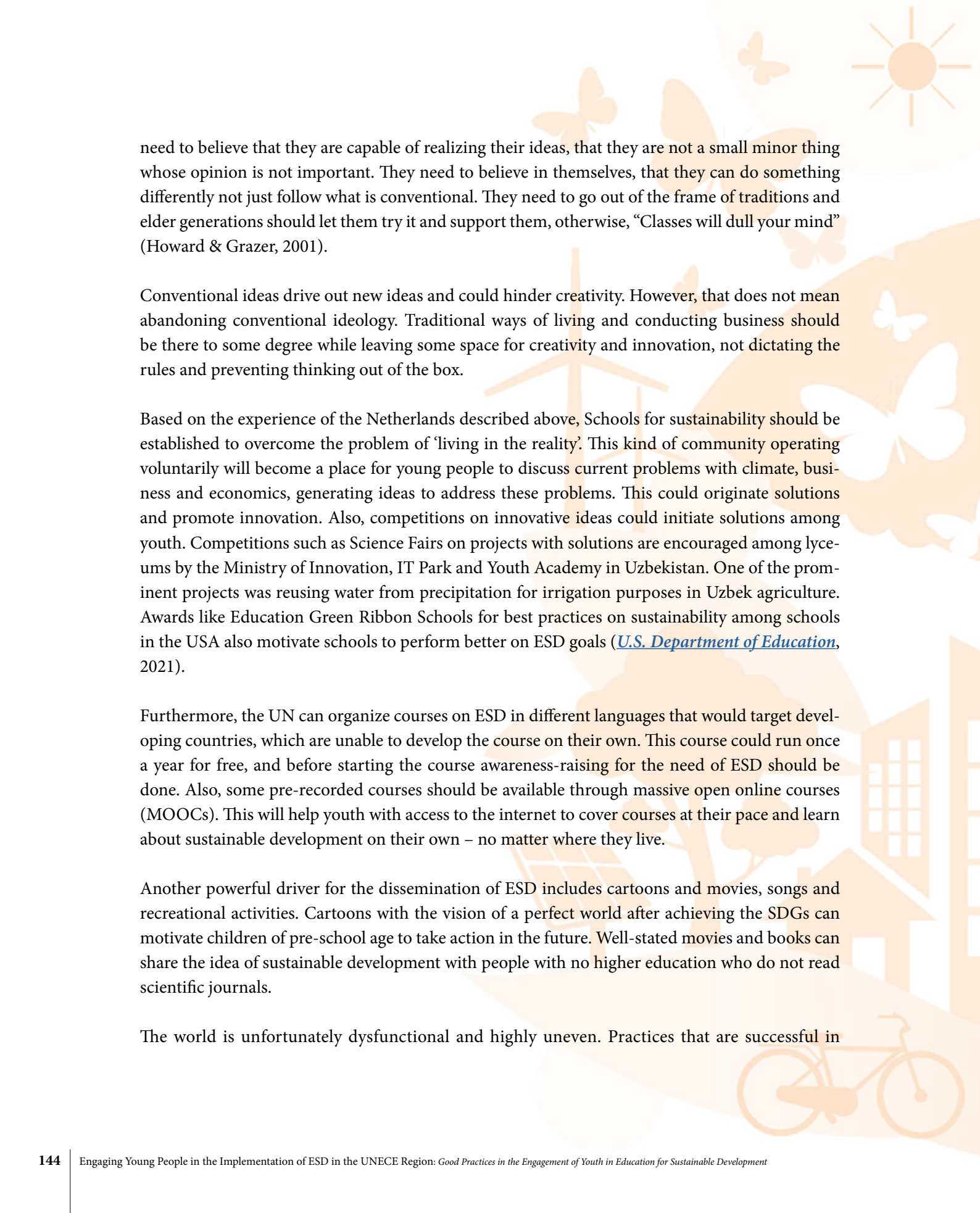
to provide basic human needs for their citizens in the first place regardless of the consequences and means to obtain them. The same applies at the micro-level; households, which can barely earn a sufficient income to sustain the family or do not have any income, cannot think about sustainable development as they have to focus on their day-to-day survival. In such situations, there are few policies available to promote ESD.

Even though individuals could have an interest in ESD, especially in countries like Central Asia, where the problem of hunger and poverty is not so severe compared to some countries in Africa, the lack of programs and language barriers could prevent access to ESD.

Kopnina (2013) has indicated that for real sustainable development we need eco-centric attitudes, which focus on our planet regardless of whether it is beneficial for humans or not. ESD should not focus just on learning but on social norms/ethics. Sustainable development should become something subconscious and instinctive. Caring about the ecosystem should be at the same level as our ego. Pupils should not be forced to learn ESD, but have a desire to live within the vision of sustainable development. ESD in developing countries could be implemented with a vision for creating a perfect world. Each individual should be allowed to see the world where they want to live in, then people would work hard to achieve this perfect vision.

However, the abandoning of the 'grow first, clean up later' concept should not stop the economic development of nations with high poverty and inequality. Economic development is still essential as people need to get out of poverty and have access to education and basic needs. Yet there is a need to find a way of promoting economic growth without harming the environment. We need a combination of economic growth with sustainable development. For the full implementation of sustainable development, the problem of a highly unequal world should be solved first. True altruism and free will-based wealth redistribution are needed. Richer countries should not only strive for sustainable development within their own jurisdictions but also help developing countries to become eco-friendly nations, given that the developed countries have access to more advanced technology and are capable of building eco-friendly technology. With the vision of sustainable growth, wealthier countries can arrange their development to achieve a steady-state and help to build environmentally friendly economies in countries with the least development.

Last but not least, the problem that relates to every youth in the world, regardless of the region they live in, is 'living in the reality'. Youth growing up and learning to live in the traditional way cannot come up with new ideas, with a new vision. It is important to let the new generations live their dreams, to believe that the craziest ideas could be quite realistic. When youth live traditionally many things seem impossible to achieve and thinking 'out of the box' seems unrealizable. They

need to believe that they are capable of realizing their ideas, that they are not a small minor thing whose opinion is not important. They need to believe in themselves, that they can do something differently not just follow what is conventional. They need to go out of the frame of traditions and elder generations should let them try it and support them, otherwise, "Classes will dull your mind" (Howard & Grazer, 2001).

Conventional ideas drive out new ideas and could hinder creativity. However, that does not mean abandoning conventional ideology. Traditional ways of living and conducting business should be there to some degree while leaving some space for creativity and innovation, not dictating the rules and preventing thinking out of the box.

Based on the experience of the Netherlands described above, Schools for sustainability should be established to overcome the problem of 'living in the reality'. This kind of community operating voluntarily will become a place for young people to discuss current problems with climate, business and economics, generating ideas to address these problems. This could originate solutions and promote innovation. Also, competitions on innovative ideas could initiate solutions among youth. Competitions such as Science Fairs on projects with solutions are encouraged among lyceums by the Ministry of Innovation, IT Park and Youth Academy in Uzbekistan. One of the prominent projects was reusing water from precipitation for irrigation purposes in Uzbek agriculture. Awards like Education Green Ribbon Schools for best practices on sustainability among schools in the USA also motivate schools to perform better on ESD goals (*U.S. Department of Education*, 2021).

Furthermore, the UN can organize courses on ESD in different languages that would target developing countries, which are unable to develop the course on their own. This course could run once a year for free, and before starting the course awareness-raising for the need of ESD should be done. Also, some pre-recorded courses should be available through massive open online courses (MOOCs). This will help youth with access to the internet to cover courses at their pace and learn about sustainable development on their own – no matter where they live.

Another powerful driver for the dissemination of ESD includes cartoons and movies, songs and recreational activities. Cartoons with the vision of a perfect world after achieving the SDGs can motivate children of pre-school age to take action in the future. Well-stated movies and books can share the idea of sustainable development with people with no higher education who do not read scientific journals.

The world is unfortunately dysfunctional and highly uneven. Practices that are successful in

some countries are not effective in other countries based on their economic development, culture and acceptance of ESD. Yet one of the biggest challenges for youth lies in themselves, on how an individual can go out of what is taken as real and believe in themselves and their ideas. Supportive programs in school curricula, additional courses which are easily available, competitions and campaigns to express youth voice can support and empower young people to overcome challenges. It is important to raise awareness about existing problems, the scale of it and ESD to everyone regardless of the region people live in or whether they belong to minority groups. Only true altruism towards nature and animals, trust among people of different nations could ensure collective action. Only working together as one organism can achieve sustainable development.

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18. Be Creative - Secure The Future

Zdravko Zivkovic, Isidora Zivkovic

ABSTRACT:

In the 21st century, it is essential to develop new learning approaches and innovative learning materials that enable students to acquire competencies for living and working in an environment of the Fourth Industrial Revolution. Critical and algorithmic thinking, creative problem solving, teamwork, and social communication must be developed systematically.

Learning methods that were acceptable to students in the last century are nowadays largely inadequate because they are based on memorizing and reproducing facts, already widely available on the Internet. Modern research into how the human brain works indicates that learning through play, projects, research, experience, etc., is far more in tune with how the human brain works. In short, every student must acquire comprehensive life competencies during their education, i.e., they must develop the ability to actively participate in society, manage their own lives and careers and start value-adding initiatives.

Keywords: Creativity, innovation, self-confidence, entrepreneurship

The role of youth in Education for Sustainable Development (ESD)

Between 2018 and 2020 the project 'Future4US' was financed by the Erasmus+ program. The project participants were students (aged 15-18) of the three VET schools: Art school Enrico e Umberto Nordio, Trieste in Italy, the business school, Ekonomska i upravna škola Osijek in Croatia and VET School Branko Radičević Ruma in Serbia. The project coordinator was the Scientific Centre for Creative Development Ideall Novi Sad, which successfully develops educational methods for stimulating creativity, innovation, and entrepreneurship of students.

In order to find, improve and effectively apply innovative methods that achieve relevant and high-quality skills and improve the level of key competencies and skills relevant to the labour market and their contribution to socio-economic development, it is necessary to integrate the competitive advantages that VET school students in different education systems have. Unlike adults, whose way

of thinking is mainly framed and limited by boundaries of life experience, the youth are open to imagination and free thinking 'outside the box'. Sustainable economic development is based on constantly generating new business ideas that exploit new possibilities and opportunities. This project aimed to engage youth with open minds to generate, evaluate, and introduce new business ideas to the business community and define the new method of education suitable for the new era.

Empowering youth to implement ESD

The new 10-step method for entrepreneurial thinking was developed and tested through creative workshops on almost 1000 students.

1. Survey – self-assessment of individual creativity
2. Introduction to the theory of creativity – main obstacles and stimulating examples
3. Test question
4. Warming-up – figures without a wrong solution
5. Foster the imagination – throw away the limits of the impossible
6. Group thinking – Brainstorming
7. Individual thinking – Brainwriting
8. Selection and evaluation of ideas – Six Thinking Hats
9. Virtual Stock Exchange – investing in ideas
10. The creative workshop evaluation

Project promotion in Trieste/Italy

Workshop in Ruma/Serbia

Workshop in Trieste/Italy

Workshop in Osijek/Croatia

Figure 18.1
Snapshots of Events

1. Survey – self-assessment of individual creativity

In the beginning, the teacher gives a few introductory remarks and raises the question: 'Who is convinced that he/she is creative? Raise your hand.' At this point, the teacher does not give any details on what is meant under creativity or influences the expression (by encouraging or challenging). The goal is to determine the number of students convinced of their creative abilities based on self-assessment.

The average number of students who raised their hand as a creative person was a maximum of 20% or even less.

2. Introduction to the theory of creativity – main obstacles and stimulating examples

The moderator explains to the students that creativity is not only the creation of genius and epochal ideas that change the world (conceived by fortunate individuals having the gift of God) but also all simple ideas when human imagination combines, changes, and creates something new. The ability to create new ideas is found in the DNA of each individual. To a greater or lesser extent, all people are creative in different areas. What prevents people from expressing their natural creativity are several obstacles, such as auto-censorship (no self-confidence), the voice of judgment (fear of other people's criticism), fear of the unknown (avoiding looking dumb), the fear of losing what we have (not sharing ideas with others fearing that someone could steal them), etc.
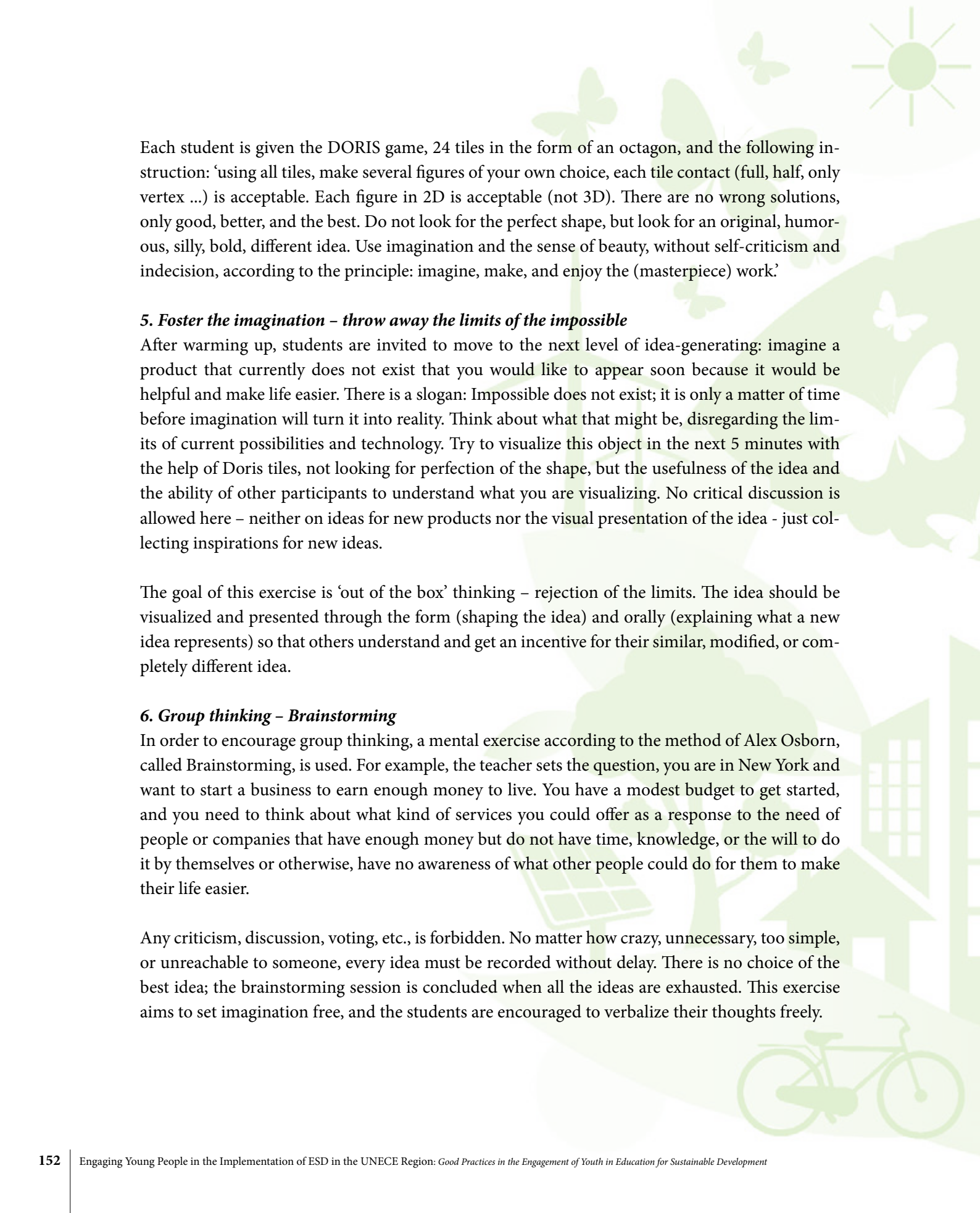
3. Test question

Imagine you have just won a million dollars. What would you do? You have 24 hours to spend it. Do you have an idea how to spend it, or will you return it due to a lack of imagination?
Anyone who knows the answer to this question, i.e. having an idea of how to spend a million dollars, is creative!

It is an ice-melting point. There is a lot of laughter and indecision at first, but there are some exciting answers. It is an expected reaction as they have not yet generated ideas for new products and services in which they would like to invest money.

4. Warming-up – figures without a wrong solution

This is the right time to further relax the classroom atmosphere by introducing the workshop's methodology: all activities will be one big game, with no negative consequences and certainly without 'right-wrong' answers. This phase set out to encourage the students' visual and spatial cognitive abilities. Unlike formal knowledge tests, the game does not cause stage fright, stress, and fear; instead, it is accepted as an informal activity. Although it is taken seriously to achieve the best results, the players remember that it is a fun and relaxing 'game' that relieves them from the burden of responsibility 'in the real world.'

Each student is given the DORIS game, 24 tiles in the form of an octagon, and the following instruction: 'using all tiles, make several figures of your own choice, each tile contact (full, half, only vertex …) is acceptable. Each figure in 2D is acceptable (not 3D). There are no wrong solutions, only good, better, and the best. Do not look for the perfect shape, but look for an original, humorous, silly, bold, different idea. Use imagination and the sense of beauty, without self-criticism and indecision, according to the principle: imagine, make, and enjoy the (masterpiece) work.'

5. Foster the imagination – throw away the limits of the impossible
After warming up, students are invited to move to the next level of idea-generating: imagine a product that currently does not exist that you would like to appear soon because it would be helpful and make life easier. There is a slogan: Impossible does not exist; it is only a matter of time before imagination will turn it into reality. Think about what that might be, disregarding the limits of current possibilities and technology. Try to visualize this object in the next 5 minutes with the help of Doris tiles, not looking for perfection of the shape, but the usefulness of the idea and the ability of other participants to understand what you are visualizing. No critical discussion is allowed here – neither on ideas for new products nor the visual presentation of the idea - just collecting inspirations for new ideas.

The goal of this exercise is 'out of the box' thinking – rejection of the limits. The idea should be visualized and presented through the form (shaping the idea) and orally (explaining what a new idea represents) so that others understand and get an incentive for their similar, modified, or completely different idea.

6. Group thinking – Brainstorming
In order to encourage group thinking, a mental exercise according to the method of Alex Osborn, called Brainstorming, is used. For example, the teacher sets the question, you are in New York and want to start a business to earn enough money to live. You have a modest budget to get started, and you need to think about what kind of services you could offer as a response to the need of people or companies that have enough money but do not have time, knowledge, or the will to do it by themselves or otherwise, have no awareness of what other people could do for them to make their life easier.

Any criticism, discussion, voting, etc., is forbidden. No matter how crazy, unnecessary, too simple, or unreachable to someone, every idea must be recorded without delay. There is no choice of the best idea; the brainstorming session is concluded when all the ideas are exhausted. This exercise aims to set imagination free, and the students are encouraged to verbalize their thoughts freely.

7. Individual thinking – Brainwriting

This exercise aims to overcome intellectual conformity (acceptance of majority opinion or attitudes of authorities) and any ideas that may have already been in the subconscious or generated during previous exercises should be written on paper. The anonymity of each participant in the session – the authors of the ideas is preserved.

Under the concept of new products, students should be aware that these can be existing products that have an improvement (additional function or value, etc.), another way of providing existing services, existing technology applied on other devices or fields or revolutionary inventions. Alternatively, innovations replace complex and costly devices with substantially less expensive products (but with an acceptable level of quality).

8. Selection and evaluation of ideas – Six Thinking Hats

The moderators select three to five ideas generated during the brainwriting exercise, which they consider the most original and appropriate for group evaluation. The method of Edward de Bono's Six Thinking Hats is the most effective way to evaluate an idea in groups, with the involvement of all students. It is necessary to prepare six paper hats in the following colours: White, Red, Yellow, Blue, Green, and Black. This tool works as follows: each proposal, one at a time, is read, and then all the participants give their opinion, depending on which hat the moderator has on the head.

This exercise aims to contemplate each idea from multiple angles and identify weaknesses or well-hidden attributes that were not visible at first glance.

9. Virtual Stock Exchange – investing in ideas

After evaluating selected ideas, it is the right time to check which of the proposed ideas is attractive enough to convince investors on the stock exchange to invest their money into their realization. Given that the authors of these chosen ideas are not known, it is assumed that each student will be guided primarily by their impression and by believing that the proposed products and services deserve to become innovations in the market, either because they think their investment will make a profit, or that humankind will benefit from it, or for some other reason. Nevertheless, this must be their autonomous decision, not biased (for example, because it would be liked by the majority, support friends or be humane in front of others, etc.).

Each student should be given 'money' (for instance, $ 1,000) and allowed to invest that amount into the ideas he/she wants. In the end, the moderator will count the amounts of money collected by each idea. After the proclamation of the winners, the investors who invested the most money

in the winning idea will get a confirmation of a good sense of investment, and the authors of these ideas get more confidence that they are capable of generating successful business ideas.

10. *The creative workshop evaluation*
Participants present their impressions, their level of satisfaction compared to expectations, their remarks, suggestions, proposals, and in the end, they provide their answers through an evaluation questionnaire.

Conclusion
The result of the project was the acquired innovative and entrepreneurial thinking, i.e., entrepreneurial competencies of the VET students, in such a way that upon completion, they would be able to actively participate in society, manage their own lives and careers and take initiatives to create new value.

The total number of business ideas generated: 4,900; selected ideas for evaluation: 240; award-winning out-of-the-box ideas for sustainable development: 55.

Based on games and imagination, this informal learning method confirmed that young people are very creative but have little chance or stimuli to express their creativity for business during formal classes. It also confirmed that students need to be trained on how to escape from the intellectual conformism mindset and be empowered to think creatively – out of the box – and be encouraged to develop self- awareness and self-efficacy, initiative, and self-confidence.

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Engaging Young People in the Implementation of ESD in the UNECE Region: Good Practices in the Engagement of Youth in Education for Sustainable Development

Education for Sustainable Development (ESD), as a dynamic and liberating form of learning, but above all, as a comprehensive framework for thinking and viewing life, suggests that young people are not only the focus of our policies and decisions, but active co-designers and pioneers in the implementation of policies and actions related to the protection and preservation of the planet and to our survival.

The present publication is the result of the cooperation of the member countries of the UNECE Steering Committee on Education for Sustainable Development, aimed at introducing good practice programs and initiatives related to supporting and empowering youth participation in ESD and the implementation of the UNECE Strategy for ESD in their countries. A particularly important element of this publication is the fact that it was developed and implemented by the UNECE ESD Youth Platform, to the invitation of which several organizations, authorities, and universities responded warmly. The authors of the texts are young people, active researchers and professionals, working for and with young people to promote ESD in their country.