A Critical Review of Environmental Education for Sustainable Development Goals, the United Nations Convention on the Rights of the Child and Child-Friendly Schools

Gulsah Dost, University of Durham, United Kingdom

Abstract
Global warming and other acts of environmental destruction have had significant consequences on our lives in recent years that will most likely continue in the future. Therefore, it is very important for children to have access to information about environmental education and the ability to apply this knowledge practically. Environmental education builds awareness, creates the skills and knowledge essential to express complex environmental problems, helps students understand how their choices and actions influence the environment and promotes ways to keep the environment sustainable and healthy for the future. Environmental education should be considered and not limited to schooling but added to Sustainable Development Goals (SDGs), The United Nations Convention on the Rights of the Child (UNCRC) and Child Friendly Schools (CFS). For this reason, this study will examine the role of environmental education within the scope of SDGs, UNCRC and CFS, and will critically evaluate the relationship between environmental education and each concept.

Keywords: Environmental Education, United Nations Convention on the Rights of the Child, Sustainable Development Goals, Child Friendly Schools

iafor

The International Academic Forum
www.iafor.org

Introduction

Environmental damage has significant impact on the lives of children today and future generations as the severity of the damage increases in the absence of preventative action. According to the latest Intergovernmental Panel on Climate Change Report (IPCC, 2021), scientists are observing changes in the Earth's climate in every region of the world and in the entire climate system. Their findings show that there are new estimates of global warming exceeding 1.5°C in the coming decades and up to 2°C if necessary measures are not taken. Thus, increasing the number of environmentally literate individuals is important for the protection of the environment and the sustainability of environmental resources (UNESCO, 1978; Wheaton, Kannan, & Ardoin, 2018), and for this purpose, environmental education can serve as a critical tool in tackling environmental problems (e.g., Potter, 2009; Palmer, 1999). Environmental protection is seen as an important goal at all stages of environmental education. Michelsen and Fischer (2017) stated that environmental education should be seen as an indispensable necessity if we want to successfully promote sustainable development. Therefore, nature-based environmental education, which provides discovery through learning by doing, aims to develop students' emotional relationship with nature, their attention to ecological issues and social relations, and encourages them in this field (e.g., Ballantyne & Packer, 2002).

Children's rights violations caused by environmental damage can have lifelong, irreversible, and even intergenerational consequences. Therefore, the UNCRC provides a strong normative framework for the realization of children's rights through a healthy environment. Children, parents and adults working with children should be familiar with the international framework of children's rights and should be encouraged to receive an education that respects the natural environment and raises their awareness (Blanchet-Cohen & Elliot 2011). Here, rights based, child friendly education systems and schools come into play; these schools are characterized as a child-friendly schools, inclusive, healthy and protective for all children, impactful, emotionally safe, and relevant to families, communities and children and are covered in the UNICEF Framework. Therefore, this study explores in-depth and broadly links and synergies between environmental education, the SDGs, the UNCRC and the CFS from a critical perspective.

Outcome of Environmental Education

Environmental education comprises ecological and environmental learning, nature awareness, forest pedagogics and other terms (O'Flaherty & Liddy, 2018; Rauch, 2000; Weiss & Rametsteiner, 2005). Environmental education is a significant educational mission and field for every institution at every stage of education. Based on environmental education, it is understood that human life includes the biological life in the world and that individuals are in harmony with this biological life and nature, and by raising understanding of this from early childhood, protecting the environment will facilitate the life of future generations (Kharrazi, Kudo & Allasiw, 2018; Sinakou, Boeve-de Pauw, & Van Petegem, 2019). This education aims to increase self-confidence and responsibility in individuals, increases environmental awareness and individuals' conscious of the environment (Liu & Guo, 2018; Erhabor, 2018). Environmental education includes a number of components such as awareness, knowledge and attitudes towards environmental threats, the skills to identify them and the ability to find solutions to environmental problems, as well as participation in activities that lead to their resolution (Ramadhan, Sukma & Indriyani, 2019; Law, Hills & Hau, 2017). Additionally, this education improves their problem-solving and decision-making skills by providing individuals

with the ability to look at a subject from different perspectives through critical thinking (EPA, 2007).

Environmental education has had many positive effects, from improving academic performance to personal growth and the development of critical life skills such as confidence, leadership and autonomy (Chen, 2018; Browning & Rigolon, 2019; Ramadhan, Sukma & Indriyani, 2019). Bodzin et al. (2010) state that being in a relationship with the environment and exposure to environmental education, individuals can improve their academic development by strengthening scientific inquiry, arithmetic and developing language arts through writing and speaking. There are studies showing that environmental education increases civic participation and positive environmental behaviours. For example, Powell et al. (2011) assessed a middle school-focused residential outdoor program that emphasized character development and environmental education. The study discusses the links between environmental education and positive youth development in light of the findings on character development, environmental responsibility and leadership. Stevenson et al. (2013) also discuss how environmental education goes beyond mere understanding and conceptualization. They state how it goes to develop learner agency, including a problem-solving orientation. Through focus groups and surveys with environmental education participants and practitioners, West (2015) identified numerous and varied outcomes for both groups, with an emphasis on knowledge as well as social outcomes among participants. Researchers who have closely examined some environmental education programs have found that environmental programs involve providing individuals with environmental awareness, attitudes, skills, intentions, enjoyment, and behaviours that include citizen participation (Ardoin et al., 2020; Stern et al., 2014; Ladwig, 2010). Environmental education, which provides individuals with attitudes, values, knowledge and skills to take environmentally friendly actions, encourages individuals to improve the sustainability of human-nature interactions over time (Mastŕangelo et al., 2019; UNESCO, 1978).

Environmental Education for Sustainable Development

The ideologies of environmental education contained in the Tbilisi Declaration include the basic values of sustainable development: adopting perspectives both at the local and global level; promotion of international solidarity; considering the social aspects of the environment and the close links between economy, environment and development (UNESCO, 1978). Sustainable development is the overarching framework of the United Nations and this framework has four dimensions, which are society, environment, culture and economy (WHO, 2016). These dimensions are not separate from each other but are intertwined. Sustainability is a paradigm in which social, environmental and economic issues are balanced in search of a better quality of life that includes future goals (Schaltegger & Wagner, 2017; Epstein, Elkington & Herman, 2018). For example, a prosperous society provides food and resources and relies on a healthy environment, aiming to provide its citizens with safe drinking water and clean air.

The 2030 Agenda consists of seventeen Sustainable Development Goals (SDGs) and 169 targets that will guide policy and finance for the next nine years (United Nations, 2015a). This Agenda includes acting in collaborative partnership with all countries and stakeholders, from ending poverty, reducing inequality, to building more peaceful, wealthy societies by 2030. These targets and objectives are "global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities" (Matte et al., 2015, p.6). The UN 2030 Sustainable

Development Agenda envisions inclusive equality, justice and well-being within the environmental framework and places a significant emphasis on education as set out in Goal 4. Education is recognized as an aim for education in Goal 4.7 with sustainability as a means to accomplish the remaining 16 Goals.

Target 4.7 "*By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development*" (UNESCO, 2019, p.68).

Education and environmental sustainability are not only closely related to each other, but also strongly linked by a cause-effect relationship; therefore, what is typically caused by the former naturally affects the latter (Howe, 2009; Walid & Luetz, 2018). In this categorisation, education assists as a tool to achieve environmental sustainability goals. Although in theory this seems like a reasonable and logical conclusion, in practice it turns out to be a much more unstable relationship network. After exploring the broader historical relationships between environmental education and Environmental Sustainability and Sustainable Development, the SDGs show the story of a worsening relationship between education and the environment. Within the SDGs, education is included in Goal 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (United Nations, 2021, p.11). While this goal deals with development from a social and economic point of view in its main statement, it does not make any special reference to the environment. In other words, sustainable development (SD) seeks to grasp and explain the relationship between society and economy to promote the transition to sustainability. However, environment was not mentioned in this SDG statement on education. The complexity of sustainability as a concept makes it challenging and ambiguous making it difficult to relate SDGs to educational learning outcomes with what Education for Sustainable Development (ESD) endeavours to achieve. While the multiple targets detail individual targets, SDG Goal 4 does not address environmental sustainability and does not make a single explicit reference. This raises several important questions and the most important is; if environmental sustainability is not even a target, can education be expected to deliver results in environmental sustainability? In other words, can education achieve its real purpose related to the environment without including sustainability?

Sustainable Development Goals cannot be fulfilled without addressing children's rights (United Nations, 2015a, 2021). It covers and applies to children, even if not explicitly stated in all goals and targets of the 2030 Agenda. Therefore, it is essential that the implementation of the 2030 Agenda promote, strengthen, protect, and fulfil the realization of children's rights by integrating a children's rights-based approach that respects and promotes children's rights (Arts, 2019). Using both main structures in synergy will strengthen their mutual practices and ensure that children's rights are realized in a meaningful way. All world leaders strive to fulfil their 2030 commitment, striving to secure healthy and quality education, a clean world and more for children all over the world (United Nations, 2021). More than 100 Member States have reconsidered their promises to children's rights to ensure the implementation of the SDGs (United Nations, 2021). UNICEF collaborates with governments, other UN agencies and partners to help countries guarantee that the SDGs deliver equal results for and with every child, for present and future generations. On a national basis, some countries have explicitly embraced the right of the child to participate in their constitutions and domestic laws (Parkes, 2015). In many court decisions, UNCRC and regional documents, the child's right to participation is clearly cited and discussed (Geary, 2012). Considering the processes and

conditions that directly affect children and young people, it is necessary to expand this further to include children's families, communities, professionals working with them, policy makers and ultimately the entire regulatory regime (Gal, 2017).

UNCRC as Environment-Related Children's Rights and Environmental Education

The UNCRC is one of the few human rights papers that clearly calls for the world's countries to take action to preserve the environment and to leave a cleaner and liveable nature to future generations. UNCRC has now been signed by 196 countries, and since the General Assembly adopted the Convention in 1989, it has speedily become the most approved international human rights agreement in history (UNICEF, 2009b). This Convention consists of 54 articles and has articles that stipulate that all children of the world should automatically enjoy these rights, addressing both the rights of children and the responsibilities of governments to ensure and protect these rights (UNCRC, 1989). The UNCRC imposes obligations on governments to protect the rights of countries regarding children's rights and to ensure that every child enjoys these rights equally. This means that national governments have a legal responsibility to act on climate change to protect children's rights and prevent violations on this issue. Child rights-oriented policies reduce children's vulnerability to the harms caused by climate change have important co-benefits for children such as allowing them to develop, survive, protect, participate, have a voice and enjoy their fundamental rights (Pegram & Colon, 2019). Governments taking climate action from a UNCRC perspective not only enable them to fulfil their UNCRC mandated obligations but also to contribute to climate action. Furthermore, Article 24 and General Comment 5 impose obligations on developed nations to play a role and take action in the promotion and protection of children's rights in developing countries and these obligations include; developed countries need to provide financial resources and take political action to ensure that children in developing countries enjoy their rights. When this article is evaluated in the context of climate change, minimizing the negative effects of climate change on vulnerable communities and helping them to activate the resources they need and to achieve emission reductions by developed countries can minimize the effects of climate change that negatively affect children in developing countries.

Children's environmental rights are not summarized in a single specific UNCRC article; they are covered in numerous articles. Article 3, Article 6, Article 12 Article19, Article 24, Article 27, Articles 28, 29 and 31 all relate in several aspects to ecological rights (see Table1). For example, children's rights to health, survival and development are enshrined in the UNCRC Articles 6 and 24, while green and healthy spaces are an important part of children's right to play (UNCRC Article 31) and children have the right to participate in all matters that affect them (UNCRC Article 12).

Table1. Articles of the UNCRC That Apply to Children's Environmental Rights

Provision	Content	Relevant legal text
Article 3	Best interest of the child	Article 3 '*In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration*'.

Articles 24	Health and health services	**Article 24 (2)** on the right of the child to the enjoyment of the highest attainable standard of health provides that: *"States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures: [...] to combat disease and malnutrition [...] taking into consideration the dangers and risks of environmental pollution"*
Article 29	Goals of education	**Article 29 (1)** on the aims of education provides that: *"States Parties agree that the education of the child shall be directed to: [...] the development of respect for the natural environment"*.
Article 6	Life, survival and development	
Article 19	Protection against, among others, neglect	
Article 27	Adequate standard of living	
Article 28	Right to education	
Article 31	Play, leisure and culture	

The UNCRC committee makes a responsibility to put the child's best interests first when making decisions that can have a major impact on a child. Where a child is mature enough to express his or her views, these views should be given due weight according to the age and maturity of the child, and it should be ensured that children who are able to form their own opinions have the right to participate in any actions that affect them (Article 12). Looking at the UNCRC articles, there are also two articles that specifically mention about the environment, these are articles 24 and 29. Article 24 of the UNCRC states that children have the right to enjoy the highest attainable health and environmental standard/conditions. Article 24 of the Convention also expresses that States require considering the risk of contaminated water and food as well as pollution when individuals enjoy their right to health (UNCRC, 1989). The environmental health condition of children is also closely related to other rights of UNCRC. These contain the right to survival and development, the right to life as well as the right to food, water and sanitation, education, adequate housing, freedom from economic exploitation, information and an adequate standard of living. The right to non-discrimination and equality also means that children over the world should have access to a healthy and safe environment.

While the UNCRC contains provisions that explicitly refer to the environment, such as Articles 24 and 29, many other children's rights, mainly socioeconomic rights, have robust environmental dimensions or can be reinterpreted from an environmental perspective. Therefore, the UNCRC already comprises the critical grounds of a legal framework for the protection of children's rights with respect to the environment and aims to protect children's

environmental rights as a legal instrument, because it is impossible to realize critical rights such as rights to life, health, play, or an adequate standard of living for current children or indeed future generations without an ecologically healthy environment. For countries to fulfil their duties and obligations to realize this right, an effective legal and political framework is established that protects children from environmental threats and degradation that would endanger their survival and development (Walker, 2017). However, there are some barriers preventing children from benefiting from environmental education as a right. Education curricula of some countries are not related to existing problems in a local context (Conde & Sánchez, 2010). The environment in which children live is dirty, excessively degraded making it difficult for children to realize their potential which deprives them of basic awareness of environmental risks (Lawson, 2018). The decrease in quality time in nature or nature spaces for children fails to meet the needs of children and is a major threat to the realization of Article 29(1) (e) of the UNCRC. There is limited room for resolving problems, engaging in skills development and possible solutions, and challenges which concerns all children. Furthermore, Article 29(1) (e) does not have a solid explanation of what exactly states/countries should do in their efforts to promote environmental education. In contrast, multilateral environmental agreements, like the Paris Climate Agreement, indicate educational measures but do not make particular reference to the rights of children (United Nations, 2015b). The Paris Climate Agreement (2015) emphasized that the protection of the natural world and the development of respect begins with children's enjoying of nature, spending time in nature and experiencing nature. Understanding and recognizing the environment by establishing a bond with the environment is a prerequisite for children to take actions to protect and preserve nature.

UNCRC is ignored in the determination and implementation of environmental policies and standards, laws, policies and actions related to children's rights are not considered, revealing a gap in legislation and policies, as well as neglecting children's rights related to environmental factors (UNICEF, 2009b). Environmental policy decisions and laws taken at the national level are not considered within the scope of children's rights (European Commission, 2019). For example, there seems to be a gap in the treatment of standards and policies regarding biodiversity, ecosystems and natural resources from a child rights point of view. On the other hand, policies designed to assess children's rights do not adequately consider environmental issues (CRAE, 2017). While international agreements on the environment such as the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, and the Paris Agreement in climate change practices rely on cooperation, more robust guidance is needed to identify the elements of a child rights-based stance on climate change and environmental issues.

Child-friendly Schools and Environmental Education

Child-Friendly School (CFS) framework was put forward by UNICEF in 1999, as a result of the global requirement to increase and improve the quality of education, based on the philosophy of children's rights, adopting the fundamental position of education as supporting the development of children at the highest level (Osher et al., 2009). The CFS are a versatile framework and meet the basic needs of the child as a student. The CFS framework also aims to guarantee the full participation of all actors who can influence children's full engagement of the right to quality education (Chabbott, 2004). These schools avoid building new schools and ensure that existing schools are for children, while ensuring that the school fulfils and protects children's rights, since schools becomes their second home. In a CFS, there is a healthy, hygienic and safe learning environment, adequate water and sanitation facilities are provided to children. In addition, these schools provide health policies and practices such as a school

free of drugs and harassment, and health services like nutritional supplementation (Clair, Miske & Patel, 2016). A child-friendly school can essentially be considered as a miniature of a society because it includes ethno-linguistic tensions from countries and communities where social, economic, political and cultural dynamics cooperate and are based on rights-based approaches (Orkodashvili, 2013; Clair, Miske & Patel, 2016). Horelli (2007) defined a child-friendly environment as multidimensional, complex and multi-level. This refers to an environmental framework that supports the individual child and related groups that are significant to the child. From this point of view, a wide-ranging model in the learning curriculum in schools is required to enable children to realize their full potential and to reduce negative experiences.

Child Friendly Schools are schools with three basic pillars: emotional, physical and psychological, which include all children, consider the best interests of children and enable them to be emotionally secure, physically safe and psychologically enabling (UNICEF, 2012). The child-friendly school also puts a great deal of effort into promoting sustainable educational development by leading the designing of a clean environment for children and give significance to the well-being of children at school (UNICEF, 2000, 2012). UNESCO (2015) express that one of the goals of sustainable development is to provide and sustain a healthy life, and with this it aims to ensure the well-being of all. The CFS framework encompasses and promotes gender-sensitive, child-centred, protective, community-related, comprehensive, ecologically friendly, and healthy attitudes around the world. This has established the basic method to promote proper education for all children, directly in natural life or in the event of an emergency.

The CFS are areas that can help minimize the various negative effects of a potential crisis on children, but these schools are not the solution to problems of all children. The CFS activities are built around improving children's problem-solving skills and coping skills, and children are proactively involved in the selection of activities to ensure that the activities are relevant to them (UNICEF, 2009a). The CFS creates a child-oriented and child-friendly environment that supports children's cognitive development, as well as providing them with learning opportunities at various levels (Djoehaeni et al., 2020). They can help minimize disruption to the development opportunities and learning that education provides, particularly in the developing world. Child Friendly Schools support children's positive self-control and self-regulation skills and enable them to take responsibilities appropriate to their age (Ningsih, 2020). Thus, they can help children develop self-esteem and sense of security.

The UNCRC (1989) expresses that member States are obliged to provide a safe, protective and healthy environment that is free from injury, violence, abuse and neglect. In this context, it is important to recognise environmental risk factors based on children's rights, by considering the basic needs, vulnerabilities and marginalization of children, and to create a framework for protecting the environment and minimizing potential risks within the scope of children's rights. Therefore, environmental education and CFS play a critical role as these are defined as an effort to increase environmental awareness and aim to form environmentally friendly behaviours in individuals. Since the creation of a healthy environment is a requirement for the full realization of children's rights, more attention is needed to the environmental aspects of children's rights to activate and strengthen the frameworks covering children's rights in the management of environmental quality (Schubert, 2012). UNCRC cannot clearly guarantee the right of children to a healthy and quality environment in an ecological context which is a fundamental right of children. In addition, UNCRC cannot fully guarantee that all children will enjoy such a right at the highest and fairest level, as it is depending on external factors such as how countries make regulations for children's rights. Both the monitoring and interpretative functions of the

UNCRC committee give the opportunity to better define the relationship between a good quality and healthy environment and UNCRC principles in an ecological context. The Committee as an interpreter and monitor has the chance to provide information on how developing children's right to a healthy environment should be.

Conclusion

Individuals need to be aware and informed about the environment in order to cope with environmental problems, to take action and to help improve the environment. Providing environmental education to individuals is an important instrument for teaching them to have a sustainable vision, sustainable life, environmental literacy and environmental responsibility. In a context where social relations and solidarity among individuals dominate, education focused on the environment that ensures sustainability for present and future generations by preserving traditions and customs that encourage responsibility among its members is very important. The cross cutting approach of environmental education enables us to address all the challenges posed by environmental degradation in one place, with the measures that we need to take in order to understand existing inequalities and protect the environment. The SDGs, UNCRC and CFS have a fundamental basis in strengthening environmental education and these are interlinked. If we want a sustainable world including equality, sustainable development and a clean environment, these three agreements should fulfil their duties and the countries should effectively fulfil the decisions taken by these elements. If we want a sustainable world that includes equality, sustainable development and a clean environment, these three agreements should guide the countries by detailing the articles/goals/targets related to environmental education.

Children's futures and rights are threatened by inadequate government action to address the climate crisis, the destruction of natural resources, widespread pollution of air, water and soil, and exposure to toxic substances. These negative impacts affect children disproportionately and countries fail to ensure that every child receives an equal quality education and lives in a sustainable environment, which violates the principle of non-discrimination. A safe and healthy environment is closely related to children rights and despite the many connections between them, the lack of awareness among individuals and the inability of countries to develop an effective enforcement mechanism by establishing this connection hinders the effective implementation and protection of children's rights for all children. The UNCRC provides a normative framework for the realization of children's rights through a healthy environment and environmental education and awareness of children's rights, but these are largely absent from environmental or climate-related laws, policies and actions. Thus, Member States need to ensure that they have taken action to integrate the SDGs into their governments' policies, actions and strategies and detailed the documents and practices related to the environment within the scope of children's rights. In addition, Member States should take into account the best interests of children in their concrete environmental actions/plans/policies/reports/laws from the decision-making stage to the implementation and evaluation stage.

Although climate change will eventually affect every child, children living in high-risk areas seem to need the most urgent support given their vulnerable situation. The negative effects of climate change, natural disasters, poverty and urbanization not only affect children negatively but also lay the groundwork for the violation of children's rights. The CFS model has the ideology of providing a safe and protected school, trained teachers, appropriate resources and a learning environment for students in all these adverse situations. Protecting children's rights is one of the most important components of this model. For this reason, it is very important to

increase the number of the CFS model in countries, to realize children's rights by considering international documents, and to ensure that children take environmental education in schools to become environmentally literate. Children depend entirely on a natural environment in order to live in a healthy and sustainable environment, have adequate and clean air, safe water and adequate sanitation, and have access to non-toxic environments and playgrounds. The right to a healthy environment needs to be adopted, protected and implemented by all countries of the world, whether they are UNCRC members or not. Taking such a step is important for children and future generations who are disproportionately affected by environmental damage.

References

Ardoin, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. *Biological Conservation*, *241*, 108224.

Arts, K. (2019). Children's Rights and the Sustainable Development Goals'. *International Human Rights of Children. Springer, Singapore*, 537-561.

Ballantyne, R., & Packer, J. (2002). Nature-based excursions: School students' perceptions of learning in natural environments. *International research in geographical and environmental education*, *11*(3), 218-236.

Blanchet-Cohen, N., & Elliot, E. (2011). Young children and educator's engagement and learning outdoors: A basis for rights-based programming. *Early education & development*, *22*(5), 757-777.

Bodzin, A., Klein, B. S., & Weaver, S. (Eds.). (2010). *The inclusion of environmental education in science teacher education*. Springer Science & Business Media.

Browning, M. H., & Rigolon, A. (2019). School green space and its impact on academic performance: A systematic literature review. *International journal of environmental research and public health*, *16*(3), 429.

Chabbott, C. (2004). UNICEF's Child-friendly Schools Framework: a desk review. *New York: UNICEF*.

Chen, J. (2018). A study on the correlations between thinking styles and academic achievement in web-based environmental education. *Ecology*, *27*(106), 2045-2051.

Children's Rights Alliance for England (CRAE) (2017). *Barriers and solutions to using children's rights approaches in policy*. Retrieved from: http://www.crae.org.uk/media/123572/Barriers-and-solutions-to-using-childrens-rights-in-policy-E.pdf

Clair N., Miske S., & Patel D. (2016). Child rights and quality education Child Rights and Quality Education child friendly schools in Central and Eastern Europe (CEE), *Eur. Educ., 44(*2), pp. 5–22.

Conde, M. D. C., & Sánchez, J. S. (2010). The School Curriculum and Environmental Education: A School Environmental Audit Experience. *International Journal of environmental and science education*, *5*(4), 477-494.

Djoehaeni, H., Agustin, M., Gustiana, A. D., & Kamarubiani, N. (2020). A child-centered classroom program: An approach to promote child friendly schools. In *Borderless Education as a Challenge in the 5.0 Society* (pp. 252-259). Routledge.

EPA, (2007). Final Bulletin for Agency Good Guidance Practices. United States Environmental Protection Agency.

Epstein, M. J., Elkington, J., & Herman, B. (2018). *Making sustainability work: Best practices in managing and measuring corporate social, environmental and economic impacts*. Routledge.

Erhabor, N. I. (2018). Developing leaders through mentoring in environmental education. *Electronic Green Journal*, *1*(41).

European Commission, (2019). *Embedding a children's rights perspective in policy and decision-making*. Retrieved from: file:///C:/Users/vfjp66/Downloads/KE-02-19-407-EN-N.pdf

Gal, T. (2017). An ecological model of child and youth participation. *Children and Youth Services Review, 79*, pp. 57–64.

Geary, P. (2012). *CRC in court: The case law of the Convention on the Rights of the Child*. London: Child Rights International Network.

Horelli L., (2007). Constructing a theoretical framework for environmental child-friendliness, *Child. Youth Environ. J., 17*(4), pp. 267–292.

Howe, C. (2009). *The role of education as a tool for environmental conservation and sustainable development*. PhD thesis. London: Imperial College.

IPCC, 2021: Summary for Policymakers. *In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

Kharrazi, A., Kudo, S., & Allasiw, D. (2018). Addressing misconceptions to the concept of resilience in environmental education. *Sustainability*, *10*(12), 4682.

Ladwig, J. G. (2010). Beyond academic outcomes. *Review of Research in Education, 34*(1), 113–141.

Law, M. M. S., Hills, P., & Hau, B. C. H. (2017). Engaging employees in sustainable development–a case study of environmental education and awareness training in Hong Kong. *Business Strategy and the Environment*, *26*(1), 84-97.

Lawson, D. F., Stevenson, K. T., Peterson, M. N., Carrier, S. J., Strnad, R., & Seekamp, E. (2018). Intergenerational learning: are children key in spurring climate action?. *Global Environmental Change, 53*, 204-208.

Liu, S., & Guo, L. (2018). Based on environmental education to study the correlation between environmental knowledge and environmental value. *Eurasia Journal of Mathematics, Science and Technology Education*, *14*(7), 3311-3319.

Mastrͨangelo, M. E., Pͨerez-Harguindeguy, N., Enrico, L., Bennett, E., Lavorel, S., Cumming, G. S., et al. (2019). Key knowledge gaps to achieve global sustainability goals. *Nature Sustainability,* 1–7. https://doi.org/10.1038/s41893-019-0412-1

Matte, S., Moyer, L., Kanuri, C., Petretta, D., Bulger, C., & Swaney, R. (2015). Getting Started with the Sustainable Development Goals. *A Guide for Stakeholders. Columbia University's School of International and Public Affairs*.

Michelsen, G., & Fischer, D. (2017). Sustainability and education 1. In *Sustainable development policy* (pp. 135-158). Routledge.

Ningsih, T. (2020). Mental Revolution Education Strategy in Realizing Child-Friendly Schools Based on Character Education Strengthening (Strategi Pendidikan Revolusi Mental dalam Sekolah Mesra Keluarga Berdasarkan Pengukuhan Pendidikan Karakter). *Akademika*, *90*(1).

O'Flaherty, J., & Liddy, M. (2018). The impact of development education and education for sustainable development interventions: a synthesis of the research. *Environmental Education Research*, *24*(7), 1031-1049.

Orkodashvili, M. (2013). Quality education through Child-Friendly Schools: resource allocation for the protection of children's rights. *Revista Românească pentru Educaţie Multidimensională*, (1), 101-109.

Osher, D., Kelly, D. L., Tolani-Brown, N., Shors, L., & Chen, C. S. (2009). UNICEF child friendly schools programming: Global evaluation final report. *Washington, DC: American Institutes for Research*.

Palmer, J. A. (1999). Research matters: A call for the application of empirical evidence to the task of improving the quality and impact of environmental education. *Cambridge Journal of Education*, *29*(3), 379-395.

Parkes, Aisling (2015). Implementation of Article 12 CRC in family law: Lessons learned and messages for going forward, In *T. Gal & B. Faedi Duramy (Eds.), International perspectives and empirical findings on child participation: From social exclusion to child-inclusive policies* (pp. 111-134), New York, NY: Oxford University Press.

Pegram, J. & Colon, C. (2019). *Are climate change policies child-sensitive?* Retrieved from: https://www.unicef.org/globalinsight/media/646/file/are-climate-change-policies-child-sensitive-2019.pdf

Potter, G. (2009). Environmental education for the 21st century: Where do we go now?. *The Journal of Environmental Education*, *41*(1), 22-33.

Powell, R. B., Stern, M. J., Krohn, B. D., & Ardoin, N. (2011). Development and validation of scales to measure environmental responsibility, character development, and attitudes toward school. *Environmental Education Research*, *17*(1), 91-111.

Ramadhan, S., Sukma, E., & Indriyani, V. (2019, August). Environmental education and disaster mitigation through language learning. In *IOP conference series: Earth and environmental science* (Vol. 314, No. 1, p. 012054). IOP Publishing.

Rauch, F. (2000). Schools: A place of ecological learning. *Environmental Education Research*, *6*(3), 245-258.

Schaltegger, S., & Wagner, M. (Eds.). (2017). *Managing the business case for sustainability: The integration of social, environmental and economic performance*. Routledge.

Schubert J. (2012). *Protecting environmental child rights*. Terre des Hommes, Osnabrück. Retrieved from: http://www.terredeshommes.org/wp-content/uploads/2013/01/tdh_Environmental-ChildRights_2012-11-final.pdf.

Sinakou, E., Boeve-de Pauw, J., & Van Petegem, P. (2019). Exploring the concept of sustainable development within education for sustainable development: implications for ESD research and practice. *Environment, development and sustainability*, *21*(1), 1-10.

Stern, M.J., Powell, R.B. & Hill, D., (2014). Environmental education program evaluation in the new millennium: what do we measure and what have we learned? *Environ. Educ. Res. 20*, 581–611. https://doi.org/10.1080/13504622.2013.838749

Stevenson, K. T., Peterson, M. N., Bondell, H. D., Mertig, A. G., & Moore, S. E. (2013). Environmental, institutional, and demographic predictors of environmental literacy among middle school children. *PloS one*, *8*(3), e59519.

UNESCO (2015). *Embracing Diversity: Tool kit for creating inclusive learning friendly environment*. Retrieved from http://unesdoc.unesco.org/images/00 13/ 001375/137522e.pdf

UNESCO (2019). *Metadata for the global and thematic indicators for the Follow-up and review of SDG 4 and Education 2030*. Retrieved from http://tcg.uis.unesco.org/wp-content/uploads/sites/4/2019/08/sdg4-global-indicators-4.7.pdf

UNICEF (2000). Defining Quality in Education: Working Paper Series Education Section Programme Division United Nations Children's Fund New York, NY, USA

UNICEF (2009a). *Schools as protective environments in Child friendly schools manual*. New York: UNICEF.

UNICEF (2009b). *Machel study 10-year strategic review: Children and conflict in a changing world*. Office of the Special Representative of the Secretary-General for Children, & Armed Conflict. Retrieved from https://www.un.org/ruleoflaw/files/Machel_Study_10_Year_Strategic_Review_EN_0 30909[1].pdf

UNICEF (2012). *Child friendly schools: Life skills*. Retrieved from www.unicef.org/ lifeskills/index_7260.html

United Nations (1989), *Convention on the Rights of the Child*. HMSO, London.

United Nations (UN), (2015a). *Transforming our world: the 2030 agenda for sustainable development*. Resolution Adopted by the General Assembly, Seventieth Session A/RES/70/1

United Nations (UN), (2021). *The Sustainable Development Goals Report 2021*. Retrieved from: https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf

United Nations Education, Scientific and Cultural Organization (UNESCO)/United Nations Environment Program (UNEP), (1978). The Tbilisi declaration, *Connect, 3*(1), pp.1–8.

United Nations, (2015b). *The Paris Agreement.* Retrieved from: https://www.un.org/en/climatechange/paris-agreement

Walid, M., & Luetz, J. M. (2018). From education for sustainable development to education for environmental sustainability: Reconnecting the disconnected SDGs. In *Handbook of Sustainability Science and Research* (pp. 803-826). Springer, Cham.

Walker, C. (2017). Tomorrow's leaders and today's agents of change? Children, sustainability education and environmental governance. *Children & Society, 31*(1), 72-83.

Weiss, G., & Rametsteiner, E. (2005). The role of innovation systems in non-timber forest products and services development in Central Europe. *Economic Studies, 14*(1), 23-36.

West, S. E. (2015). Understanding participant and practitioner outcomes of environmental education. *Environmental Education Research, 21*(1), 45–60.

Wheaton, M. A., Kannan, A., & Ardoin, N. M. (2018). *Pathways in environmental literacy.* (Environmental Literacy Brief, Volume 2). Social Ecology Lab, Stanford University.

World Health Organization. (2016). *World health statistics 2016: monitoring health for the SDGs sustainable development goals*. World Health Organization.

Contact email: gulsah.dost@gmail.com