Evaluation of Pedagogical Approaches in Early Childhood Environmental Education: Perspectives and Relationship with Ecosychology

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Introduction

There are multiple definitions in the literature on environmental education. It is known that the basis of these definitions was created by William B. Stapp in 1964. According to William B. Stapp, environmental education is an educational process aimed at raising useful individuals who have knowledge about the environment and environmental problems, can produce solutions for environmental problems and try to solve these problems (Kütük, 2019). In addition, environmental education is based on actions aimed at increasing the environmental awareness of the society and creating a framework for the protection of the environment (Laing, 2004). Environmental education not only conveys environmental information to individuals, but also contributes to the development of positive attitudes and behaviors towards the environment (Erten, 2004). Environmental education can also be considered as a means of science education because it is based on learning based on experiences, develops problem-solving skills, enables children to gain experiences, and is an education based on active participation (Gardner, 2009; Sugg, 2008).

Although environmental problems in recent years pose more problems for young children, environmental education practices in early childhood started later in educational institutions such as primary and secondary schools (Elliot & Davis, 2009). Considering the early childhood learning characteristics, it has a critical role in helping children acquire positive attitudes towards the environment in relation to other periods of life (Tilbury, 1994). If children develop negative attitudes towards the environment in the early stages, these attitudes will most likely become permanent. In addition, it is pointed out that learning at early ages is largely neglected and early period is critical age in the context of environmental education (Tilbury, 1994).

Talking about the existence of a healthy environment from the early years is possible with an education integrated with ecopsychology. It has been proven that the environment even affects the psychology of living things Ayaz (2014). The concept of ecopsychology explains this situation. In today's world, one of the most powerful remedies for children's unhappiness and restlessness is nature. Ecopsychology especially helps children to have a sense of moral responsibility towards nature and other people by developing the ego about the environment. In terms of raising awareness and sensitivity about the environment in early childhood, researchers have drawn the attention of this period and declared that it

is the most important period of life. Environmental education given especially between the ages of 3-6; It is important for children to acquire environmental awareness and sensitivity and to develop positive emotional bonds towards the environment (Biriukova, 2005). In this direction, they stated that environmental education has a significant effect on the change of preschool children's perspectives on the environment, and in this context, children should be introduced to environmental education in early years (Shin, 2008).Sarikaya (2006) in his study; problem-based learning known as student-centered teaching methods, learning cycle, multiple intelligence theory, 4MAT, brain-basedlearning, constructivist learning, project-based learning, inquiry-basedlearning), emphasized the use of approaches and methods such as active learning in science education, environmental education and other fields will ensure the realization of permanent learning in students.

Environmental Education and Practice Partnership (EETAP, 2002) stated that one of the benefits of environmental education outside the classroom is that it enables active learning and reconstructs the previous knowledge of the student. In this study, it was determined that the trainings were given in the natural environment based on the nature of the subjects, mostly based on observation and questioning, and environmental awareness developed (Okur Berberoglu, 2013). According to Ozaner (2007), an ecology-based environmental education is one of the best methods that enable individuals to learn about science and the environment. She has come to the conclusion that well-planned field studies in out-of-school spaces will not only facilitate students' understanding of the world around them, but also enable them to acquire positive attitudes and values towards nature and the environment. In their study, Cutter-Mackenzie and Edwards (2013) stated that integrating environmental education, which is considered in the context of pedagogical play types and structured games, into learning processes has a significant contribution to children's early learning. Torquati et al. (2013) similarly emphasized in their study that the curriculum content used in environment and nature education in early childhood education should be handled in an integrated context with nature and activities for children should be handled in a way that includes nature-based learning.

In a study in which Okur Berberoğlu (2015) examined the effect of ecopedagogy-based out-of-class environmental education program on environmental awareness of participants, she concluded that ecopedagogy-based out-of-class environmental education program increased the environmental awareness of participants. Akbayrak and Kuru Turaşlı (2017) examined the effect of game-based learning activities on the environmental awareness of preschool children and concluded that the activities supported children's environmental awareness, enriched children's environmental awareness and broadened their perspectives. The findings of the study titled "My Best Teacher Nature: Teacher Activities Prepared within the Scope of the Preschool Nature-Based Education

Applications Project" by Temiz and Karaarslan Semiz (2019) showed that teachers who did not practice nature activities a lot before participating in this project were able to use nature and natural materials at the end of the study. They have prepared various activities. With this project, it is aimed to establish nature-based education practices in Turkey from an early age, to encourage teachers to use nature in their immediate environment in education programs, and to make nature-based education widespread in schools.

When we look at the studies in the field of environmental education, it is seen that researchers constantly offer new approaches in order to maximize the efficiency obtained from this education. In line with the applied approaches, the determined objectives and functioning of environmental education in early childhood may differ (Ministry of Environment, 1998; Özdemir, 2007; Yılmaz, 2016). These approaches will be explained and examined separately in line with the relevant literature below.

Environmental education, which is initiated from early childhood, is important in terms of improving human and environmental interaction in a positive way from early childhood and raising sensitive and respectful individuals towards the environment. Creating environments that will provide life based on the active participation of children in the early years is one of the important dynamics of environmental education. In this context, in early childhood, children should be aware of their responsibilities towards environmental problems and especially recognize their environment in order to strengthen their relations with the environment. In the context of these principles, the aim of the chapter is to address and introduce current pedagogical approaches in environmental education, based on child-centered natural environment and child interaction, providing active learning, inquiry-based, in the light of the principles of ecopsychology in today's world, which has moved away from the context of ecological relations. Considering all these issues, this chapter aims to introduce the effectiveness of ecopsychology and current pedagogical methods that center children in environmental education, unlike traditional methods, and to consider alternative approaches in an inclusive and holistic way, to adopt approaches that will add differences to the processes of children's understanding of nature and the environment, and to create environmental education in this direction.

This chapter was carried out within the framework of critical theory. As this work is informed by critical theory, it uses the method of critical inquiry, which is the operationalization of critical theory in the social sciences. At this point, there is a definite need to justify what makes this present study "critical". From the perspective of critical theory, just exploring and recording social behavior is not enough. For social research to be useful, the next step in explaining this behavior in terms of socio-economic and cultural context is essential, that is, social research must go beyond 'fact-gathering'. In this chapter approaches that have entered the literature around the world in early

childhood environmental education are defined, explained and critically examined.

Pedagogical Approaches in Early Childhood Environmental Education

1. Nature-Based Approach: Nature Pedagogy

Simply put, nature-based early childhood education for young children (0-8 years) is where learning takes place in the context of nature. Many program models that are considered nature-based early childhood education (NbECE) such as nature-based kindergartens (also called nature-based kindergartens), forest kindergartens (also called forest kindergartens), nature-based kindergartens, nature-based first grade, nature-based kindergartens, and the like has. In all these programs, nature is at the heart of the curriculum, there is ample time outdoors daily during a school year, and teachers engage in high-quality environmental education practices alongside high-quality early childhood practices. In other words, nature and the outdoors permeate almost every aspect of a nature-based education program. Therefore, although the model or program structure may vary, there is a common approach to teaching children: nature pedagogy.

Nature-based kindergartens, sometimes simply referred to as nature kindergartens, are licensed early childhood programs for 3–5-year-olds in which at least 30% of the classroom day is excluded, infusing nature and pedagogy in all aspects of the programme. It emphasizes inquiry-based learning through play and hands-on exploration. This means that the curriculum is emerging (that is, based on children's interests) but typically based on seasonal events of the natural world, given their frequent experiences of time spent outdoors. In addition, nature is integrated with interior spaces and playgrounds generally have the appearance of a natural area rather than structured playground equipment. Nature-based kindergartens include time spent beyond the designated playground, nature indoors, and nature as the main theme of the curriculum (Bailie, 2010; Green Hearts, 2014; Larimore, 2011b, 2011; Moore, 2014). Another way to describe it is the integration of nature with learning "inside", "outdoor" and "beyond" (Warden, 2015). Nature-based kindergartens differ from forest kindergartens, which spend longer outdoors (70-100%) and have limited indoor use (Larimore, 2016; Sobel, 2014).

It has been observed that the concept of school gardening was first expressed by John Locke, and thus gardens and horticultural practices began to be used in educational settings (Johnson, 2012). Expressing that early childhood is more important than other periods of life, Jean Jacques Rousseau emphasized the necessity of applying education through natural environment and nature-based experiences in this period (Gravez et al., 1996). Influenced by Rousseau's views, Pestalozzi aimed to establish a strong relationship between children and nature through nature-based activities such as nature walks and nature observations in his school. Another educator, Friedrich Froebel, who was influenced by Rousseau's views and practices, can be seen in his own synthesis as

well as Rousseau's views in his educational works on children. Froebel, who spent his early life in touch with nature and was the founder of the first kindergarten in Germany, provided children with learning opportunities both inside and outside the classroom. It has created planting-planting areas for children in the garden of their schools, thus providing educational practices that can improve and support children's harmony with nature. (Garrick, 2009; Royce, 2012; Tovey, 2007).

Froebel's views and practices have provided the basis for the development of early childhood education in many countries. John Dewey was also influenced by these practices of Froebel and attached great importance to planting practices where children like Froebel could observe nature. In his discourses on education, Dewey often emphasized the importance of learning environments outside the classroom and argued that areas such as gardens and forests should be used effectively in the education of children in this direction (Herrington, 2001; Rivkin, 1998). Emphasizing the importance of the relationship between child development and clean air, McMillan attached great importance to the garden design of the school he opened. By creating the school garden from different surfaces, special planting areas were created for children, and also benefited from the hills and sandboxes (Bilton, 2010; Garrick, 2009; Tovey, 2007). Maria Montessori is another educator who argues that natural environments and gardening practices should be used as a learning environment for children. Rudolf Steiner, on the other hand, embraced the interaction of nature and children and the harmony of children with nature more than Montessori. The Waldorf approach, developed by Steiner, attaches great importance to nature-based play and learning activities. It has been concluded that through these games and activities, children's change and development in nature is pioneered. In particular, planting and harvesting practices are stated as one of the most important channels to gain a desired attitude and responsibility towards the environment and nature (De Souza, 2012; Edward, 2002; Schmitt-Stegmann; 1997).

2. Forest Schools

Forest schools are a system built on basic dynamics all over the world. By adopting the play pedagogy as a principle, the forest school has brought a unique dimension to contemporary outdoor education by focusing on young children. The concept of play, which puts children at the center and considers the active participation of the child, is seen as a new and potential principle and it not only brings a new breath to educators, but also opposes the current understanding of education (Leather, 2016).

Forest schools have been an environment that not only supports children's development with a multidimensional and holistic perspective, but also offers them the opportunity to become self-confident and aware of their competencies (Tantekin & Yalçın, 2017). The determining factor behind forest schools is that children learn more outside the

classroom than in unconventional environments. The target audience of these schools is especially aimed at kindergartens and primary school children (MacEachren, 2013).

The forest school is held in a forested area or a natural wooded area in order to develop the relationship between children and the natural environment. The reason for choosing a forested area in particular is that it meets the needs of the program and the student, is the most suitable environment for the philosophy of the approach, and contains elements that can stimulate children's feelings of discovery. Forest schools aim to establish long-term environmentally viable behaviors and child-nature relationship through children's experiences. It is seen that this nature-based education approach is adopted and examples are seen in different countries around the world.

a) Denmark, Sweden, Norway: Nature-Based Kindergartens

Its basic philosophy is based on the idea that "if you make your child love nature, the awareness of protecting nature and a positive attitude towards nature will develop spontaneously." Because the understanding that an individual will only tend to protect something he loves and values is adopted. This understanding is also reflected in the name of the applications made in Sweden (Sevimli Çelik and Yalçın, 2020). In line with this philosophy, education is carried out in areas such as forest, woodland, lake and seaside, which have a dynamic structure that changes depending on the climate and season (Linde, 2010; Robertson, 2008). The pedagogical arguments are as follows; knowledge and skills are gained through activities performed in nature in the child's close environment and requiring direct contact with nature. This information, based on the experience of children about their local, natural and cultural environment, is also very important for the protection of cultural heritage (Lysklett, 2017).

b) Germany: Forest Kindergartens (WaldKindergartens)

Waldkindergart institutions, which was founded for the first time in Germany in 1991 and which we can translate into Turkish as a forest kindergarten, was established in Flensburg, Germany under the leadership of two educators named Petra Jäger and Kerstin Jebsen (Lysklett, 2017; Quetteville, 2008; www.waldkindergarten.de). It is seen that these institutions in Germany serve 0-3 age groups and 3-6 age groups. In addition, they have two different institutional structures as integrated and pure. Çizioğlu (2020), unlike other sources, mentioned that these institutions have three main purposes in the platform where he shared his observations. He summarized these three main objectives as follows; to be a citizen of the world, to have awareness of nature and to be peaceful. He argued that this basic purpose was reflected in every question asked, every project carried out and every association in German nature schools. In summary, the foundations of forest kindergarten (Waldkindergarten) institutions in Germany date back to Froebel, and current practices are inspired by Scandinavian countries.

c) England: Forest School Approach

The Forest Schools "Forest School", which has a similar founding story to the Waldkindergarten institutions in Germany, is the British establishment. The establishment of these institutions is based on the visit of a group of teachers and students from Bridge Water College, early childhood education department to nature kindergartens in Denmark in 1993. Many studies have been conducted on children aged 3-11 years studying at Forest Schools in England, which provide education in line with the principles of this approach, examining the possible benefits of this practice for children. The common results of these studies can be summarized as follows: Forest Schools support children's self-respect and confidence, cooperation and awareness of other individuals, language and communication, recognizing and understanding themselves and their environment, attention and concentration, risk taking and problem-solving skills (Borradaile, 2006; Hughes, 2007; Massey, 2003; O-Brien & Murrey, 2007).

d) Australia: Bush Kinder Approach

Bush Kindergartens or Bush Kinder Approach has emerged in Australia, with many studies showing how important educational practices in nature are for children's health, development and learning. However, as in Germany and England, this practice implemented in Australia was also developed based on the practices made in Scandinavian nature schools (Sevimli Çelik & Yalçın, 2020). The practice in nature is usually in the form of a routine consisting of three basic practices: eating and drinking, circle and exploration time (www.education.vic.gov.au; 2020). Especially in times of discovery, the child is encouraged to explore nature with all his senses. However, care is taken to minimize the trace left in nature during this exploration. There is even a minimum impact guide available in the sources. It is seen that the guidelines determined in the minimum impact guide are actually directly related to the environmental education process for sustainable development (Sevimli Çelik & Yalçın, 2020 p. 89).

3. Garden-Based Education Approach

Garden based environmental education is an instructional strategy that utilizes the garden as a teaching tool. It encompasses programs, activities and projects in which the garden is the foundation for integrated learning, in and across disciplines, through active, engaging, real-world experiences that have personal meaning for children, youth, adults and communities in an informal outside learning setting.Looking at the foundations of the garden-based education approach, it is seen that the field of education is based on the most prominent philosophers and educators from Comenius to Dewey. The ultimate goal of the garden-based education approach is to bring "environmental awareness" to children (Morris & Zidenberg-Cherr, 2002; Tran, 2015). In this direction, environmental awareness for a sustainable world turns into an applicable process at all levels of

education. As a matter of fact, while children are learning with garden-based education, they are actually preparing for "real life" and gaining life experiences (Dewey, 1996). When we look at Turkey, the fact that the understanding of garden-based education is not adequately reflected in both education programs and practice from early childhood to higher education reveals that this approach is not included at the required level. Garden-based education is a good model for raising individuals who are both environmentally conscious and have environmentally responsible tendencies. It is also an important step for students to discover the natural environment they live in (Taşçı et al., 2020).

4. Place-Based Environmental Education

Place and community-based environmental education is accepted as desirable environmental education in today's world. In addition to carrying out teaching activities on the natural environment, it also takes its place in the literature as teaching how to create a natural environment. Place-based education is a relatively new term. However, progressive educators have supported this concept for over 100 years. For example, in "School and Society," John Dewey advocated an experimental approach to student learning in the local environment: "Experience outside of school has a geographical aspect, artistic and literary, scientific and historical aspects (1915, p. 91). It includes the traditional methodologies of outdoor education advocated by Dewey to help students connect with particular corners of the world.Proponents of place-based education often see it as having a role in ensuring local ecological and cultural sustainability.

Sobel, on the other hand, states that the infrastructure of this teaching process consists of subjects such as the aesthetics of the society and the environment, its history, folk culture, social problems and economy. It has been stated that one of the most basic goals in this process is to explain how nature, social infrastructure and culture interact and shape each other (Sevimli Çelik & Yalçın, 2020). Hence, it is multidisciplinary in nature. Today, in order for children to move more easily in the natural world they live in, it is important that they first get to know the 'place' they live in. In order for this to occur, it is thought that place-based education should be given to children effectively (Keşaplı Can, 2015). Smith and Williams (1999) describe this approach as "ecological education". The practice of ecological education entails seeing humans as part of the natural world and human cultures as the result of interactions between species and particular places.

5. Outdoor Education

Outdoor education relies on the assumption that learning experiences outdoors in 'nature' foster an appreciation of nature, resulting in pro-environmental awareness and action (Clarke & Mcphie, 2014). Outdoor education means learning "in" and "for" the outdoors. The ultimate goal in outdoor education is to complement and expand traditional classroom teaching; to ensure that structured environments are integrated with natural

environments and combined with meaningful contextual experiences. In other words, the main purpose of "outdoor education" is to provide meaningful contextual experiences in both natural and structured environments that complement and expand classroom teaching dominated by print and electronic media (Knapp, 1996). In the world we live in, children's chances for unstructured play and a regular connection with the natural world seem to be greatly reduced. Outdoor education programs are a tool that helps children reach the natural world. Outdoor education is an educational approach focused on curriculum, behavior, production, protection and survival (Shanely, 2006). Nature offers different materials to children in outdoor education. Children can learn a lot just by being in nature, using all their senses in the process, and exploring and examining nature (Dinçer, 1999).

6. Game-Based Education Approach

It is emphasized in the most important publications of institutions and organizations such as NAEYC- (Association for the Education of Young Children) that it should be game-based when creating programs in the education of children, especially when creating programs that center the child (Bredekamp & Coople, 1996; NAEYC, 2014). Considering the early childhood developmental characteristics, the game has always been the focus of attention for all stakeholders focusing on early childhood, in line with its uncanny effect on the regulation of learning experiences, the development and change of behaviors and attitudes (Ahmed et al. 2016, Bergen, 2002; Cabrera, 2017; Frost, 1988; Orr & Geva, 2015; Quinn et al., 2018). In this direction, in order to realize sustainable development in early childhood, environmental education experts consider games, especially outdoor games, as important evidence for developing environmental knowledge, awareness and positive attitudes towards nature in early childhood. As a matter of fact, it has been found that one of the situations that explains the positive attitude towards the environment developed by children who have nature-based play experiences in outdoor spaces in the preschool period is these play experiences (Ewert et al., 2005).

7. Environmental Education Approach

The environmental education approach, which was accepted in the early years of environmental education, aimed to learn the interrelationships of physical and social systems with each other. However, due to the fact that this approach remained highly technical and instrumental in the following process, it ignored environmental problems and left its place to the eco-pedagogical approach (Çelikbaş, 2016; Özdemir, 2007).Environmental education approach focuses on:1. Engaging with citizens of all demographics to;2. Think critically, ethically, and creatively when evaluating environmental issues;3. Make educated judgments about those environmental issues;4. Develop skills and a commitment to act independently and collectively to sustain and

enhance the environment; and,5. To enhance their appreciation of the environment; resulting in positive environmental behavioural change (Bamberg & Moeser, 2007; Wals et al., 2014).

8. Ecopedagogical Approach

The ecopedagogical approach has provided a pedagogical and critical perspective on environmental education and aimed to bring an understanding that includes respect for nature, people and diversity (Gronemeyer 1987; Kahn 2010; Okur Berberoğlu, 2015). An environmental education based on an ecopedagogical approach aims to teach the rules of life with an education based on the principles of ecology and to transform these rules into desired attitudes and behaviors (Atasoy, 2005; Gronemeyer, 1987; Kahn 2010; Okur, 2012).Ecopedagogy's primary goal is to create a "planetary consciousness" through revolutionary teaching and learning (Bowers, 2004).Ecopedagogy scholar Richard Kahn describes the three main goals of the ecopedagogy movement to be:

- •Creating opportunities for the proliferation of ecoliteracy programs, both within schools and society.
- •Bridging the gap of praxis between scholars and the public (especially activists) on ecopedagogical interests.
- •Instigating dialogue and self-reflective solidarity across the many groups among educational left, particularly in light of the existing planetary crisis (Kahn, 2010).

Gaard (2009) outlines the necessity for children's environmental literature to encompass the following core aspects of ecopedagogy;

Figure 1. Aspects of Ecopedagogy (Gaard, 2009)

The movement aims to create educational programs that interrogate the intersection of social, political, economic and environmental systems. As an outgrowth of critical pedagogy, ecopedagogy critiques environmental education and education for sustainable development as vain attempts by mainstream forms of pedagogy seeking to appear relevant regarding current issues of environmental degradation (Kahn, 2008).

9. Ecological Learning Approach

An education that considers ecology as the basic building block is the most effective method for individuals to learn information about the environment and science and to change their attitudes positively (Ozaner, 2004; Phenice & Griffore, 2003; Thoe and Lin, 2006). The ecological learning approach, which helps the individual to be aware of the environment and social environment in which he exists, emphasized that environmental education should lead the socio-cultural change and adopted the idea of "a new person, a new society" as a principle. The effectiveness of the approach has decreased due to the fact that the approach is seen as incomplete and inadequate in the academic context and does not take into account specialization (Çetin, 2018; Özdemir, 2007).

10. The Nature Experience Approach

Many theoretical and empirical research in the 1990s suggested an important role of nature experience for the development of environmental values and attitudes, as well as in influencing pro-environmental behaviors. In particular, evidence emerged those different kinds of environmental experience have a different impact on environmental behaviors (Bögeholz, 2010). This approach is very important in terms of environmental education and students' understanding of the relationship between living and non-living things based on their discovery of environmental events such as matter cycles (Özdemir, 2010; Özdemir & Uzun, 2006). In the figure below, five nature-related aspects (Bögeholz, 2010)to fulfil the requirements of nature experience dimensions are given;

Figure 2. Nature-Related Aspects to Fulfil the Requirements of Nature Experience Dimensions

Showing students how and in what way the intervention of human elements to nature through education in nature and the changes that occur due to these interventions will lead them to love and show more interest in nature. Among the conditions of nature education to be applied, features such as mutually establishing the relationship between the student and the environment, realizing active learning, entertaining and interesting in the learning process are included in this approach (Birinci, 2013; Bullock, 1994).

11. Educational Approach for Sustainable Development

Sustainable development aims to develop the many sustainable development goals approved by the United Nations that highlight a global vision for sustainability. Education institutions play a fundamental role in empowering individual reflection on one's own actions to foster current and future social, cultural, economic and environmental understanding and impacts (Barth et al., 2007) to activate participation both locally and globally and to reframe complex situations on a sustainable basis. Individuals are encouraged to reach sustainable development by defining new directions through active participation and societal cooperation (Jebrian et al., 2020; UNESCO, 2006).The framework of the approach consists of three different titles, which are mentioned as education about the environment, education within the environment and education for the environment (Mamur, 2017; Okur Berberoğlu & Uygun, 2013).

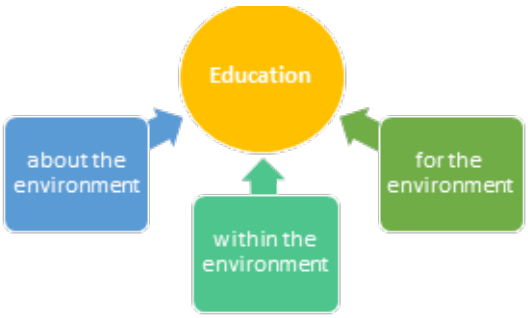

Figure 3. The Framework of the Approach for Sustainable Development Consists of Three Different Titles

It is an educational approach about the environment that aims to inform individuals about human-environment interaction, to explain cause-effect relationships in this direction and to increase their level of interest, and to develop more cognitive areas (Mamur, 2017; Tilbury, 1995). The approach to education within the environment, on the other hand, emerges as education based on student-centered activities rather than traditional methods and teaching methods that center out-of-class learning (Mamur, 2017; Tilbury, 1995). Today, it has become imperative for individuals to be conscious of environmental problems in education for the environment shaped by common points. In the approach based on the principle that the education given is mainly for the "environment", it is important for children to have basic knowledge about the environment and its problems,

to develop values based on protecting, improving and beautifying the environment, to define problems and to develop solutions (Ünal et al., 2001). Environmental problems increase day by day, the importance of early childhood in life and the need for children who grow up far from the natural environment to get to know nature increases the importance of environmental education in the preschool period.

Ecopsychology and Early Childhood Environmental Education Approaches Perspective

The term 'ecopsychology' was first used by Theodore Roszak in 1992. In his book, The Voice of Earth, Roszak (1992) discussed how human activities and the economic system have changed, and talked about the negative effects of these changing activities and economic order on ecosystems. By bringing together the principles of ecopsychology, ecology and psychology, it aims to help people become aware of their inner connection with nature and to repair the broken bond (Er et al., 2020). In addition, another aim of ecopsychology is to develop the ego about the environment and to mature the ethical responsibility of the person towards other people and other living and non-living beings on the planet (Uzunoğlu, 2006).

The aim of ecopsychology is to awaken the knowledge of the interrelationship of nature and man, which is innate and found in the ecological unconscious. However, ecopsychology aims to awaken this awareness in adults with the foresight that children's environmental awareness may be higher, by stating that the vital stage of human development is childhood. It is important to tell nature-friendly stories, fairy tales and lullabies for the development of environmental awareness in childhood. With the development of ecological consciousness, people have a sense of responsibility towards nature and other people, and ecopsychology aims to have this sense of responsibility have a say in social relations and political decisions (Enns, 2004).

Evaluation of Early Childhood Environmental Education Approaches in Terms of Purposes, Themes and Content

Learning occurs only when the subject is perceived by the child or student as related to them (Kola-Olusanya, 2005). Effective environmental education programs need to be personally relevant to the daily lives of children and young people and to what is happening in their "own backyard" (Ballantyne & Packer, 2009). It is important that the programs relate directly to the local context and give students the chance to "explore and experience their surroundings". Environmental educators must reintroduce students to their local area by exploring and experiencing, learning and celebrating. By doing this, environmental educators help students develop a sense of curiosity and a sense of place (Athman & Monroe, 2001). From this point of view, pedagogical approaches to environmental education contain different elements and principles. When the

relevant literature is examined, it is seen that these approaches are carried out with similar characteristics in different geographies of the world. Teaching environmental knowledge and developing important attitudes towards the environment are the most striking similarities. In addition, different perspectives were used in the evaluation of these approaches.

The importance of family role models is frequently mentioned in research (Arnold et al., 2009; Monroe, 2003). Having parents, teachers, and other role models that take an interest in nature can predispose people to take an interest in nature and then work to preserve it. Research shows that children are more likely to participate in environmental initiatives if their parents are also active in this way or approve and encourage them to participate (Chawla & Cushing, 2007).Many authors emphasize the importance of socializing and having fun while connecting with nature for children and young people. Young children naturally learn about the environment through informal, spontaneous, unrestricted play with others (White & Stoecklin, 2008).For older children, the chance to socialize and form friendships can be an important motivator to relate to nature and the environment (Arnold et al., 2009).

It is important for children and young people to be outside and use all their senses to actively explore, experience, make sense of their environment and have a sense of independence (Gurevitz, 2000). Research with environmentalists shows that "the most important school memories include opportunities for action rather than passive classroom learning" (Chawla, 1999). Research has found that most programs that show gains in young people's reported environmental behavior or intention to protect the environment also include an action component.

'Free choice learning' typically refers to learning that takes place outside of formal education (for example, through camping and walking in national parks and visiting museums, zoos and gardens). Through these experiences, 'the student exercises a great deal of choice and control over what, when and why they learn' (Falk, 2005). Some researchers stress the importance of focusing on these experiences as a way to foster lifelong learning and develop environmental understanding and responsible action. Gurevitz, 2000; Falk, 2005; Palmberg & Kuru, 2002).

There are many studies on the importance of encouraging children and young people to be active stakeholders in the environment and decision-making, especially from early childhood (Barratt et al., 2007). It brings a lot of criticism towards approaches that try to inform children and young people about environmental issues in the hope that it will lead to responsible action. Instead, many researchers advocate an approach that focuses on developing knowledge and understanding, empowering them, and a sustainable consciousness. To decide on environmental problems; planning and action, participation;

emotional response, critical thinking and reflection, and a sense of personal and civic responsibility (Athman & Monroe, 2001). The aim of this approach is for students to learn how to be active participants in society (Bolstad, 2003). Connecting children and young people to the environment in this way is defined as developing 'action competence' from early childhood (Breiting & Morgensen, 1999; Jensen & Schnack, 1997).

However, based on children's role as active citizens, many educators advocate the importance of children and young people having authentic experiences, being involved in real-life problems in the local context, exploring problems and taking action (Ballantyne & Packer, 2009; Monroe, 2003). In this way, real environmental issues at the local level help children practice active citizenship and see the effects of their contributions.

The themes discussed above are the dimensions that are thought to be in environmental education. Approaches to be used in early childhood environmental education need to be strong from some perspectives. It is seen that these approaches from the past to the present have different elements and different dimensions are emphasized. The table shows the themes emphasizing different approaches defined in early childhood.

Table. Comparison of ecological approaches to early childhood environmental education according to different themes

Theme / Environmental Education Approach	Giving children ecological knowledge	associating with daily life	Involving families, communities and role models	Providing opportunities for social connections	Encouraging direct experiences	Promoting free choice learning	Promoting the 'active stakeholder' role	Targeting real and local issues	Promoting collective benefit and action for the environment	Being eco psychologically based
Nature-Based Approach	✓	✓		✓	✓					✓
Forest Schools	✓	✓		✓	✓	✓				✓
Garden-Based Education Approach	✓	✓			✓					✓
Place-Based Environmental Education	✓	✓				✓	✓	✓	✓	
Outdoor Education	✓	✓		✓	✓					✓

Game-Based Education Approach	✓	✓	✓	✓		✓		✓	✓	✓
Environmental Education Approach	✓	✓						✓		
Eco-pedagogical Approach	✓				✓				✓	
Ecological Learning Approach	✓						✓	✓	✓	
The Nature Experience Approach	✓	✓		✓	✓			✓		
Educational Approach for Sustainable Development	✓				✓	✓	✓	✓	✓	✓

As seen in the table above, providing children with ecological information and associating the learned information with daily life are the most obvious common features in the main goals of the approaches taken at the center. The least emphasis appears to be on promoting the 'active stakeholder' role and involving families, communities and role models. It can be said that the approaches that deal with the child in its entirety, support it in an eco-psychological sense and display a multidisciplinary content are approaches for game-based education and sustainable development. More objectives and themes are covered in these approaches.

Conclusion

In today's world where environmental problems are increasing rapidly, it is especially important to raise individuals who are sensitive to the environment and nature in order to minimize environmental problems. In this context, it is considered necessary to benefit from ecopsychology in terms of improving environmental awareness and changing human behavior against environmental problems. However, ecopsychology helps children become aware of their inner connection with nature and renew the degenerate relationship in early childhood, which is the critical period of human development. In addition, the importance of environmental education increases considerably in the context of prevention of ecological problems, development of ecological literacy, and awakening of positive environmental desire in children. Today, it is necessary to start environmental education from early childhood on raising children with high ecological sensitivity.

The use of traditional approaches and practices, in which the child is not at the center of environmental education and children are only included as passive listeners, requires

questioning the quality and effectiveness of teaching. Although an education based on pure knowledge transfer is not efficient for children, it is seen that most educators are content with framework programs and traditional approaches and practices, and especially children are not emotionally isolated in the process and cannot internalize the process. In this direction, it is possible to train children's negative attitudes towards environmental education in a positive direction, and it is possible with environmental education programs based on current pedagogical approach applications in a planned manner from early ages.

It is a teaching area of environmental education that is based on learning based on experiences and experiences. In order to achieve the objectives of environmental education, it is necessary for the efficiency of environmental education to include approaches and practices designed in a way that will contribute to children's motor skills, cognitive development, attitudes and perceptions towards the environment and be intertwined with nature. In addition, it is necessary to use out-of-class learning environments and outdoor activities effectively, and in this direction, it is necessary to turn to contemporary practices (Bulut, 2015; Demir & Yalçın, 2014; Özbuğutlu et al., 2014; Tanrıverdi, 2009).

When we look at the early childhood education historically, the child and nature have been considered as a whole since the early years (Duhn, 2012). According to Rousseau's reflections of nature experiences on child education and development, Froebel's pedagogical understanding (May, 2006) and early childhood educators of the same period (Burman, 1994), there is a strong interaction in the context of environment and children's education. Dewey also mentioned the importance of nature and natural materials especially in the education of children and states that being in close contact with nature contributes to both the development and learning of the child (Davis, 1998). In addition, thinkers such as Comenius, Rousseau and Pestalozzi in the 17th and 18th centuries talked about the importance of nature-based learning (Berberoğlu and Uygun, 2013). Comenius explains that while learning a subject, it is imperative for children to make contact with a plant, a stone or an animal in relation to that subject (Kanad, 1948).

It is important to give environmental education as well as the direction in which this education should be given is an issue that should be emphasized. A rich stimulating environment must be provided to effectively help children learn in the early years. Desired early childhood experiences help them develop positive attitudes towards school, learning and self-efficacy (Morrison, 2003; Oktay, 1999). In order to support early childhood development in the best way, an environment should be created in which children can gain more qualified cognitive stimuli, rich language interactions, and positive social-emotional experiences (MEB, 2013). It is essential that children grow up in an environment that keeps their interests and curiosity alive, especially in

early childhood. Children are always interested in discovering plants, animals, and other living and non-living things in the natural environment (Pramling & Samuelson, 2011). Environmental education to be conducted with children should declare in detail how natural systems work, the relationship between systems and the place of children in this relationship (Davis, 1998). In order to apply all these, outdoor activities should be used.

In line with the researches, it is seen that the studies on environmental education are mostly aimed at primary school and higher education children and adults, and there are very few and limited studies on children in early years. The common denominator in studies on environmental education in early childhood is that children's awareness of environmental problems, their knowledge, attitudes and behaviors about the environment develop, and people begin to attach importance to the effect of their negative behavior towards their environment. (Kurt Gökçeli, 2015).

It can be said that the approaches used in early childhood environmental education have similarities, although they are called by different names. Of these, it is important to understand the relationships between place-based education, outdoor education, and environmental education because each concept has been developed in some way by educators who produce curriculum materials and teaching practices that can be useful in other concept areas. What further complicates this potential exchange is the variety of labels applied to each of these approaches. For example, as the field of outdoor education matured, it was called school camping, camping training, and eventually outdoor training. Likewise, place-based education has been termed "community-oriented education", "ecological education" and "bio-regional education".

Traina and Darley-Hill (1995) expand 'local' to include 'bioregional education', encouraging students and teachers to know their place and consider the impact their lifestyles have on the resources of that bioregion. Similarly, Orr's (1994) call for "eco-literacy" offers principles for rethinking education that explicitly links place-based education with outdoor education. Accordingly, children should understand the implications of this knowledge for real people and their communities, and learn through direct experiences outside of the classroom.

Some critics of place-based education believe that the primary purpose of schooling is to prepare students to work and function in a highly technological and consumer-oriented society. In contrast, place-based educators believe that education should prepare people to live and work to maintain the cultural and ecological integrity of the places they live. To do this, people need to be knowledgeable about ecological patterns, causal systems, and the long-term effects of human actions on these patterns (Orr, 1994).

From this point of view, it can be stated that current pedagogical approaches used in environmental education and studies in the field of ecopsychology are limited. The

inadequacy of the studies on the approaches and practices that guided environmental education in the early years in the literature may cause the failure to achieve the desired success in environmental education and the failure to make environmental content updates a part of the system.These findings indicate that more research and practice is needed to develop approaches to environmental education that better reflect the child's own environmental experiences.

It is thought that studies should be carried out to measure the level of pre-school teachers' inclusion and consideration of current pedagogical approaches in environmental education at the stage of planning and implementing environmental and nature activities, and their interest, attitudes and self-efficacy towards these approaches. Subsequently, in-service training in the light of current data on environmental education may be among the suggestions. In addition, a mobile application consisting of video-supported activities can be created on the basis of contemporary applications that can guide families in order to make family participation studies effective and efficient in early childhood environmental education.

It can be recommended to increase the projects within the Ministry of National Education and universities to make the contribution of environmental education practices in early childhood to education more prominent and visible within the framework of current pedagogical practices and to increase good examples. In addition, environmental arrangements made in the light of the principles of ecopsychology in pre-school education institutions and their dissemination can be used to regulate the deteriorated relations of children with the environment.

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