PICTURE BOOKS FOR CHILDREN OF EARLY SCHOOL AGE FOR THE PURPOSE OF ENVIRONMENTAL EDUCATION

Abstract

Environmental education is gaining more and more significance, not only because of the wasting of natural sources but also because of the polluting of the environment. The aim of environmental education is not only the knowledge or a line of facts which a child should learn about the environment, but also building proper attitudes and a positive relation towards the environment. It's important to practice literature to develop an ecological conscience. It's possible to accomplish a connection of literature and education on three levels: on the basic, on some higher and on the highest one. On the basic level, picture books and illustrated books for children process ecological themes more from the cognitive and less (or almost not at all) from the poetical point of view appeared. Exactly because of that, they are called a cognition type of picture books or illustrated books for children. The aim of this paper is to describe picture books with ecological themes and also to analyse functions of each picture book taken in the account. Six books were selected: Sunčica upoznaje činčilu (eng. Sunčica meets chinchilla), Brdo na kraju grada (eng. Hill at the end of town), Priroda priča... (eng. Nature talks), Nauči poštivati prirodu uz kravicu Šaricu (eng. Learn to respect nature with Šarica the cow), Zatvori vodu! (eng. Shut the water off!) and Zraka trebam, hitno! (eng. I need air, now!).

Keywords: picture book, illustrated book, environmental education

Introduction
Čudina-Obradović and Težak state that the “basic aim of ecological upbringing is in developing healthy and correct behaviour which the children will gain in their childhood and carry over into maturity.” (Čudina-Obradović and Težak, 1995, according to Husanović-Pejnović, 2011:20). It is important to note that the aim of environmental education is not only knowledge i.e. a series of facts that a child needs to learn about the environment, but also the construction of correct attitudes and a positive relation towards the environment (Petrović-Sočo, 1999). Primary education teachers have an extremely important role in making children aware and educating them about the possibilities of preserving nature, that is about the possibilities of maintaining its purity and beauty. Cognitive picture books and illustrated children’s books which talk about different ecological themes can help them with that.

This paper describes picture books of an ecological theme and an analysis of each individual picture book’s function is made. Six picture books have been chosen, and those are: Sunčica upoznaje činčilu (eng. Sunčica meets chinchilla), Brdo na kraju grada (eng. Hill at the end of town), Priroda priča... (eng. Nature talks), Nauči poštivati prirodu uz kravicu Šaricu (eng. Learn to respect nature with Šarica the cow), Zatvori vodu! (eng. Shut the water off!), Zraka trebam, hitno! (eng. I need air, now!).

Furthermore, the notion of a picture book is described, the most important differences between a picture book and an illustrated book have been given, and the functions of a picture book have been approached as well. The differences between the notions of ecology, environment protection, and nature protection are analysed, while the issue of influence of man on the environment is brought up as well.

**Picture book**

Crnković and Težak (2002) in *Povijest hrvatske dječje književnosti* (eng. *The History of Croatian Children’s Literature*) state that a picture book is a children’s book *par excellence* and that it is also the first book a child sees. According to Štefančić (2000), a picture book is, simplified, a book of pictures or a name usually used to name a book with pictures intended for children. Furthermore, Branka Hlevnjak (2000) in her paper *Kakva je to knjiga slikovnica?* (eng. *What kind of a book is a picture book?)* states that a picture book is a collection of small pictures called miniatures or illustrations and that it was precisely the illustrations which determine the picture book and give it character. Nodelman
(1989, according to Batarelo Kokić, 2015) says that picture books are primarily intended for little children and that they transfer information or tell a story through pictures combined with a little or no text, where the pictures and text in the picture books transfer information in a different way than would be the case when they are used in other conditions.

Picture books are characterized by their two-dimensional nature (graphic and verbal) i.e. three-dimensional one (tactile) (Hameršak and Zima, 2015). As far as the two-dimensional nature goes, Hameršak and Zima (2015) state that there is an interaction of a textual and graphic level in picture books i.e. the picture and the story. Furthermore, Javor (2000) states that, in a picture book, the sense of the story is completed and enriched by illustration. Even though illustrations complete and enrich the story they go along with, an illustration can also be “a story for itself” (Jerabek, 2016) i.e. a story in a picture book can be told solely with illustrations or pictures (Javor, 2000). Hlevnjak (2000) explains that a picture has an advantage over words because it is read faster and easier i.e. a picture is seen as a whole symbol and, that way, causes a chain of notions in a reader-viewer more immediately. That is one of the reasons why picture books are beloved with children (Hlevnjak, 2000). Pictures in a picture book influence the acquiring of information about colours, sizes, harmony, but also about art (Šišnović, 2011). Šišnović (2011) highlights that words in a picture book are an encouragement and a basis for the construction of a child’s vocabulary, learning how to speak and develop a sense for language. Furthermore, the same author states that the first notions in picture books are actually the first written pieces of information about the world surrounding the child and about the child itself and they are the basis and encouragement for intellectual development. Hlevnjak (2000: 8) explains the tactile dimension of the picture book the following way: “The holes in cardboard pages through which little fingers can feel the content of the book, its pages, or the cut-out forms of a foot in the picture book talking about little feet, or about a boat, body organs etc. have their tactile and space-image role.”

Due to a combination of a graphic and literary expression, Crnković and Težak (2002) state that a picture book is not a pure literary type. This points to the fact that, in a picture book, apart from the writer, the role of an illustrator is inseparable or that it is unimaginable without him. The illustrator, using his skill, transforms the given text into a specific “print” on paper. This means that an illustrator enriches, completes and graphically shapes the spoken or written word (Jerabek, 2016). It can be said that a picture book is “an artistic expression...
of the author, the graphic artist illustrator, and the illustration is a peculiar graphic discipline.” (Javor, 2000: 5)

The relationship between picture and text actually determines for who the book is intended. The picture book in which there are pictures without text is intended for the youngest i.e. the children who do not know how to read. In those picture books the pictures are simple, clear, of clear surfaces and colours. As the amount of text grows, so do the illustrations become more complex and they attempt to present the text with an image. For older readers, an illustration may be more demanding, of more complex structure and content and it all depends on the artist i.e. illustrator and their imagination. (Jerabek, 2016)

Picture books are, in most cases, short and they encompass different topics (Crnković and Težak, 2002). Batinić and Majhut (2000) in their paper Počeci slikovnice u Hrvatskoj (eng. The beginnings of the picture book in Croatia) state that the most frequent theme of picture books is the children’s world (parties, everyday life). Also, Batinić and Majhut (2000) state that only a fifth of picture books covers fairy tales, 15% is made up by animal motives, 10% by transport vehicles, and that other themes cover fantasy, sports, ABC picture books etc. Crnković and Težak (2002) state that a picture book, according to its sensation and intent, can be artistic or instructive. The same authors explain that children will, by way of instructive or informative picture books, meet the environment, the animal and plant world, different human activities etc. Also, the same authors explain that an artistic picture book strives towards the sensation of the world i.e. setting up an internal relationship between the reader-viewer and the world.

Martinović and Stričević (2012, according to Batarelo Kokić, 2015) state that a picture book is the first meeting of a child with literature and the written word in general and it is realized in childhood and it is, therefore, necessary to take care of the quality of a picture book. For the creation of quality picture books, the cooperation between the author and illustrator is of the utmost importance (Ćudina-Obradović, 2007, according to Šišnović, 2011). Ćudina-Obradović (2007, according to Šišnović, 2011) states that quality picture books are recognized by a rich and imaginative graphic content which opens the door to a new world for a child, and a good and beautiful language which gives a clear message. A good picture book is interesting in content, literarily valuable and attractive and gives a special aesthetic-cognitive experience to the read-viewer with its graphic shape (Javor, 2000). In a quality picture book, the text and image harmoniously complete each other i.e. they do not compete (Jerabek, 2016). Given that a picture book enters the child’s life early, its creators (authors,
pedagogists, graphic and technical editors) should weave the best of their creation or work into it. (Šišnović, 2011)

A picture book most frequently appears in school in Croatian Language classes i.e. in the subject matter of the literature and reading assignment classes. This is most often in the first and second grade of primary school when the syllabus foresees reading and story interpretation, especially fairy tale. In the Croatian Language class, a picture book is frequently used in the elementary reading and writing assignments, but also in the language expression classes as a template to practice the oral and written use of language. (Visinko, 2000)

Given that picture books are very diverse, it is important to highlight that a picture book should be appropriate for the age of a child it is intended for i.e. it should follow a child’s development on all levels, respecting the individual differences among children (Martinović and Stričević, 2012). Šišnović (2011) highlights that it is important to synchronize the artistic and pedagogical value of a picture book in order for it to positively affect the development of an early age child. Also, when forming or designing picture books for the youngest age, it should be considered that picture books are the first textbooks of a child and that a picture book, therefore, requires pictures which will not burden with redundant details i.e. will not draw a child’s attention to what is unimportant (Hlevnjak, 2000). Šišnović (2011) states that, if a picture book is done right, then it represents a gathering of educational contents and values which should intertwine in order to be a real encouragement i.e. a challenge for the child.

The difference between a picture book and an illustrated book

A picture book is often identified with an illustrated book, but those are two different notions. The terms picture book and illustrated book exist in the German (Bilderbuch – picture book, illustriertes Buch – illustrated book) as well as in English (Picture Book/Illustrated Book) (Visinko, 2000).

Batinić and Majhut (2001) state that in an illustrated book, along with the textual section, there are illustrations which further visually describe what is written (a poem, fairy tale, non-fictional text and such) and that an illustrated, unlike the picture book, has a clearly understandable written content. Narančić Kovač (2011), in her work Slikovnica-višemodalno djelo (eng. Picture book – the work of multiple modalities) specified the difference between an illustrated book and a picture book by stating that, in an illustrated book, the literary text may be separated from the illustrations with it remaining wholesome. Furthermore, the
same author highlights that pictures in a picture book are especially important (unlike the illustrated book where that is not so). It is important to highlight that a picture book cannot only be called a graphic or literary medium because the joint action of image and text is realized in it (Hameršák and Zima, 2015). Authors Crnković and Težak (2002: 16) highlight: “In the picture book, the picture is not an illustration of the text, as it is in the illustrated book.” In an illustrated book, the illustration represents a certain cross-section of the story i.e. the moment which the illustration describes is actually all the information received from the literary text up until that moment (Batinić and Majhut, 2001). Furthermore, Batinić and Majhut (2001) state that the illustration in illustrated book illustrate i.e. shed light on the text they belong to and that they have nothing to shed light on in a picture book because, in that case, the illustrations are the carriers of information. Because of that, as Batinić and Majhut (2001) state, it is wrong to use the term illustration for the graphic component of a picture book. Therefore, it may be concluded that illustrations in an illustrated book serve to enrich the sensation, to specify the action i.e. the written text (Javor, 2000), and in the picture book the illustrations i.e. pictures are the carriers of information. (Batinić, Majhut, 2001)

**Picture book functions**

Čačko (2000), in the paper *Slikovnica, njezine definicije i funkcije* (eng. *Picture book – its definitions and functions*) states that the functions correspond to the needs of a child in education in preschool age, as well as the age of beginner-reader. Čačko (2000) states the following functions of a picture book: information-education, cognitive, sensation, aesthetic and entertaining.

The information-education function

“The child will get an answer to many questions in the picture book which it asks itself or asks the parents, but it can also get an answer to problems which it was unaware of previously, walked around them, but did not notice them.” (Čačko, 2000: 15) The information-education function of a picture book enables the child to access the contents related to its feelings, behaviour, health, but also familial and social relations (Komisija za knjižnične usluge za djecu i mladež HKD, according to Martinović and Stričević, 2012). A child gradually learns that a book is a source of knowledge and that it is good to learn from it, to extract that knowledge. Also, by using the picture book, it is easier to explain to children how to understand relationships, changes, relations among things and phenomena.
A child, by using the picture book, gradually learns how to develop thinking i.e. develops the abilities of analysis, synthesis, comparison, generalization and sometimes even the ability of abstraction. (Čačko, 2000)

- **Cognitive function**

  A picture book enables the child to check its cognitions and knowledge of things, relations, and phenomena. That way, a child gets feedback or security that its cognitions and experiences are correct and its attitudes adequate. (Čačko, 2000)

- **Sensation function**

  The sensation function, as the word implies, is connected to the sensation of a child i.e. “it is comprised out of giving immediate experience to a child.” (Martinović and Stričević, 2012: 53). More accurately, a lot of what a child cannot experience immediately, it can learn through a picture book (Martinović and Stričević, 2012). A picture book, for instance, enables a child from the city to get to know the environment in which previous generations grew and lived (farm animals, a courtyard, forest flowers, fruit plants and other things) (Čačko, 2000). It also enables the child to learn about multiculturalism and multi-ethnicity, the traumatic experience of violence and other social topics (Nikolajeva, 2003, according to Martinović and Stričević, 2012). It is important to highlight that, in picture books, such topics are processed in an interesting, amusing way, unobtrusively and, of course, in metaphors (Martinović and Stričević, 2011). A child would learn of these things only from a book, the TV or something of the sort, and a picture book could, as Čačko (2000: 16) states: “initiate a conversation between a parent and a child, a transfer of knowledge and experience and set up connection between two generations.”

- **Aesthetic function**

  Čačko (2000) states that the aesthetic function plays a big role in a picture book. The aesthetic function of the picture book develops a sense of beauty in a child, acts on its intelligence, but also causes different emotions and sensations and does not leave it cold to the world (Čačko,2000). The same author explains: “A child will very gladly reach for a pretty book. The artistic and graphic side are often the only and most important incentives of interest in a book. The picture book significantly influences the child’s taste.” (Čačko, 2000: 16)
• **Entertaining function**

The entertaining function is no less important than the abovementioned functions of a picture book (Čačko, 2000). It is often the prerequisite for the realization of other functions i.e. in order for the other functions to be fulfilled, the picture book must provide the child with entertainment (Čačko, 2000, according to Martinović and Stričević, 2012). A child must play with the book and have fun with it (Čačko, 2000). More precisely, “the moments spent with the book must not be training which would make the book boring and repulsive for a child. Easiness is the condition for the construction of a proper relationship toward a book.” (Čačko, 2000: 16). Čačko (2000) states that a child actually absorbs knowledge through play which is hidden to it at first glance.

Martinović and Stričević (2012) state that the abovementioned functions intertwine and that they are rarely realized independent of each other.

• **Ecological education**

Ecology is derived from the Greek words oikos (home, habitat) and logos (science) (Šolić, 2015). Garašić (2004) states that ecology, as a primarily biological scientific discipline, began to develop in the 19th century. The notion ecology was first introduced by the German zoologist Ernest Haeckel in his work *Opća morfologija* (eng. *General morphology*) in 1866. There is a great number of possible definitions of ecology, but the first one was given by the aforementioned Ernest Haeckel. He defines ecology as a science on the interactions between organisms and their environments. It should be mentioned that some basic ecological principles were described prior to the introduction of the term ecology, and they were described by Charles Darwin in his life’s work *Porijeklo vrsta* (eng. *The origin of species*) from 1859 (Šolić, 2015). By taking several definitions into consideration, Šolić (2015) states that ecology is the science of the number, distribution, and interaction of organisms, or groups of organisms, in their environment. “The subject of its study are the relations between the units and their living and unliving environment. It researches the connection of different living creatures at a certain habitat, their determination by that habitat and the dependence of the unit, population or relatives on the other members of the living community.” (Garašić, 2004:9). Šolić (2015) states that the term ecology often assumes the topics which it does not deal with. Author Husanović-Pejnović (2011: 16) in the work *Održivi razvoj i izvanučionička nastava u zavičaju* (eng. *Sustainable growth and out-of-classroom teaching in the motherland*) explains: “The terms ecology and nature protection are often mixed because they are
causally connected and some terms which are closely related to that area are also incorrectly defined.”

Ecology is a science, but the question of how to define it is asked (Čatić, 2001). The author Husanović-Pejnović (2011:16) defines ecology in the following way: “Ecology is a science of the system of nature i.e. the interaction of living beings and their environment (today, the accent is put on the actions of man).” Garašić (2004) states that environment protection has a scientific base in ecology, but at the same time includes other areas – from legislation, management and control to the technological and technical solutions. “Environment protection is the sum of measures used to preserve natural resources (primarily water, ground and air) for human needs” (Hrvatski opći leksikon, 1996, according to Čatić, 2001:327). According to Husanović-Pejnović (2011: 16-17) environment protection is: “a set of adequate activities and measures with the goal of preventing danger to the environment, preventing damages and/or pollutions to the environment, reducing and/or removing damages cause to the environment and the return of the environment to the state prior to caused damages.” According to Šolić (2015), ecology must be differentiated from environmental science. These are two different sciences which are closely connected. Ecology studies the interactions between organisms and their environment (living and unliving) and environmental science deals with the influence of man on the environment. Even though man is a part of the ecosystem and there is no special justification to exclude him from it, the division into ecology and environmental science still managed to take on a life of its own in practice (Šolić, 2015). “Finally, under protection of nature one should take the purposeful action of man for the preservation of unchanged or as little as possible changed parts of nature and processes needed for the life of communities, ecosystems and natural landscapes, regardless of their usefulness for man” (Hrvatski opći leksikon, 1996, according to Čatić, 2001: 327). In short, the protection of nature encompasses the activities for the protection of the entire landscape diversity (Husanović-Pejnović, 2011). Topics such as environment pollution, protecting the nature, protecting the environment etc. are connected to ecology. Knowing ecology is a prerequisite for solving problems such as pollution and the influence of that pollution on nature, but also the problem on the way of protecting the environment, organisms etc. (Šolić, 2015)

It is important to conclude that ecology is not a science of the protection of nature, neither is it, as Šolić (2015) states, a science of protecting the environment, pollution or a science on the proper management of natural resources. By
observing the definitions of ecology, one can notice that *environment* is the key word in their defining (Šolić, 2015). Matas (2001, according to Čukelj, 2009) states that the term environment has a complex ecological meaning i.e. it encompasses the natural basis and social modification. The natural basis relates to air, ground, water and the sea, climate and the living world in the totality of its interaction, and social modification relates to the environment created by man (Đikić, Glavač and co., 2001, according to Čukelj, 2009). For all of the above, environment should be taken in a wider sense, not only as the immediate relation of man towards it (De Zan, 1990, according to Dolenec, Pejnović, 2014). “Therefore, education for the environment pertain to, apart from nature, the cultivated component as the consequence of man’s actions in nature.” (Dolenec and Pejnović, 2014:64).

Man, according to his evolutionary development, is a part of the environment in which he lives. Just like all other beings, man is dependent on his environment (Lepičnik Vodopivec, 2007). Lepičnik Vodopivec (2007) highlights that human activity is often focused against nature. Supek (1989, according to Lepičnik Vodopivec, 2007) states that man, with his activities, disrupted the balance between his way of life and nature and, by doing so, jeopardized the environment and the conditions necessary for survival. The technological-industrial development, in time, brought about a lack of balance in nature. It is because of that we are threatened with numerous dangers, some of which are: loss of fertile land, irreparable loss of plant and animal species and biological diversity, limited amounts of water, air pollution, destruction of woods, global climate change and similar (Husanović-Pejnović, 2011). Afrić (2002) states that such an intense “pressure” of man on the environment caused a series of ecological problems. Črnjar (2002, according to Afrić, 2002:579) defines ecological problems as “any change of state in the physical environment which was caused by human activity disrupting that state and has effects which society deems unacceptable by accepted ecological norms (standards)”. Afrić (2002) divides ecological problems into three levels i.e. ecological problems happening on a global, regional, and local scale. Global ecological problems relate to the warming of the atmosphere, reduction of the ozone layer etc. Regional ecological problems relate to the appearance of acid rains, pollution of groundwater, heavy oil spills, and local ecological problems relate to the pollution of water, air, unlicensed waste dumping etc. (Afrić, 2002)

The real answer to ecological problems is the ecological and spiritual revolution, a change in lifestyle which needs to be synchronized with nature
Preserving the environment starts with an individual and the opinion that, as individuals, we are completely powerless in regard to the constant destruction of the environment is wrong (Husanović-Pejnović, 2011). “What the future will look like depends on how much today’s and future generations will be ready to invest effort and knowledge or how much will they be prepared to change their relationship with nature or the environment.” (Dolenec, Pejnović, 2014:64). Because of all this, Devernay and collaborators (2001, according to Dolenec and Pejnović, 2014) highlight that contemporary thoughts on education should focus their attention to the themes of environment and sustainable development with the aim of understanding their legalities, complexity, interactions, and problems. Prior to the very talk of ecological education, it is important to mention more significant conferences which brought about a turn and opened a path to new thoughts on the world in which we live, as well as the introduction of topics about the environment into the content of subjects in school. (Dolenec and Pejnović, 2014)

The First Conference of the United Nations was held in Stockholm in 1972. That year mean the beginning of ecological pedagogy for world education and pedagogy. The aforementioned conference contributed to the fact that the problem of ecological education should begin to be considered in depth i.e. the conference insisted on the development of ecological education (Uzelac, 1992). The conference in Tbilisi was held in 1977. At that conference, environmental education was defined as a constant process in which the individual and society are completely aware of their environment. Therefore, they acquire values, knowledge, experience, skills, and resoluteness, which helps them in individual and group activities focused towards solving current, but also future problems in the environment. (Benedict, 1991, according to Lepičnik Vodopivec, 2007). Bognar (1999) explains that ecological education is gaining more and more meaning not just because of the expenditure of natural resources, but also the pollution of the environment, which results with jeopardizing man’s existence. Goldsmith (1988, according to Jukić, 2011) highlights that the only way to solve the accumulated ecological problems is actually to develop knowledge, awareness, values, and new humane relations between people i.e. ecological education. Uzelac and Starčević (1999) in their work Djeca i okoliš (eng. Children and the environment) state that education for the environment systematically begins (or should begin) when a child starts going to school. They also highlight that the meeting of a child with nature begins even sooner, in the family and in kindergarten. It is precisely the social factors (family, kindergarten, school,
peers etc.) which are considered the most important factors influencing the ecological education of pupils (Kundačina, 1998, according to Milešević, 2013). School, with its organization i.e. programs and contents, is key in developing ecological awareness and culture of students. The aforementioned points to the fact that the best syllabi and textbooks must be found and that teachers in schools need to be trained with the aim of developing ecological awareness and education from the earliest ages (Milešević, 2013). The sense in ecological education is that students will, with their way of life and activity, preserve nature and help discover pollution and prevent it, but also that they will, in the future, as grown members of society, they will take care of nature for future generations (Bognar, 1999). Therefore, “The basic aim of ecological education is developing an ecologically healthy and proper behaviour which the children will acquire in childhood and transfer into mature age.” (Čudina-Obradović and Težak, 1995, according to Husanović-Pejnović, 2011:20) Uzelac (1990) states that a positive attitude towards the environment can be created only as a result of ecological knowledge, habits, skills and abilities. Therefore, the aim of ecological education is not only knowledge i.e. a series of facts that a child must learn about the environment, but also in the construction of correct attitudes and a positive relationship with the environment (Petrović-Sočo, 1999). Lepičnik Vodopivec (2007) states that education for the environment can give children the following possibilities: adopting skills and knowledge needed for the protection of the environment, studying and interpreting the environment from different angles and active contribution to solving ecological problems and conflicts.

When discussing ecological upbringing, it is an undisputable fact that ecological education should also be discussed because they are connected. “Ecological education is the acquiring of a fund of scientific cognitions and legalities from the field of ecology. Education for the environment, with elementary ecological education, assumes also getting to know the principles and means to protect the environment and developing positive attitudes and behaviours in relation to nature and the entire environment.” (Garašić, 2004:9) “The immediate aim of education for the environment is the acquisition of adequate knowledge, skills and habits, developing attitudes and enabling for responsible decision making.” (Garašić, 2004: 10). The purpose of education is not only developing cognitive, but also emotional moments because with cognitive and emotional reactions, man reaches the cognition on the value of the environment and nature, which is a good assumption for his later responsible behaviour (Čifrić, 1996, according to Husanović-Pejnović, 2011). Education for the environment should not be
interpreted as some superstructure built on education, but as a part of education necessary for the contemporary man (Milešević, 2013). Garašić (2004) states that the strategy of enforcing education for the environment is shortly defined in the formulation: **head-heart-hands**. The same author clarifies that it is necessary to know the facts and to understand the phenomena and relations in the world which surrounds us (head=reason). “However, only knowledge without emotion is inadequate to shape attitudes from which positive behaviour arises in regard to the environment, and so positive emotions (the heart) should be encouraged and developed. The benefit to the environment and man within it is only possible if the developed positive relationship comes alive through action (hands=activity)” (Garašić, 2004:10). In the educational process, there are four equally valuable components which need to be realized, and those are: theory, experience, evaluation, and activity. (Garašić, 2004)

Garašić (2004) explains the aforementioned components the following way:

1. **Theory** – gives answers to questions on basic information, facts, and concepts important for the environment and sustainable development.

2. **Experience** – “the best teacher”, enables deeper understanding and permanent adoption of contents. Also enables the development of sensations which leave a more permanent mark in memory than theory. Experience also assumes the application of knowledge in problem solving.

3. **Evaluation** – in this context it means making your own opinions and comparing them with those of other people (especially the members of your own group). Group discussion enables the strengthening of confidence, developing your own value system and enables for responsible decision making.

4. **Activity** – represents the highest degree of applying your own knowledge, skills, taking sides. It also enables self-confirmation and is an important indicator for necessary corrections.

According to Garašić (2004), in our school practice the most frequent and best realized is the theory component. The same author clarifies: “The importance of experience learning and practical application of knowledge is known to us i.e. activity. It is questionable how much are the components of experience and activity, in the midst of various objective and subjective reasons as well as difficulties arising from everyday school life, actually applied. As far as
evaluation goes, we can say that it is a relatively new didactic term so, in a school environment with a traditional pedagogical inheritance, the importance of this component is still not recognized.” (Garašić, 2004: 11)

Ecological awareness appears along with the industrial development i.e. the attempt to harmonize industrial development with the abilities of the environment. It is important to highlight that in the 1960s ecological awareness was almost non-existent i.e. the ecological problems which resulted with an ecological crisis at the end of the 20th century actually encouraged its development (Afrić, 2002). Husanović-Pejnović (2011) states that scientific and technological advancement by no way means the advancement of ecological awareness as well and that this progress even resulted with the awareness of man being all-powerful and his victory over natural phenomena. Also, Husanović-Pejnović (2011) explains that it is people who are destroying the environment, but are also working to preserve it and that is why it is necessary that young people be made aware of the environment and included in the preservation of that environment so that its permanent quality should be kept and maintained. “Ecological awareness or ecological consciousness in school is often met with terms: love for nature, ecological education, ecological literacy, ecological creativity.” (Husanović-Pejnović, 2011:20). The perception of ecological problems by students, and wider, is considered to be the origin of the development of ecological awareness (Dolenec and Pejnović, 2014). “Ecological awareness is a spiritual dimension of ecological culture and encompasses acquired knowledge and habits, adopted values, attitudes and beliefs, acceptance of norms on what is healthy and good in a natural and social environment, and what is not.” (Šušnjić, 1998, according to Milešević, 2013:187)

A whole series of factors influences the forming of ecological awareness, and some of them are knowledge, education, practical activities for removing unfavourable ecological situations etc. (Milešević, 2013). Education for the environment can influence the development of ecological awareness of the individual in a positive way during the entire lifetime (Uzelac 2002, according to Husanović-Pejnović, 2011). According to Husanović-Pejnović (2011), the purpose of education for the environment is to create an ecologically aware and conscientious individual who actively manifests his attitudes. Also, the same author states that ecological awareness is a developmental process and that it is never too late for ecological education. “The basic elements of ecological awareness are ecological knowledge, evaluating the ecological situation, and ecological behaviour.” (Milešević, 2013:187). Milešević (2013) explains the
elements of ecological awareness the following way: ecological knowledge is the basic element of ecological awareness. It is knowledge about the limited nature of natural resources and the need to set up new value systems between natural and social systems. It also includes the knowledge on causes and consequences of disrupting ecological balance, but also the possibilities of acting on them, as well as the knowledge on the need to introduce a new global strategy of social development etc. Students acquire the basic knowledge on natural processes which ensure the consistency of nature in the framework of the biosphere in schools, the contradictions between nature and society, the humanization of the living habitat, but also the possibilities of protecting that habitat.

Evaluation of the ecological situation is the second element of ecological awareness. The ability to evaluate the ecological situation depends on knowledge, experience and cognitive abilities. There is always non-ecological opinions, understandings, and behaviours in our midst, which negatively affects the pupils. It is precisely why they should be trained to evaluate the actions of others towards their environment, but also to understand and apply the demands of an ecologically responsible behaviour towards all the elements of the environment. Ecological behaviour is the third important element of ecological awareness. Ecological awareness is not only the knowledge of an individual and a group on ecological problems, but also the behaviour in specific conditions or situations. It is important to highlight that ecological behaviour is also conditioned by the personality traits. Husanović-Pejnović (2011) highlights that in Croatia (as a country in transition) the competences of material wealth, consumer mentality, intolerance, and insensitiveness are still prevalent. Aware and educated people oppose those “values” with positive ones, such as long-term care for the environment, saving money, solidarity with plants and animals, or the other “me”. Also, Husanović-Pejnović (2011:21) states: “The new ecological culture calls for a renewal of awareness that it is more valuable to “be” than to “have”!

**Literary art and ecology**

Uzelac highlights the importance of experiencing lingual and literary contents in cooperation with the ecological ones in his works (1993,1996,1999) (Visinko, 1999). Visinko (1999) states that for the development of ecological awareness, but also some other rich educational orientation, it is important to also do literature “because it carries in it the lines of our needs, interests and wants transformed into a sophisticated artistic attire which fulfils us and transforms us”
(Visinko, 1999: 51-52). “The highest level of connection between literary art and ecology is the one on which the definition of classic European notion of ecology is actualized: 1) the totality of cognitions and activities on the coexistence of all living things in nature, on their actions on nature and nature on them, about the protection of nature and 2) study of the influence of the environment on man’s health and quality of life” (Anić and Goldstein, 1999, according to Visinko, 1999: 51) or as friar Božo Vulek wrote it down, “ecology is education for life” (Visinko, 1999: 51). The understanding of the essence of literary art in the life of man is at the centre of attention here. Therefore, at the centre of attention is the sensation, the expression of impressions, reading of poetic text, its descriptions, dialogues, compassion with characters, expressing feelings, recognizing the simplicity of the relationship between nature and man. That is the highest level of connection between literary art and education because the recipient goes through and understands the various relationships and touches between beings which appear, in the world of literary art, as characters. (Visinko, 1999)

When talking about connecting literary art and ecological education, Visinko (1999) states three levels of connecting: lowest, higher and highest level, which was also previously mentioned.

At the lowest level, the cognitive type of the picture book and illustrated book appear (Visinko, 1999). The portion of the poetic is the smallest at this level (Visinko, 1999) i.e. the portion of the cognitive is the greatest. “In children’s literature in Croatia in the last 10 years, there has been a notable appearance of ecological themes, especially in narrative prose – stories and novels. The aforementioned texts deal in ecological themes quite a bit, but they are of artistic nature” (Visinko, 1999: 50). Visinko (1999) explains that they set a higher level of connection between literature and ecology. Therefore, at that level, the literary-artistic texts with ecological themes are observed. Visinko (1999: 49) explains the highest level the following way: “The appearance of diverse literary art as one of the elements of an ecologically aware consciousness represents the highest level of the relationship between literature and ecology in the widest meaning of the term.”

**The cognitive type of picture book for the children of early school age**

As was already mentioned, the lowest level of inclusion of literary art into the process of ecological education is the one on which the portion of the artistic i.e. poetic is the smallest. Therefore, at the lowest level, the picture books and
illustrated children’s books appear which process ecological themes from a more cognitive and less, or not at all, from a poetic standpoint. That is why they are also called the cognitive type of picture books or illustrated books for children. (Visinko, 1999)

Cognitive and poetic picture books belong to the area of children’s literature (Visinko, 1999). Cognitive picture books, as the word implies, give cognitions from life and nature, introduce the child to domestic and wild animals, the environment they live in etc. Poetic picture books are actually “the opposite” to the cognitive ones because they do not offer knowledge or cognitions, but instead they act on a child’s imagination and taste, as well as the aesthetic (Diklić, Težak and Zalar, 1996). The poetic picture books highlight the experience of pictorial text, which is not the case with cognitive picture books in which that experience will not occur given that the artistic reality is least present in them or it does not exist at all. Of course, there is a possibility for lyrics and a more pictorial description to appear in a picture book of a cognitive type, but that does not guarantee its literary value. That is precisely the reason why a cognitive picture book of an ecological content sets up a connection with the literary art at the lowest level (Visinko, 1999).

The research done on the picture book confirms that sources of a cognitive type are important for education of pre-schoolers as well as primary schoolers. To be more precise, the teachers who were questioned are of the opinion that, by way of cognitive picture books, the students learn easier and adopt a lot of content, more than when classic and well-known textbooks are used. It has also been confirmed that picture books of the cognitive type are more frequent in theory and in practice of ecological education (Visinko, 1999).

**Picture books with an ecological theme**

In this part of the paper we will describe picture books with an ecological theme and analyse the functions of individual picture books. The picture books we will deal with are: *Sunčica upoznaje činčilu*, *Brdo na kraju grada*, *Priroda priča*, *Nauči poštivati prirodu uz kravicu Šaricu*, *Zatvori vodo!* i *Zraka trebam, hitno!* When choosing picture books, it was important that they deal with various ecological themes, and that they are appropriate for children of an early school age. Every picture book is first described and then a table shows an overview of the analysis of functions of an individual picture book. It is known that the functions of picture books are the following: information-education,
cognitive, experience, aesthetic, and entertainment. The entertainment function is not analysed because it is considered that the mentioned picture books satisfy that criterion. When analysing functions, it was important to read the aforementioned books well, to determine their functions and corroborate them with text, but also the illustrations from the books themselves. Therefore, the aim of the paper is to describe the picture books with an ecological theme and to analyse the functions of an individual picture book.

**Sunčica upoznaje činčilu**

The picture book *Sunčica upoznaje činčilu* belongs to the picture books with an ecological theme and it was written by and illustrated by Iva Brčić. The picture book talks about the problem of killing chinchillas and the problem of selling their fur for making profit. At the centre of attention of this picture is a little girl called Sunčica and her curiosity, which was the cause of us finding everything out about chinchillas and the inappropriate relationship of people towards them.

**The analysis of the picture book functions**

Table 1. The analysis of the picture book “Sunčica upoznaje činčilu”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” | QUOTES FROM THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” |
|------------------------|------------------------------------------------------------------|---------------------------------------------------|
| Information-education  | By reading the picture book, the child arrives at the conclusion that it is not right to kill chinchillas, certainly not for profit (to create expensive coats for sale). | “Zar ih tako puno ubijate za samo jedan kaput? Kako možete ubijati ta divna mala stvorenja? -zaplače Sunčica i bijesno izjuri van.”

“Kako je samo mila i živahna! Svakako joj nije mjesto na vješalici. -razmišljala je pospana i umorna Sunčica.” |

1 “Do you kill so many of them for one coat? How can you kill those wonderful little creatures? – Sunčica cried and stormed out.”

2 “Oh how nice and lively it is! She definitely does not belong on a hanger. – a tired and sleepy Sunčica thought.”
### PICTURE BOOK FUNCTION

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” | QUOTES FROM THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” |
|-----------------------|------------------------------------------------------------------------|---------------------------------------------------------|
| Cognitive             | Cognitions on the life of a chinchilla (what is the animal like, its eating habits, the origin of its name). | “Činčila je glodavac i hrani se travom i korijenjem. Nježan je član obitelji: ne treba pažnju, a rado je prima, voli društvo, a ostaje i sama, tiha je, a može se i glasati. Vrlo je pametna i radoznala, nema mirisa, čista je i ne prenosi nikakve bolesti.”³ |
|                      | Cognitive Cognitions on the inappropriate relationship of man towards chinchilla. | “Tako su je nazvali španjolski osvajači. Kad su putovali Južnom Amerikom u planinama Čilea, a zovu se Ande, našli su ih kod indijanskog plemena Činče (Chinche) koji su ih koristili za hranu, a od kože pravili krzno. Zato su ih nazvali činčile i prenijeli kasnije u Europu, gdje se i danas uzgajaju za skupocjene kapute – bunde. U svojoj prirodnoj sredini mogu živjeti i dvadeset godina.”⁴ |
|                      |                                                                 | “Rađaju 5 do 7 mladih dvaput godišnje i kad ih ima dosta, ubijamo ih za skupocjeno krzno.”⁵ |
|                      |                                                                 | “Evo tu ih sušimo, za jednu bundu treba 120 do 150 malih krzna. To je unosan posao.”⁶ |

³ “Chinchilla is a rodent and it feeds on grass and roots. It is a gentle member of the family: it does not need attention and gladly accepts it, loves company and stays alone as well, it’s quiet and it can make sounds. It is very smart and curious, does not smell and does not transfer any disease.”

⁴ “That is how the Spanish conquerors named it. When they travelled South America into the mountains of Chile, which are called the Andes, they found them with an Indian tribe Chinché who used them for food and made fur from their skin. That is why they called them chinchillas and later brought them to Europe where they are grown today for expensive fur coats. They can live up to twenty years in their natural environment.”

⁵ “They give birth to 5 to 7 younglings twice a year and, when there is plenty of them, we kill them for their expensive fur.”

⁶ “This is where we dry them. It takes 120 to 150 little furs for one coat. It is a profitable business.”
| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” | QUOTES FROM THE PICTURE BOOK “SUNČICA UPOZNAJE ČINČILU” |
|-----------------------|-------------------------------------------------------------------|----------------------------------------------------------|
| Experience            | The picture books enables a child to get to know the chinchilla. The illustrations faithfully portray its appearance. | Read more about the chinchilla under the cognitive function. |
| Aesthetic             | The picture book text is of a simple syntactic structure so even the youngest readers can understand it. Warm and natural colours are prevalent in the book and realistic illustrations. | “Činčila, joj kako smiješno ime! - smije se djevojčica.”<sup>7</sup>  
”Mogu li je negdje vidjeti? - upita djevojčica.”<sup>8</sup> |

**Brdo na kraju grada**

The picture book *Brdo na kraju grada* was written by Božo Markota and illustrated by Ida Mati. The picture book talks about the problem of producing a large amount of trash that, due to inappropriate sorting, ends up at a waste dump. Therefore, this picture book highlights the importance of proper waste management in order to reduce the amount of trash as much as possible. Apart from that, the reader learns about the ways of collecting, separating, and processing rejected things i.e. trash when reading the picture book. The main character of this picture book is a boy called Kiko who investigates everything about the waste dump with his class.

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<sup>7</sup> “Chinchilla, oh what a funny name! – the girl laughed.”<br><sup>8</sup> “Can I see it somewhere? – the girl asked.”
### The analysis of the picture book functions

**Table 2.** Analysis of the functions of the picture book “Brdo na kraju grada”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “BRDO NA KRAJU GRADA” | QUOTES FROM THE PICTURE BOOK “BRDO NA KRAJU GRADA” |
|------------------------|---------------------------------------------------------------|----------------------------------------------------|
| Information-education | By using the picture book, the child builds positive relations towards nature. | “Ne želimo smeće, otpad ćemo odvojiti i iskoristiti.”9  
“Moramo štiti prirodu jer nas ona hrani i voli.”10  
“Više cvijeća manje smeća,”11 |
| cognitive              | Cognitions on the waste dump                                | “Spusti li se pogled nešto niže, primjećuje se brdo koje ne može sakriti svoju utrobu. U otvorenom dijelu odlagališta bilo je mnogo smeća.”12 |
|                        | Cognitions on trash and waste.                               | “..otpad se može iskoristiti ako se pravilno odvoji. Kad otpad u vrećici ili kanti izmiješamo, nastaje smeće koje se ne može više iskoristiti.”13 |
|                        | Cognitions on the ways of waste management (separating into correct containers, recycling, producing compost) | “Ja u kvartu odlažem papir u plavi spremnik, staklo u zeleni, plastiku u žuti, metal u sivi, a biootpad u smeđi.”14 |
|                        |                                                               | “Ne Kiko, sve što se odvojeno odloži, reciklira se i ponovno koristi-smirivala ga je učiteljica.”15 |

9 “We do not want trash, we will separate and use waste.”  
10 “We have to protect nature because it feeds us and loves us.”  
11 “More flowers, less garbage.”  
12 “If you look a little lower, you can see a hill which cannot hide its belly. In the open part of the dump, there was a lot of trash.”  
13 “…waste can be used if it is properly separated. When we mix waste in a bag or a can, we create trash which cannot be used anymore.”  
14 “In my neighbourhood, I put the paper into the blue container, glass into the green one, plastic into the yellow one, metal into the grey one, and bio-waste into the brown one.”  
15 “No, Kiko, everything put away separately is recycled and reused – the teacher calmed him down.”
| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “BRDO NA KRAJU GRADA” | QUOTES FROM THE PICTURE BOOK “BRDO NA KRAJU GRADA” |
|-----------------------|---------------------------------------------------------------|------------------------------------------------|
| cognitive             | Cognitions on the inappropriate relationship of man and waste. | “Tu prikupljamo biootpad i proizvodimo koristan kompost. Evo, to je isto što radi i tvoj djed, samo što je ovo veća kompostana u koju se dovozi trava, lišće, uvelo cvijeće, voće, povrće, pa i božićna drvca iz čitavog grada.” |
|                       |                                                               | “Onda ovdje toliko kamiona sa smećem? - pitao je Marko. To je zato što još uvijek nedovoljno odvajamo koristan otpad, a sve što nije razvrstano je ostali otpad ili smeće.” |
|                       |                                                               | “Naravno, da su ljudi odvojeno odložili sve te stvari kao što mi radimo u školi, ne bi bilo ovoliko puno smeća ni golemog odlagališta.” |
| Experience            | The picture book enables a child to get to know a waste dump. | “Ajme, kakvo je ovo brdo? - prva je uzvuknula Marija. To je upravo odlagalište našeg otpada.” |
|                       |                                                               | “Kad su se približili samom glavnom ulazu odlagališta, vidjelo se reciklažno dvorište sa spremnicima različitih boja.” |
| Aesthetic             | Realistic illustrations of natural colours.                  |                                               |

16 “This is where we collect biowaste and produce useful compost. Here, it’s the same thing your grandfather does, only this is a larger factory in which you bring in grass, leaves, withered flowers, fruit, vegetables, even Christmas trees from all around town.”

17 “Where do all these garbage trucks come from then? – Marko asked. That is why we still aren’t separating useful waste enough and everything that is not separated is waste or trash.”

18 “Of course, if people separated all the things that we do at school, there wouldn’t be this much trash or a giant waste dump.”

19 “Oh my, what kind of a hill is this? – Marija cried first. This is precisely the dump of our waste.”

20 “When they got closer to the very entrance to the dump, you could see the recycling yard with different coloured containers.”
Priroda priča...

The picture book *Priroda priča...* was written by Josip Kokotović, and illustrated by Roman Markuš. The aforementioned picture book is comprised out of three parts: “Grad bez boja” (eng. *A town without color*), “Sumorna šuma” (eng. *A gloomy forest*) and “Umorno more” (eng. *A tired sea*). These parts complete each other, you can say that each part is a continuation of the previous one. The picture book text is written in verses, and it rhymes.

In general, the picture book talks about the ecological pollution of the planet we live on. When looking by parts, you can say that each part talks about the pollution of one part of Earth. The part “Grad bez boja”, as can be deduced from the title, talks about the problem of pollution in cities. The second part, called “Sumorna šuma”, points to the problem of acid rains and excessive cutting of woods, which brings to their destruction, as well as that of plants and animals living in it. The third part, called “Umorno more”, as the title says, talks about the problem of the pollution of the seas, which is a consequences of oil spills, but also trash dumping by people. Apart from that, this part talks about the disappearance of some plant and animal species due to a larger temperature of the sea, as well as excessive fishing.

The analysis of the picture book functions

*Table 3.* Analysis of the functions of the picture book “Priroda priča...”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “PRIRODA PRIČA...” | QUOTES FROM THE PICTURE BOOK “PRIRODA PRIČA...” |
|-----------------------|-------------------------------------------------------------|--------------------------------------------------|
| Information-education | The picture book affects the development of a child’s appropriate behaviour towards nature. | “Ma što da se desi, sumnje biti neće, na pod više nikad neću bacati smeće!”
|                       |                                                            | 21 “No matter what happens, there will be no doubt, I will never again throw trash out!” |
|                       |                                                            | “Kakvo srce sve to čini toj prekrasnoj rijeci?
Kameno je i ne želi dobro svojoj djecici.”
|                       |                                                            | 22 “What kind of a heart does this to this beautiful river? One of stone that does not want good for its children.” |
PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “PRIRODA PRIČA...” | QUOTES FROM THE PICTURE BOOK “PRIRODA PRIČA...”
--- | --- | ---
Information-education | Cognitions on the ecological pollution of the planet we live on i.e. the ecological pollution of the cities, seas, and woods. | “Bit će bolje, nek ti bude srce puno radosti. Shvatit će i ljudi jednom što su prave vrijednosti, Čisti zrak i puno zdravlja, a ne svijet pun gadosti.”
Cognitive | Cognitions on the inappropriate relationship between man and nature. | “Stari štakor tulum radi kod kanti za smeće, to stvorenje i od mačke naraslo je veće. Ostaci od jabuka, kore od banane, kad čistoća nestane, njemu jutro svane.”

23 “It will be better, let your heart fill with joy. People will one day realize what real values are, clean air and lots of health, not a world filled with muck.”
24 “The old rat made a party by the trash cans, this creature grew larger than even a cat. Apple remains, banana peels, when the impurity is gone, it’s daybreak for him.”
25 “When I felt the stench coming from the sea, I nearly got a fever. Where did the oil, the crude, those ugly stains come from? The old fisherman explains: “Those are wastewaters.”
26 “Even the land itself is filled with poison.’ A frightened woodpecker shouted to me. ‘Yes, yes, our veins are filled with lead, and that is why our tree is rapidly decaying.’”
27 “They can hear the lumberjacks closer and closer, sounding new trouble for this wood. Tell everyone, you tell them, that people are not alone, listen sometimes to the sounds in the darkness.”
| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “PRIRODA PRIČA...” | QUOTES FROM THE PICTURE BOOK “PRIRODA PRIČA...” |
|------------------------|----------------------------------------------------------|--------------------------------------------------|
| Cognitive              |                                                          | “I po pijesku svud otpatci, zar bacaju čak i hranu, bacaju li sve po podu, tako i u svome stanu?”
|                        |                                                          | “Nestale su stare luke, od vjetrova skloništa, na obali sad se grade za tankere pristaništa.” |
| Experience             | This picture book enables a child to get to know an ecologically polluted city and the sea, as well as a murky wood. | Zagadađeni grad “Antene su pticama zamijenile grane, u toj šumi metalnoj gube se i vrane. Čak i šišmiš gubi glavu, a lovac je noćni pa proguta češće čadu, no zalogaj sočni.”
|                        |                                                          | Zagadađeno more “No pobjeći od nemara, zadaća je malo teža, kraj čamca se pojavila jedna naftna mrlja svježa. Galebovi masnih krila, ribe koje jedva dišu, prazne boce bez pisama, takvi ljudi i ne pišu.” |

28 “Even on sand there is waste everywhere, do they even throw away food, do they throw everything away, even in their own apartment?”

29 “Gone are the old harbours, shelters from the wind, now they are building docks for tankers on the shore.”

30 Polluted city “The antennas replaced branches for birds, even the crows get lost in that metal forest. Even the bat loses his head, and he is a night hunter so he more often swallows soot than a juice bite.”

31 Polluted sea “But to run away from neglect is a difficult task, next to the boat a fresh oil stain appears.” “Gulls with greasy wings, fishes which barely breathe, empty bottles with no letters, such people do not write.”
| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “PRIRODA PRIČA...” | QUOTES FROM THE PICTURE BOOK “PRIRODA PRIČA...” |
|-----------------------|---------------------------------------------------------------|--------------------------------------------------|
| Experience            | The picture book text is written in verse, and in simple, child-accessible rhyme. | Zagadena šuma  
“I dok sretan šećem ja po šumskoj stazi, moje oko tek krajičkom, gljive tada spazi. Bolesne su, jadne, klobuci ih bole, nema čistih kiša koje toliko vole. ”Kisele su sinko“, ptica jedna vrišti, ”sva šumska stvorenja ta kiselost tišti.”32 |
| Aesthetic             | The illustrations invite for a reading of this picture book with their looks and colours. | “Gdje su ribe, gdje su žabe, prijatelji stari? Njih tu nema, samo plove odbačene stvari.”33 |

**Naući poštivati prirodu uz kravicu Šaricu**

The picture book *Naući poštivati prirodu uz kravicu Šaricu* was written by Veronica Podesta and illustrated by Monica Pierazzi Mitri. This picture book, using the characters of Šarica the cow and Kiko the goatling, points to correct behaviour in nature.

32 Polluted forest “And as I am walking on the forest track, out of the corner of my eye I noticed mushrooms. They are sick and miserable, their hats are hurting, no clean rains that they love so much. ‘They are acid, son’ a bird is screaming, all the forest creatures are pricked by that acidity.”  
33 Where are the fish, where are the frogs, old friends? They are not here, only castaway things floating.”  
34 “Gulls with greasy wings, fishes which barely breathe, empty bottles with no letters, such people do not write.”
The analysis of the picture book functions

Table 4. Analysis of the functions of the picture book “Nauči poštivati prirodu uz kravicu Šaricu”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “NAUČI POŠTIVATI PRIRODU UZ KRAVICU ŠARICU” | QUOTES FROM THE PICTURE BOOK “NAUČI POŠTIVATI PRIRODU UZ KRAVICU ŠARICU” |
|-----------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Information-education| This picture book contributes to developing the correct nature of a child towards nature.    | “I Šarica je postala dobra i idućeg je dana došla pomoći Kiku oko povrtnjaka. Bila je jako brižna i pazila je da nešto ne pogazi. Čak je donijela i prirodno gnojivo za njegov povrtnjak.”
|                       |                                                                                             | “Šarica: Paaa, moram biti pažljiva i ne gaziti po bilju.”  
|                       |                                                                                             | “Kiko: I čuvati drveće.”  
|                       |                                                                                             | “Šarica: I moram biti pažjiva kod odlaganja smeća.”  
|                       |                                                                                             | “Kiko: I štedjeti vodu.” |
| Cognitive             | Cognitions of life in the village (Šarica the cow, Kiko the goatling, hens, a pond, a garden) | “Na velikoj livadi punoj raznoboјnom cvijeća živi kravica Šarica.”  
|                       |                                                                                             | “Zavirila je preko ograde gdje su živjele koke i iz sveg glasa zamukla.. muuuu..!”  
|                       |                                                                                             | “Zatim je otišla do ribnjaka, gurnula glavu pod vodu i zamukala kako bi pozdravila ribice, a zračni mjehurići su izlazili na površinu vode.” |

35 And Šarica became good and came to help Kiko in the garden the next day. She was very caring and careful not to trample something. She even brought natural fertilizer for his garden.”
36 Šarica: Weell, I have to be careful and not trample the plants.”  “Kiko: And take care of the trees.” “Šarica: And I have to be careful when taking out the trash.” “Kiko: And save water.”
37 “In the big meadow full of colourful flowers, there lives a cow Šarica.”
38 “She peaked over the fence where the hens lived and cried as loud as she could...moooo!”
Cognitive

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “NAUČI POŠTIVATI PRIRODU UZ KRAVICU ŠARICU” | QUOTES FROM THE PICTURE BOOK “NAUČI POŠTIVATI PRIRODU UZ KRAVICU ŠARICU” |
|-----------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Cognitive             | Cognitions about the proper relationship towards nature.                        | “I tako je Šarica došla do kozlića Kika koji je bio jako zaposlen u svom povrtnjaku.”

“See pictures 12, 13 and 14.”

“Ali Šarica ga nije slušala i baš je htjela ureauzati maleno srce u koru drveta. Čim je krenula, nešto ju je ubolo.”

“Vidiš Šarice, možda ne bi trebala raditi drugima ono što ne želiš da oni tebi rade.”

“Iz svog džepa je izvukla staru prljavu čarapu i htjela ju je odložiti u kantu za kompost, ali Kiko ju je zaustavio.”

“Nemoj...kompost je važan za kokoši. Želiš li da umjesto glista izvlače tvoju staru čarapu? Moraš biti pažljiva kod razvrstavanja otpada. Ne smiješ trovati druge.”

“She opened the faucet really hard, drank water and wiped her mouth without noticing the

39 “And that is how Šarica came to Kiko the goatling who was very busy in his garden.”
40 “But Šarica didn’t listen to him and really wanted to carve a little heart into the tree bark. As soon as she started, something stung her.” “See, Šarica, maybe you should not do to others what you don’t want them to do to you.”
41 She pulled out an old, dirty sock from her pocket and wanted to put it in the compost bin, but Kiko stopped her.” “Don’t...compost is important for the hens. Do you want them to pull out your dirty sock instead of the worms? You need to be careful when you’re sorting waste. You mustn’t poison others.”
42 “She opened the faucet really hard, drank water and wiped her mouth without noticing the
Zatvori vodu!

The picture book *Zatvori vodu!* was written by Marica Milčec, and illustrated by Dario Kukić. This picture book is made up of five parts, and those are: the plot of the picture book, discover, explore, etiquette, and a pop quiz. In the first part, through the character of the boy Dado, the problem of excessive water spending is discussed, as well as its importance for the living world. In the second part of this picture book, the basic facts about water are brought out (what it looks like, why it is important, what can it be like, which planets have water, where it is, in what shapes does it appear, how much water should we drink per day, why we need it) and the ecological problems related to water are spoken about. In the third part of the book, under the title explore, three experiments are listed. By performing the first two experiments, the children can see for themselves the presence of water in the human body and an apple. By performing the third experiment, the children can find out how polluted water affects the plant. In the fourth part of this picture book, titled etiquette, examples of good behaviour related to water are described. In the fifth part of the picture book there is a pop quiz using which children can check the basic knowledge acquired with this picture book.

 puddle spreading around her legs. ““Kiko laughed and advised her to close the faucet in the future if she doesn’t want to fall into mud.”
The analysis of the picture book functions

Table 5. Analysis of the functions of the picture book “Zatvori vodu!”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “ZATVORI VODU!” | QUOTES FROM THE PICTURE BOOK “ZATVORI VODU!” |
|-----------------------|----------------------------------------------------------|------------------------------------------------|
| Information-education | This picture book contributes to the development of a child’s proper relationship with water. | “Dotrči mama, ugleda ono ZATVORI VODU i hitro zavrne slavinu. Mlaz ZATVORI VODU zaustavi se kao odrezan i nesta kroz rupice odvoda. Mama učini isto i sa slavinom kade, a zatim malo, sasvim malo odvrne vodu na umivaoniku. Zažubori veseli mlaz. Tanak, tanak, tanušan! Ali sasvim dovoljan za umivanje.” |
|                       |                                                          | “Nagovori tatu da u vodokotlić postavi plastičnu bocu napunjenu vodom kako bi se smanjila količina vode za ispiranje zahodske školjke.” |
|                       |                                                          | Read the rest of the examples of a proper handling of water under the cognitive function (related to etiquette). |
| Cognitive             | Cognitions on water (what it looks like, why it is important, what can it be like, which planets have water, where can you find it, in what shapes does it appear, how much water we should drink per day, why we need it). | “Voda je prozirna tekućina bez boje, mirisa i okusa.” |
|                       |                                                          | “Čovjek i ostala bića ne mogu bez vode. Sve živo na Zemlji sastoji se od vode.” |
|                       |                                                          | Voda može biti: “plitka, duboka, slana, bočata, slatka, izvorska, morska, barska, čista, onečišćena” i sl. |

43 “The mom came running, saw the SHUT THE WATER OFF and rushed to turn the faucet off. The SHUT THE WATER OFF jet cut off and disappeared through the drain holes, The mom did the same with the faucet in the bathtub and then turned the faucet a little, just barely, at the wash basin. A happy jet rippled. Thin, thin, tiny! But just enough to wash your face.”
44 “Talk dad into setting up a plastic bottle filled with water into the toilet in order to reduce the amount of water for flushing.”
45 “Water is a transparent liquid, without colour, smell, or taste.”
46 “Man and the rest of the creatures cannot be without water.” “Everything alive on Earth is made up of water.”
47 “Water can be: shallow, deep, salty, brackish, sweet, source, see, bar, pure, dirty etc.”
## Picture Books for Children of Early School Age for the Purpose of Environmental Education

### Examples of Functions of the Picture Book “Zatvori Vodu!”

| Picture Book Function | Examples of Functions of the Picture Book “Zatvori Vodu!” |
|-----------------------|----------------------------------------------------------|
| *Cognitions on the importance of water for the living world (fishes, plants, bugs)* | “Naš planet zemlja, najvećim je dijelom voda, na ostalim planetima nema vode.”  
“Voda se na Zemlji nalazi u: oceanima, morima, jezerima, rijekama, potocima, močvarama i barama.”  
Voda se pojavljuje kao: “kiša, snijeg, magla i mraz.”  
“Za zdravlje ti je svakoga dana potrebno 10 čaša vode.”  
Voda nam je potrebna za: “piće, kuhanje, plivanje, pranje.”  
“Voda mi za život treba, pokušaj negdje drugdje! -odbrusi mu ribica Bibica.”  
“Voda mi treba za cvijeće, pokušaj negdje drugdje!-hladnokrvno mu reče kantica zalijevalica.”  
“Rosica je za bubice, pokušaj negdje drugdje! -reče mu crveni tulipan.”  
“Pitke je vode na Zemlji sve manje.”  
“Ljudi onečišćuju vodu.”  
“Ljudi nemilice troše vodu.”  
“Zbog onečišćenih voda umiru mnoge vrste biljaka i životinja.” |

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48 “Our planet Earth is made up mostly of water and there is no water on the rest of the planets.”
49 “Water on Earth is found in: oceans, seas, lakes, rivers, streams, swamps and ponds.”
50 “Water appears as: rain, snow, fog, and frost.”
51 “You need 10 glasses of water every day to be healthy.”
52 “We need water for: drinking, cooking, swimming, washing.”
53 “I need water to live so try somewhere else! – Bibica the fish talked back to him.”
54 “I need water for flowers, try somewhere else – the pouring bucket told him in cold blood.”
55 “The dew is for bugs, try somewhere else! – the red tulip told him.”


| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “ZATVORI VODU!” | QUOTES FROM THE PICTURE BOOK “ZATVORI VODU!” |
|-----------------------|----------------------------------------------------------|---------------------------------------------|
| Cognitive             | Cognitions on proper behaviour related to water (etiquette). | “Zatvori vodu dok pereš ruke ili četkaš zube.” |
|                       |                                                          | “Tuširaj se umjesto da se kupaš.” |
|                       |                                                          | “Upozori odrasle kad primijetиш kapanje vode iz slavine ili vodokotlića.” |
|                       |                                                          | “Smeće s plaže stavi u koš kako ne bi završilo u moru ili naškodilo njegovim stanovnicima.” |
|                       |                                                          | “Biljkama za piće i tuširanje draža je kišnica nego voda iz vodovoda, stoga ih iznesi kada pada kiša.” |
| Experience            | The picture book enables the child to learn about the presence of water in the human body and an apple through practical experience. | |
| Aesthetic             | The illustrations, with their looks and colours, invite the reading of this picture book. | |

**Zraka trebam, hitno!**

The picture book *Zraka trebam, hitno!* was written by Marica Milčec and illustrated by Dario Kukić. It is comprised out of five parts: the plot of the book, discover, explore, etiquette, and a pop quiz. In the first part, through the character of the boy Dado, the problem of air pollution is discussed. In the second part, the basic facts about air and oxygen are brought out (what is air, where is it, what is made up of, who needs oxygen, who produces oxygen) and the ecological problems related to air are talked about. In the thirds part of the picture book, under the title explore, four experiments are listed. By performing the first and

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56 “There is less and less drinking water on Earth. People are polluting the water. People are wasting water recklessly. Many species of plants and animals are dying due to polluted waters. Shut the water off while you’re washing your hands or brushing your teeth. Shower instead of taking a bath. Warn the grown-ups when you notice water dripping from a faucet or a toilet. Put the trash from the beach into the can so that it doesn’t end up in the sea or harm its inhabitants. The plants prefer rainwater to faucet water for drinking and showering, so take them out when it’s raining.”
the fourth experiment, the children can find out how air is being polluted, and by performing the second and thirds, they can find out how it moves. In the fourth part of the picture book, under the title etiquette, the examples of good behaviour connected to air are described. In the fifth part there is a pop quiz using which the children can check the basic knowledge acquired in this picture book.

The analysis of the picture book functions

Table 6. Analysis of the functions of the picture book “Zraka trebam, hitno!”

| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “ZRAKA TREBAM, HITNO!” | QUOTES FROM THE PICTURE BOOK “ZRAKA TREBAM, HITNO!” |
|-----------------------|---------------------------------------------------------------|--------------------------------------------------|
| Information-education | This picture book affects the awareness of a child about the importance of maintaining clean air for the life of all living creatures. | “Sva živa bića dišu, što znači da im je svima za disanje potreban kisik.”57  
“Kisik je sastavni dio zraka. Potreban je za disanje.”58  
“Zrak je bio čist, svjež i mirisan. To je dobro mjesto za tratinčicu!-uzvuknuo je Dado. Tu ćemo je posaditi! U čistoj prirodi gdje joj je i mjesto.”59 |
| Cognitive             | Cognitions about air and oxygen (what is air, where it is found, what is it made of, who needs oxygen, who produces oxygen). | “Zrak je mješavina nevidljivih plinova koji obavijaju zemlju.”60  
“Zračni omotač oko Zemlje zove se atmosfera.”61  
“Iznad atmosfere nalazi se ozonski omotač. On nas štiti od štetnih sunčevih zračenja.”62  
“Hladnjaci, klimatizacijski uređaji i sprejevi, veliki su neprijatelji ozonskog omotača.”63 |

57 “All living things breathe, which means that they all need oxygen to breathe.”  
58 “Oxygen is a part of air. It is necessary for breathing.”  
59 “The air was clean, fresh and fragrant. That is a good place for a daisy! – Dado yelled. This is where we will plant it. In clean nature, where it belongs.”  
60 “Air is a mixture of invisible gases which envelop the Earth.”  
61 “The air envelope around the Earth is called atmosphere.”  
62 “Above the atmosphere there is the ozone layer. It protects us from harmful radiations of the Sun.”  
63 “Refrigerators, air conditioning devices and spray cans are great enemies of the ozone layer.”
**PICTURE BOOK FUNCTION** | **EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “ZRAKA TREVAM, HITNO!”** | **QUOTES FROM THE PICTURE BOOK “ZRAKA TREVAM, HITNO!”**
---|---|---
Cognitive | Cognitions about ecological problems related to air. | “Zrak se nalazi svuda oko nas.”
| | | “Zrak u pokretu zovemo vjetar.”
| | | “Kisik je sastavni dio zraka. Kisik je plin bez boje, okusa i mirisa. Potreban je za disanje.”
| | | “Sva živa bića dišu, što znači da im je svima za disanje potreban kisik.”
| | | “Biljke disanjem proizvode kisik. Zato su parkovi i šume pluća gradova.”
| | | “Makni me odavde, mučno mi je!-rekla je.”
| | | “I meni se smuči od mirisa parfema, laka za kosu i isparavanja raznih sredstava za čišćenje koje mama nemilice troši.”
| | | “Nađi mi drugo mjesto. Patim zbog onečišćenog zraka što ulazi kroz prozor!-rekla je tratinčica.”
| | | “Smeta ti neugodan miris što odlazi iz golemog dimnjaka. Bilo bi dobro da je tvornica negdje drugdje.”

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64 “Air is all around us. We call moving air the wind.”
65 “Oxygen is a part of air. Oxygen is a gas without colour, taste or smell. It is necessary for breathing.”
66 “All living things breathe air, which means that they all need oxygen to breathe.”
67 “Plants produce oxygen by breathing. That is why the parks and the forests are the lungs of a city.”
68 “Get me out of here, I’m sick! – she said. “I also get sick from the smell of perfume, hairspray and evaporation of various cleaning agents that mom spends mercilessly.”
| PICTURE BOOK FUNCTION | EXAMPLES OF FUNCTIONS OF THE PICTURE BOOK “ZRAKA TREBAM, HITNO!” | QUOTES FROM THE PICTURE BOOK “ZRAKA TREBAM, HITNO!” |
|------------------------|-------------------------------------------------------------|-------------------------------------------------|
| Cognitive              | Cognitions about the ways of keeping clean air.             | “Da, da! No smetaju mi i otrovni plinovi što se oslobađaju iz gustog prometa na ulici. Ljudi bi se trebali manje voziti automobilima!-iznemoglim glasom reče tratinčica.”69  |
|                        |                                                             | “U zraku je sve više štetnih plinova koji onečišćuju zrak.” |
|                        |                                                             | “Ljudi ne žele trpjeti vrućinu i zbog toga je na Zemlji sve više hlađnjaka i klimatizacijskih uređaja koji uništavaju ozonski omotač.” |
|                        |                                                             | “Ljudi se previše voze automobilima koji ispuštaju otrovne plinove.” |
|                        |                                                             | “Tvornice i promet krivi su za smog iznad gradova.” |
|                        |                                                             | “Ljudi nemilice sijeku šume koje proizvode kisik.”70 |

69 “Find me another place. I’m suffering because of polluted air coming in through the window! – said the daisy.” “You are bothered by the uncomfortable smell coming from the giant chimney. It would be good if the factory was somewhere else.” “Yes, yes! But I am also bothered by the poisonous gases from the heavy traffic in the street. People should drive their cars less! – said the daisy in a tired voice.”

70 “There are more and more poisonous gases in the air which are polluting it. People don’t want to suffer the heat and so there are more and more refrigerators and air conditioning devices on Earth which are destroying the ozone layer. People drive their cars too much and they emit poisonous gases. The factories and traffic are guilty for the smog above the cities. People are mercilessly cutting down the forests producing the oxygen.”
Conclusion

The purpose of education for the environment is to create an ecologically aware and conscientious individual who actively manifests his views (Husanović- Pejnović). A school, with its organization or programs and contents, is key in developing ecological awareness and culture of students. The aforementioned points to the fact that the best syllabi and best textbooks need to be found and that teachers in schools need to be trained with the purpose of developing ecological awareness and education from the earliest age (Milešević, 2013). Primary education teachers have an extremely important role in developing ecological awareness and culture of students, and picture books with an ecological theme can greatly help them in doing so.

The aim of this paper was to describe picture books with an ecological theme and to perform an analysis of the functions of an individual picture book. Six picture books have been chosen: Sunčica upoznaje činčilu, Brdo na kraju grada, Priroda priča..., Nauči poštivati prirodu uz kravicu Šaricu, Zatvori vodu!, Zraka trebam, hitno! The chosen picture books talk about various ecological themes and are appropriate for children of an early school age. The appearance of diverse literary art as one of the elements of an ecologically developed awareness

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71 “Talk your parents into driving a bicycle whenever you can instead of an automobile. Buy a live Christmas tree for Christmas which you can plant in your garden or elsewhere after the holidays. That is how you will keep it for next Christmas. If you are cold, put on some clothes. Don't turn up the heat. Open the refrigerator only when necessary. Be careful to always close it because it uses a gas which is harmful for the ozone layer to work.”
represents the highest level of a relationship between literature and ecology, in the broadest sense of the term. In children’s literature in Croatia in the last 10 years, there has been a notable appearance of ecological themes, especially in narrative prose. The corpus of children’s literature in Croatia with ecological themes needs to be researched, its role and function in working with children of a preschool age needs to be determined and used to developed ecological awareness in children.

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SLIKOVNICE ZA DJECU MЛАЂE ŠKOLSKЕ DOBI U SVRHU EKOLOŠKOG ODGOJA

Sažetak

Ekološki odgoj dobiva sve više na značenju ne samo zbog trošenja prirodnih izvora nego i zbog zagađivanja okoline. Cilj ekološkog odgoja nije samo znanje odnosno niz činjenica koje dijete treba naučiti o okolišu nego i izgradnja ispravnih stavova i pozitivnog odnosa prema okolišu. Za razvoj ekološke svijesti važno je baviti se i književnošću. Povezivanje književne umjetnosti i ekološkog odgoja i naobrazbe moguće je ostvariti na tri razine: na najnižoj, nešto višoj i najvišoj razini. Na najnižoj razini pojavljuju se slikovnice i ilustrirane dječje knjige koje ekološke teme obrađuju više sa spoznajnog, a manje ili gotovo nikako s poetskoga gledišta. Upravo zbog toga ih se i naziva spoznajnim tipom slikovnica odnosno ilustriranih knjiga za djecu. Cilj ovog rada opisati je slikovnice ekološke tematike, te analizirati funkcije pojedine slikovnice. Odabrano je šest slikovnica, a to su: Sunčica upoznaje činčilu, Brdo na kraju grada, Priroda priča..., Nauči poštivati prirodu uz kravicu Šaricu, Zatvori vodu! i Zraka trebam, hitno!

Ključne riječi: slikovnica, ilustrirana knjiga, ekološki odgoj