

## Developing Children's Environmental Literacy Through Literature: An Analysis of 100 Basic Literary Works

Mehmet Erdoğan\*  
Eyyup Coşkun\*\*  
Muhammet Uşak\*\*\*

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### Abstract

*Problem Statement:* Development of environmental literacy, the ultimate goal of environmental education, should not be bound only to the natural sciences. It can also be developed through art and literature when considering the interdisciplinary nature of environmental education. Literary children's books, for example, can be an effective tool to develop students' environmental literacy. Even though MoNE suggested 100 classics for elementary and secondary education students to develop reading habits and to introduce the national and international classic works, a number of studies focussing on the implications of these classics on the educational process (policy and practice) and individual development of the students is limited. In this regard, the present study is one of the initial attempts to reveal the hidden and/or explicit effects of these classics on students' environmental literacy.

*Purpose of Study:* The purpose of the study was to analyze the components of environmental literacy embedded in the classic works recommended by MoNE for Turkish elementary schools.

*Methods:* For a detailed examination, the researchers randomly selected 10 classics from 63 well-known Turkish classic works for content analysis considering the framework of environmental literacy proposed by Simmons. Content analysis enables the researchers to examine what is or what is not in the selected written or visual document(s). The results

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\* Asist. Prof. Dr. (Corresponding Author) Akdeniz University, Faculty of Education, Antalya, Turkey, mmerdogan@gmail.com

\*\* Assoc. Prof. Dr. Mustafa Kemal University, Faculty of Education, Hatay, Turkey, ecoskun2002@yahoo.com

\*\*\* Asist. Prof. Dr. Zirve University, Faculty of Education, Gaziantep Turkey, musaktr@gmail.com

reported the frequency and percentage of environmental literacy components embedded in the selected works.

*Findings and Results:* The content analysis of these works revealed three types of main components (knowledge, affect and behavior) and several sub-components. Students' awareness of the natural environment and geographical pattern (morning-night and seasons-climate) was mostly emphasized in nearly all of the analyzed works. Students' affect and physical behaviors were relatively less emphasized.

*Conclusions and Recommendations:* In the analyzed classics, environmental pollution, which is one of the main topics and emphases of Environmental Education (EE) was paid very little attention. Considering its interdisciplinary nature, EE should be infused in other subjects (i.e., art and literature) and various classroom activities taking place in humanity classes. In this regard, 100 classics suggested for the elementary and secondary school students can be used as a vehicle. This study was only realized with 10 selected classics out of 63 Turkish classics. Foreign classics were not included in the study. It is suggested to other researchers to conduct broader research with more classic works, including both national and international classics.

*Keywords:* Environmental literacy, content analysis, 100 basic literary works, Turkey

People's intensive activities and careless lifestyles have accelerated the emergence of environmental problems and issues in a global world. Their strong connection to science and technology, without considering their positive or negative influence on the natural environment, has alienated them from the environment. A need has emerged to develop individuals' environmental awareness at first and then affect, skills and action early in life to preserve and protect the natural environment. Several strategies in considering the interdisciplinary nature of environmental education can be utilized to satisfy this need. Using art and literature can, for example, be one of the effective tools (Özdemir, 2006) to raise responsible and environmentally literate individuals.

#### *Environmental Literacy*

It is apparent in the professional Environmental Education (EE) literature that the major outcome of EE is perceived as development of "environmentally literate citizenry." This outcome is either explicitly or implicitly observed in published definitions and frameworks (Schneider, 1977; Hungerford & Volk, 1990; Roth, 1992; Disinger & Roth, 1992), set goals and objectives (Hungerford, Peyton & Wilke, 1980), other reviews of professional literature (Hart, 1981), and collections and reviews of research (Iozzi, 1981; Hines, Hungerford & Tomera, 1986/87; Volk & McBeth, 1997; Rickinson, 2001). The recent and working model of environmental literacy was developed by Simmons (1995) under the North American Association for Environmental Education (NAAEE) Guidelines for the Excellence Project. She synthesized 26 EE frameworks. That working model of environmental literacy (EL)

consisted of seven components: affect, ecological knowledge, socio-economic knowledge, knowledge of environmental issues, skills, additional determinants of environmentally responsible behavior, and environmentally responsible behavior. This framework was later used by Volk and McBeth (1997) in their effort to generate a research-based picture of the status of EL in the U.S. It was also taken as a guiding framework for the national assessment of EL in South Korea (Lee et al., 2003), Israel (Negev, Sagy, Tal, Salzberg & Garb, 2006), the U.S. (McBeth, 2006), and Turkey (Erdoğan, 2009). Although the concept of EL has been investigated in various parts of the world over the past three decades, this concept has only recently started to be studied within the Turkish EE community and literature (Erdoğan, Marcinkowski & Ok, 2007; Erdoğan, Kostova & Marcinkowski, 2009).

#### *Turkish Classics Books*

The international projects in which Turkey was involved (i.e., PIRLS in 2001; PISA in 2003, 2006, and 2009) revealed that Turkish students demonstrated low-level reading skills, and their reading level was observed to be lower than international standards. Turkish students' low-level reading skills and habits were also reported in several other research studies (i.e., Dökmen, 1994; Esgin and Karadağ, 2000; Dilidüzgün, 2004; Odabaş, Odabaş & Polat, 2008).

In the new elementary school Turkish Education curriculum that was introduced in 2005, a constructivist approach and new educational trends have been integrated. Various instructional methods and approaches involving student-centered instruction, active learning, cooperative learning, independent learning, and outdoor education are more emphasized (Güneş, 2007). The new curriculum emphasizes local and global values and the development of student motivation. Furthermore, the curriculum aims at not only expanding students' knowledge and skills but also enabling them to increase their own knowledge (Ministry of National Education - MoNE, 2005, 2006). The curriculum is built on five learning domains: reading, writing, speaking, listening, visual reading and presentation (Coşkun, 2005). However, the new curriculum has been criticised by many scholars (Sever, 2005; Hazır-Bıkmaz, 2006; Gömleksiz, 2007; Epçaçan & Erze, 2008; Metin & Demiryürek, 2009).

The common goal of putting these attainments into the curriculum is to help students attain systematic reading habits. In parallel to the implementation of these attainments, MoNE prepared a list of 100 classics for elementary-school students (5<sup>th</sup> to 8<sup>th</sup> graders) as well as for secondary-school students (9<sup>th</sup> to 12<sup>th</sup> graders) in order for the students to develop reading skills and habits. 100 classic works for 5<sup>th</sup> - 8<sup>th</sup> graders consist of both national (70) and international classics (30) that help students not only achieve the attainments of the Turkish Education curriculum but also develop reading enjoyment and habits.

A committee consisting of a group of famous writers, scientists and educational specialists under the roof of MoNE worked during one year and decided on 100 classic works for Turkish schools. The classics suggested for elementary schools include: 1. Works from Turkish literature (n=63), 2. Garlands like tongue twisters,

enigmas (n=7), and 3. Works from World literature (n=30). Many of these works were criticized by scholars and educational researchers. The scholars (Aslan, 2006; İnce, 2008), with negative opinions in terms of the properties of these classics, believe that these works are not suited to elementary-school students and include inaccuracies in the translation of foreign works. Among other denouncements, it is also criticised that living authors' works are not included in the list of 100 classics.

Following implementation of the new curriculum in schools nationwide, researchers from various fields started to undertake research on the classic works. For example, İçbay, Mısırlı, Erdoğan and Temiz (2006) assessed the values in the selected classic works. The most frequently stated values in the classics were love, honesty, humility, diligence, generosity, respectfulness, wisdom, frankness, goodness, friendship, solidarity, and cooperation. Their study also revealed several cultural- and environmental-related values integrated into these classics. Even though MoNE suggested these classics to elementary schools for student development of reading habits and an introduction to the national and international classic works, the number of studies focusing on the implications of these classics to the educational process and individual development of the students is scarce. In this regard, the present study is one of the initial attempts to reveal the hidden and/or explicit effects of these classics on students' environmental literacy. Aslan (2010) has evaluated the presentation of women in 100 basic literary works in Turkey. She has observed that women were presented mostly negatively, with neutrality coming in a close second. They were presented positively with the least intensity.

The purpose of the study was to analyze child literature books with regard to the main components of environmental literacy. Ten selected classic works suggested by MoNE for elementary school students were content analyzed by considering the main components of EL, environmental knowledge, affect, cognitive skills and environmentally responsible behavior.

## Method

The content-analysis method was utilized for the analysis of the selected works. Content analysis is one of the qualitative inquires that help with the study of the characteristics of written and visual communications (Frankel & Wallen, 2000; Patton, 2002). Content analyses enable the researchers to examine what is or what is not in the selected written or visual document(s).

### *Selected Books*

For the present study, using stratified random sampling, 10 classic books were selected from 63 Turkish classics suggested by Turkish MoNE for elementary schools. First of all, these 63 works were stratified / grouped according to their type [novel (n=25), tale (n=14), story (n=6), poem (n=6), theater (n= 5), essay (n=3), memory (n=3) and good words (n=1)]. Twenty percent of the works from each group was selected for the content analysis.

The group with less than five works was not considered. The name, writer and kind of the selected works are given in Table 1.

Table 1

*Name, Writer and Kind of the Selected Works*

ID	Name	Writer	Kind
1	Ömer'in Çocukluğu	Muallim Naci	Novel
2	Falaka	Ahmet Rasim	Novel
3	Domaniç Dağlarının Yolcusu	Şükufe Nihal Başar	Novel
4	Göl Çocukları	İbrahim Örs	Novel
5	Evvel Zaman İçinde	Eflatun Cem Güney	Tale
6	Dede Korkut Hikâyeleri	Anonymous	Tale
7	Altın Işık	Ziya Gökalp	Tale
8	Yalnız Efe	Ömer Seyfettin	Story
9	Vatan Yahut Silistre	Namık Kemal	Theater
10	Şermin	Tevfik Fikret	Poem

*Analysis of the Selected Books*

Content analysis of the selected classics was undertaken in the following steps: (1) constructing a framework for the content analysis, (2) extracting the relevant information from the selected classics, (3) conducting a reliability analysis, (4) constructing a table comprising emerged codes, and (5) analyzing and interpreting the results.

*Constructing Framework for Content Analysis*

For coding, analysis, and reporting purposes, seven main components of EL, proposed by Simmons (1995) and later utilized by Volk and McBeth (1997), were grouped into four broad categories: Knowledge, Affect, Cognitive Skills and Environmentally Responsible Behavior (ERB). Sub-components of EL including 41 items (Babulski, Gannet, Myers, Peppel & Williams, 1999; Erdoğan, Kostova & Marcinkowski, 2009) were developed as a guiding list based on Simmons' (1995) work for naming the codes and themes that emerged.

*Extracting the Relevant Information from the Selected Classics*

Each of the classics was initially coded regardless of a guiding list refined by Erdoğan et al. (2009). Firstly, each one was read carefully, and then the information pertinent to each subcomponent in the list was coded. Notes based on these codes were recorded in a separate sheet for further analysis. The codes that emerged from the initial analysis of books were grouped into three main categories such as Environmental Knowledge, Affective Dispositions (Affect) and Environmentally Responsible Behavior. No codes regarding issue investigation and problem solving skills emerged.

### *Conducting Reliability Analysis*

For ensuring the trustworthiness of the content analysis and results, the technique of inter-rater reliability was used. First of all, a second author of the paper and an external evaluator who was an expert on coding and the 100 classics, scheduled two sessions together to work on the coding of the selected books. In the first session, the second author described the details of the framework of the study and the components of EL to the second coder. In this session, they worked on the coding of a classic drawn from the population, and they coded the classic together. In the second session, one classic different from those analyzed in the study and the one selected in the first session were randomly selected from the 100 classics and were coded independently by these two coders. Each coder listed the codes emerging from the books and then compared the notes. Nearly all of the codes in both code lists were consistent, and very few differences was observed. Finally, three classics (*Göl Çocukları*, *Evvel Zaman İçinde*, & *Şermin*) were coded independently by the coders. Out of 77, 74 codes were observed to be consistent, and inter-rater reliability between coders was found to be .96.

### *Constructing a Table Comprised of the Emerged Codes*

Three tables were constructed for better organizing and analyzing the codes and information that emerged from the classics. These tables included main components, sub-components (pre-code list) and corresponding codes (see Tables 2, 3 and 4).

### *Analyzing and Interpreting the Results*

The codes that emerged were analyzed with regard to main- and sub-components of EL. Some of the codes were also clarified with the use of quotations and notes based on the text.

## **Findings and Results**

Given in a pre-code list, the codes observed in the selected classics constituted themes, and these themes were later grouped into three categories, namely, Environmental Knowledge, Affective Dispositions (Affect) and Environmentally Responsible Behavior. These categories were presented together with the codes and quotations drawn from the classics.

### *Environmental Knowledge*

The codes related to identification, description and general information regarding the environment were grouped under six main themes as follows: Description of the environment, natural disaster, ecological condition, geographical patterns, environmental pollution and environmental protection. The distribution of these themes that emerged from the selected ten books is summarized in Table 2.

Table 2

*Description of selected Turkish Classics in terms Environmental Knowledge*

Themes	# of Classics										Total
	1	2	3	4	5	6	7	8	9	10	
1. Description of the Environment	2	5	5	1	5	-	2	2	-	2	24
2. Natural Disasters	1	1	-	-	-	-	-	-	-	1	3
3. Ecological Conditions											
3.1. Habitats of animals	-	-	1	5	1	3	4	2	-	3	19
3.2. Habitats of plants	-	-	-	-	-	-	1	-	-	3	4
4. Geographical patterns											
4.1. Day / night	1	2	1	1	3	2	1	6	1	3	21
4.2. Seasons/ climate	1	2	3	1	1	1	8	-	-	8	25
5. Environmental Pollution											
5.1. Soil Pollution	1	-	-	-	-	-	-	-	-	-	1
5.2. Noise Pollution	-	2	1	-	1	-	-	-	-	-	4
6. Environmental Protection											
6.1. Struggling with natural difficulties	-	-	1	-	1	1	-	-	-	-	3
6.2. Protection of animals	-	-	-	-	1	3	1	1	-	3	9
Total	6	12	12	8	13	10	17	10	1	23	113

The natural environment (i.e., mountain, hill, grassy plain, valley, river and sea) and man-made environment (i.e., home, home garden and school garden, road and buildings) were described 24 times within the selected works. These descriptions were mainly reported in detail. One of the descriptions of the natural environment taken from the classic titled *Göl Çocukları* reads as follows:

*Gölüstü village takes its name from the lake next to it. ...it is said that its [The Lake] area includes ten-twelve kilometers. The outskirts across from the sharply descending hill give a general outlook with a blue-gray color. Later, the summits go down slowly, and turn to be shown supremely. Gölüstü is in the middle of this shore (p. 24).*

One of the descriptions of a man-made environment taken from the classics titled *Domaniç Dağlarının Yolcusu* was as follows:

*...after one hour, we arrived at Ferhat Ağa's home by passing through a narrow, muddy, stony and dark road, a huge wooden door... and a cool garden with trees and grapevines. On one side, there plenty of mulberry branches... with a well in the middle... (p. 58).*

The information on ecological conditions and habitats of animals and plants was cited 23 times within the classics. The information related to animals ( $f = 19$ ) was observed to be more than that of plants ( $f = 4$ ). How different animals were nourished and how animals and plants protected themselves from the hot and cold weather was described. Some of the quotations taken from the classic *Evvel Zaman İçinde* are given below:

*You close the open door and open the closed door; there is a sheep on one side and a dog on the other side. There is meat in front of the sheep; there is grass in front of the dog. You take the grass and put it in front of the sheep; you take the meat and put in front of dog.*

(...) *The giant wakes up and yells after you:*

*"Sheep sheep, white sheep, I could not play, but you played a trick on human kind!"*  
(pp.48-50).

How to protect the natural environment and how to struggle with the wild nature were together cited 12 times in the classics. These difficulties were more related to those that use the natural environment, i.e., difficulties as a result of trying to access a mountain or a forest. In the classics, the information associated with how humankind can protect itself from the wild animals was also cited. Several examples were given of stinging by bee, scratches by a cat, a bite by a dog, and attacks by wild animals. Information on environmental pollutions (particularly soil and noise pollution) and natural disaster was relatively little cited in the classics. Among the types of environmental pollution, no information was given regarding common environmental pollutions - air and water pollution. *Şermin* (poem) was one of the classics that provided information and description regarding the environment (23 times). Similarly, environmental-related information was given in *Altın Işık* (tale) 17 times. On the other hand, environmental-related information was relatively less emphasized in the classics of *Göl Çocukları* (novel,  $f = 8$ ), *Ömer'in Çocukluğu* (novel,  $f = 6$ ) and *Vatan Yahut Silistre* (theater,  $f = 1$ ) respectively.

#### *Affective Dispositions (Affect)*

The codes addressing children's affective tendencies and development were grouped under seven themes, namely, curiosity, attitude, appreciation, love, sensitivity, positive-negative feelings and intention. The distribution of these themes emerged from the selected ten books as summarized in Table 3.

Environmental affect was not received with as much the same or similar attention as knowledge on the environment in the classics. The codes associated with affect were observed less than half as often as those associated with environmental knowledge. Love of the environment (particularly for animals - small bird, cat, fish, duck, chicken, cock, stork, sheep, goat, cow and donkey  $f = 13$ ) and attitude toward the environment (particularly animals,  $f = 10$  and plants,  $f = 1$ ) were relatively more emphasized among others. Respect and appreciation shown toward the environment and natural beauty were only cited in four classics seven times. Motivation and intention to keep the environment clean were emphasized in three classics five times. Fear from darkness was cited in three classics three times and happiness to reside in a clean environment as a positive feeling was cited in two books two times. Environmental sensitivity associated with place identity and willingness to be in and experience the natural environment received very little attention and was cited three times in two books. Affective issues related to the natural environment were relatively mostly observed in the classics of *Falaka* (novel,  $f = 9$ ), *Domanıç Dağlarının Yolcusu* (novel,  $f = 9$ ), *Ömer'in Çocukluğu* (novel,  $f = 7$ ) and *Dede Korkut Hikâyeleri* (tale,  $f = 7$ ). However, the classic *Vatan Yahut Silistre* (theater) does not include any environmental-related affective issues.



Table 3

*Description of selected Turkish Classics in terms of Affect*

Themes	# of Classics										Total
	1	2	3	4	5	6	7	8	9	10	
1. Curiosity	-	4	-	-	-	-	-	-	-	-	4
2. Attitude											
2.1. Towards animals	-	-	-	1	2	7	-	-	-	-	10
2.2. Towards plants	-	-	-	-	-	-	1	-	-	-	1
3. Appreciation											
3.1. Natural beauty	1	1	4	-	-	-	-	1	-	-	7
4. Love											
4.1. Love for animals	4	-	4	3	-	-	-	-	-	2	13
5. Sensitivity	-	2	-	-	-	-	-	-	-	1	3
6. Positive and Negative feelings											
6.1. Happiness to live clean environment	-	1	1	-	-	-	-	-	-	-	2
6.2. Fear from darkness	1	1	-	-	1	-	-	-	-	-	3
7. Intention	1	-	-	-	-	2	-	-	-	2	5
Total	7	9	9	4	3	7	3	1	-	5	48

*Environmentally Responsible Behavior*

The codes pertaining to responsible environmental behavior were only grouped under the theme of physical action / eco-management. Distribution of the sub-themes pertaining to physical action emerged from the classics is presented in Table 4.

As indicated in the table above, responsible environmental behavior was relatively less emphasized in the selected books when compared with the other categories of knowledge and affect. Among the sub-themes observed in the classics, the behaviors associated with raising animals and protecting them from threat and danger ( $f = 24$ ) and planting and protecting various types of plants (i.e., cherry, sour cherry, barley and different flowers) ( $f = 7$ ) were frequently emphasized. On the other hand, the behavior related to preventing environmental pollution (water pollution,  $f = 1$ , soil pollution,  $f = 2$  and noise pollution,  $f = 1$ ) and saving resources (saving leftover meals and waste paper) ( $f = 2$ ) received far less attention in the classics. A physical type of environmental behavior was relatively more observable in *Şermin* (poem,  $f = 8$ ) and *Ömer'in Çocukluğu* (novel,  $f = 7$ ). On the other hand, no physical types of responsible environmental behaviors were observed in the classics *Dede Korkut Hikayeleri* (tale) and *Vatan Yahut Silistre* (theater).

Table 4

*Description of selected Turkish Classics in terms of Environmental Behavior*

Themes	# of Classics										Total
	1	2	3	4	5	6	7	8	9	10	
1. Physical action / Eco-management											
1.1. Planting and protecting plants	1	1	-	3	1	-	-	1	-	-	7
1.2. Raising and protecting animals	5	-	2	2	4	-	4	-	-	7	24
1.3. Saving resources	-	-	1	-	-	-	-	-	-	1	2
1.4. Preventing environmental pollution											
1.4.1. Water pollution	-	-	1	-	-	-	-	-	-	-	1
1.4.2. Soil pollution	1	-	1	-	-	-	-	-	-	-	2
1.4.3. Noise pollution	-	1	-	-	-	-	-	-	-	-	1
Total	7	2	5	5	5	-	4	1	-	8	37

## Discussion

This content analysis study was undertaken to analyze the implications of the components of environmental literacy in the classic works recommended by MoNE for Turkish elementary schools. Ten randomly selected classics from 63 Turkish classics were subjected to content analysis by considering the EL framework proposed by Simmons (1995).

The results indicated that environmental-related issues and topics are embedded in all of the selected classics with the frequency range of 17-36, except one classic *Vatan Yahut Silistre*, which mainly reflects values such as patriotism and independence. The poem book *Şermin* written by Tevfik Fikret appeared to mostly include environmental-related issues and values ( $f = 23$  for environmental knowledge,  $f = 5$  for affect and  $f = 8$  for responsible behavior). This book aims to advise children through a poem. There are several poems directly associated with the environment in *Şermin*. Some of the examples of the poems in *Şermin* are entitled "Papatya" (Daisy), "Melek'in Kuzusu" (Melek's Lamb), "Kuşlarla" (With Birds), "Yazın" (Summer), "Kışın" (Winter) and "Arı Sokar" (Bee Stings). The other classic in which environmental-related issues were mostly embedded was *Domanıç Dağlarının Yolcusu* by Şükufe Nihal Başar. Written by one of the enlightened Turkish women who strove for identifying public myth, this small novel consists of many past events and observations (such as memory) obtained during her visit in one of the small cities in Anatolia. Descriptions within the classic are directly associated with living in the natural environment. Frequency of environmental-related issues in *Göl Çocukları* by İbrahim Örs was relatively high--less than *Şermin* and *Domanıç Dağlarının Yolcusu* but higher than others. This adventure book is mainly about the historical artifacts being smuggled in the small city around the lake. On the other hand, among the analyzed classics, *Vatan Yahut Silistre* by Namık Kemal emphasized environmental-related issues in a very limited number ( $f = 1$ ). This theater book is the first written theater publication in Turkish literature. It basically emphasizes the

theme of patriotism and consists of dialogs, but environmental descriptions are very limited in the book.

The theme of environmental knowledge was relatively more observable within the selected classics ( $f = 113, 57,1\%$ ). The information regarding geographical patterns, the general man-made and natural environment, ecological conditions, environmental protection, environmental pollution and natural disaster were respectively embedded in the classics. This information given in the classics focuses merely upon description of biotic and abiotic factors, habitats, natural systems and pollution. Knowledge of ecology and environmental sciences is much more emphasized than knowledge of socio-economics, environmental problems and issues. Furthermore, cognitive skills (i.e., problem investigation skills, data analysis skills, action skills) addressing how knowledge can be implemented and the processes that are better for fulfilling this aim were never observed in the selected classics. This may be due to the fact that the classics basically describe the situation and place where the events are happening in the books, rather than demonstrating how these environments are to be used. This can also be attributed to the fact that these classics focus more on description and portrayal of the events and the environment instead of solution of environmental problems and pollution.

In the analyzed classics, the topic of environmental pollution, which is one of the main topics and emphases of EE, was given very little attention. Recent environmental problems such as industrialization, urbanization, loss of biodiversity, excessive construction, and global warming (Palmer, 1998), which have negative influences on the natural habitats and ecosystems, are never mentioned within the classics. This can be attributed to the selection criteria of the classics included in the 100 suggested classics. While establishing the list of classics for the elementary and secondary schools, the Turkish Ministry of National Education decided to select classics whose authors are no longer living. Depending on the main criteria, most of the books selected for the main list were written within the time range of 1850-1950. This can be the reason why recent environmental problems were not reflected in the classics.

Compared to environmental knowledge, environmental affect ( $f = 48, 24,2\%$ ) and behavior ( $f = 37, 18,7\%$ ) received very little attention. The codes emerged in the classics were more related to feelings, appreciation and attitudes. Very little attention was paid to other components (i.e., curiosity, sensitivity and intention) related to affect. However, no evidence regarding environmental values, ethical and moral reasoning, locus of control and personal responsibility was observed during the content analysis. Since young students have strong apathy and attachment to the natural environment (Bonnett & Williams, 1988), the interdisciplinary activities in different subjects should emphasize their connectedness and emotional tendencies to the environment.

Environmentally responsible behavior (ERB) includes further sub-behaviors such as consumer action, economic action, persuasion, legal action and political action (Simmons, 1995; Hsu, 1997). Only the consumer action type of ERB, also called physical action, was observed in the selected classics. Other types of action were

never observed. This may be because developing a physical type of action (i.e., waste management, saving water and electricity, planting, protecting animals and plants) can be relatively easy when compared to other types of action.

In short, this research revealed the potentiality of literature (i.e., basic classics) to the development of EL for young children. Even though all components of EL were not highly observed in the selected classics, 100 basic classic works can be used as extra-curricular activities for mainly developing students' environmental awareness and literacy (Erdoğan & Uşak, 2009). Experimental research where the experimental group will take selected classics and the control group will not may show how classic works influence students' EL level.

### **Implications**

This content analysis study has several implications for practice and further research.

#### *Implications for Practice*

Environmental education should not be limited to scientific disciplines. Art, literature and other disciplines from the humanities should also be used for developing pupils' EL, and thus, responsible environmental behavior. Art and literature are two main disciplines for interdisciplinary education through the use of powerful values, themes and motifs. Considering its interdisciplinary nature, EE should be infused in other subjects (i.e., art and literature) and various classroom activities taking place in humanity classes. In this regard, 100 classics suggested for elementary and secondary school students can be used.

#### *Implications for Further Research*

This study was conducted, using ten selected classics out of 63 Turkish classics. Foreign classics were not included in the study. It is suggested to other researchers to perform a broader research with more classic works, including both national and international classics. A similar study can analyse modern Turkish Children's literature, and the result will compare with this study. Furthermore, textbooks along with curriculum guide books (i.e., Turkish language education, social studies, art) can also be content analyzed so as to examine how EE is integrated in these courses. A similar study was conducted earlier for 4<sup>th</sup> to 8<sup>th</sup> grade science and technology curriculum in Turkey and Bulgaria (Erdoğan, Kostova & Marcinkowski, 2009), and in Macedonia (Srbínovski, Erdoğan & Ismaili, 2010). This earlier attempt may be used as a base and guide. In addition, the content analysis study presented here provided a framework that included various themes, which can be used similarly as a code list for future content analysis.

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## Edebiyat Yoluyla Çocukların Çevre Okuryazarlığının Geliştirilmesi: Yüz Temel Eser Üzerine Bir İnceleme (Özet)

### *Problem Durumu*

İnsanoğlunun çevre üzerindeki yoğun etkinlikleri ve dikkatsiz yaşam tarzı, küresel ve yerel çevre problemlerinin ortaya çıkmasını hızlandırmaktadır. Doğal çevreden her geçen gün uzaklaşan ve doğaya yabancılaşan insanların, çevreye etkileri konusunda farkındalık düzeylerinin ve koruma davranışlarının geliştirilmesi kaçınılmazdır. Bu amaca yönelik olarak, çevre eğitiminin disiplinlerarası doğasını dikkate alan birçok strateji kullanılabilir. Bu bağlamda, edebiyat yapıtlarının okunması, bireylerin çevre okuryazarlıklarını ve çevreye yönelik sorumlu davranışlarını geliştirmeye yönelik etkili bir araç olabilir.

### *Araştırmanın Amacı*

Bu çalışmanın amacı, çocuk edebiyatı alanındaki yapıtları, çevre okuryazarlığının ana bileşenleri (çevre bilgisi, duyuş, bilişsel beceriler ve davranış) açısından incelemektir.

### *Araştırmanın Yöntemi*

Çalışmada nitel araştırma yöntemlerinden içerik çözümlemesi tekniği kullanılarak, 100 Temel Eser'den seçilen 10 klasik yapıt değerlendirilmiştir. Araştırmada MEB tarafından ilköğretim 5-8. sınıf öğrencileri için hazırlanan 100 Temel Eser listesinde yer alan Türk Edebiyatına ait 63 yapıt arasından tabakalı rastlantısal örnekleme yöntemiyle belirlenen 10 yapıt incelenmiştir. Bunun için ilk olarak 63 yapıt türlerine göre sınıflandırılmıştır [roman (n=25), masal (n=14), öykü (n=6), şiir (n=6), tiyatro (n=5), deneme (n=3), anı (n=3), güzel sözler (n=1)]. Daha sonra 5'in üzerinde frekansa sahip türlerden yaklaşık olarak % 20 oranında yapıt incelemeye alınmıştır. Buna göre araştırmada roman türünde 4, masal türünde 3, öykü, tiyatro ve şiir türlerinde de birer yapıt incelenmiştir. Seçilen yapıtların içerik çözümlemesinde şu adımlar izlenmiştir: İçerik çözümlemesi için ilgili alanyazından yararlanılarak çevre okuryazarlığının bileşenlerinden oluşturulan bir liste hazırlanmış, bu liste esas alınarak yapılandırılmış çerçeve oluşturulmuştur. Yapılandırılmış çerçevede çevre okuryazarlığının bileşenleri çevre bilgisi, duyuş ve çevreye yönelik sorumlu davranışlar başlıkları altında sınıflandırılmıştır. Seçilen yapıtlar dikkatle okunarak araştırmanın amaçlarıyla ilgili bölümler ayrı kağıtlara not alınmış, daha sonra bu notlar yapılandırılmış çerçeve esas alınarak kodlanmıştır. İçerik çözümlemesinde güvenilirliği denetlemek üzere araştırmanın ikinci yazarı ile araştırmacılar dışında bir uzman, farklı türdeki üç yapıt (Göl Çocukları, Evvel Zaman İçinde, Şermin) üzerinde birbirinden bağımsız olarak kodlama yapmışlardır. İki kodlayıcı tarafından elde edilen kodlar arasında % 96 oranında tutarlılık olduğu görülmüştür. Çalışmada ortaya çıkan kodlar, çevre okuryazarlığına ilişkin ana bileşenler ve alt bileşenler göz önünde



bulundurularak değerlendirilmiş, yeri geldikçe kodlamalarla ilgili bazı açıklamalara yer verilmiştir.

#### *Araştırmanın Bulguları*

İçerik çözümlemesi sonucunda “bilişsel beceriler” alanına yönelik hiçbir kod ortaya çıkmamıştır ve belirlenen kodlar çevre bilgisi, duyuş ve çevreye yönelik sorumlu davranışlar başlıkları altında sınıflandırılarak sunulmuştur.

*Çevre Bilgisi.* Çevre bilgisi başlığı altındaki 6 temadan en çok gözlenen tema coğrafi örüntüler (gece-gündüz, mevsimler, iklim vb.)’dir ( $f=46$ ). Yapıtlarda doğal çevrelerin (dağ, tepe, ova, vadi, nehir, deniz vb.) ve insan ürünü olan çevrelerin (ev, bahçe, okul bahçesi, yol, binalar vb.) betimlemesine de sıklıkla yer verilmiştir ( $f=24$ ). Hayvanların yaşam koşullarına 19 kez yer verilirken bitkilerin yaşam koşullarına sadece 4 kez yer verilmiştir. Ayrıca çevredeki tehlikelerden korunma konusuna 12; çevre kirliliği konusuna 4; doğal felaketler konusuna 3 kez değinilmiştir. Çevre bilgisi, incelenen yapıtlardan en çok Tevfik Fikret’in Şermin adlı şiir kitabında ( $f=23$ ) ve Ziya Gökalp’in Altın Işık adlı masal kitabında ( $f=17$ ) görülmüştür.

*Duyuş.* İncelenen yapıtlarda çevreye yönelik duyuşsal eğilimler, 7 tema altında değerlendirilmiştir: Merak, tutum, hayranlık, sevgi, duyarlık, olumlu ve olumsuz duygular ve niyet. Yapıtlarda çevrenin insanlar üzerindeki etkisi ile ilgili temalara çevre bilgisi kadar yer verilmediği görülmektedir. Bu temalardan en çok tekrarlananı “hayvan sevgisi”dir ( $f=13$ ). Yapıtlarda çevreye karşı olumlu tutum temasına 11 kez rastlanmıştır. Bunların 10 tanesi hayvanlarla ilgilidir. Doğal güzelliklere hayranlık temasına yapıtlarda 7 kez yer verilmiştir. İncelenen yapıtlarda çevreye merak, duyarlık, olumlu ve olumsuz duygular ve niyet ile ilgili temalara 3 ile 5 arasında bir sıklıkla yer verilmiştir. İncelenen yapıtlar içinde Ahmet Rasim’in Falaka adlı yapıtı ( $f=9$ ) ve Şükufe Nihal Başar’ın Domaniç Dağlarının Yolcusu adlı yapıtı ( $f=9$ ) çevreye yönelik duyuşsal eğilimlere en çok yer veren kitaplardır.

*Çevreye Yönelik Sorumlu Davranışlar.* Çevreye yönelik sorumlu davranış kapsamındaki kodlar sadece “fiziksel hareket / çevre yönetimi” teması altında değerlendirilmiştir. Davranışla ilgili kodlamaların diğer kategorilerden daha az olduğu görülmektedir. Bu konudaki en çok kodlama hayvanları ( $f=24$ ) ve bitkileri yetiştirme ( $f=7$ ) ve koruma alt temasında ortaya çıkmıştır. İncelenen yapıtlarda kaynakları koruma ve toprak kirliliği alt temaları 2 kez, su kirliliği ve gürültü kirliliği alt temaları ise birer kez belirlenmiştir. Çevreye yönelik sorumlu davranışların en sık görüldüğü yapıt Şermin adlı şiir kitabıdır ( $f=8$ ).

#### *Araştırmanın Sonuçları*

Bu çalışmada 100 Temel Eser’de yer alan 63 Türk edebiyatı yapıtı içinden seçilen 10 yapıt üzerinde çevre okuryazarlığının boyutlarına yönelik içerik çözümlemesi yapılmıştır. İncelenen yapıtlarda çevre bilgisi kategorisine 113 kez (% 57.1), çevrenin insanlar üzerindeki etkisi kategorisine 37 kez, (% 18.7), çevreye karşı duyarlı davranış kategorisine 48 kez (% 24.2) yer

verilmiştir. Yapıtlarda çevre sorunları betimlenirken bu sorunların çözümüne ilişkin bilgilere yer verilmediği belirlenmiştir. Ayrıca incelenen yapıtlarda güncel çevre sorunlarına (betonlaşma, küresel ısınma, ormanların azalması, nesli tükenen hayvanlar vb.) yer verilmediği belirlenmiştir. Bu durumun nedeni 100 Temel Eser listesindeki yapıtların birçoğunun 1850-1950 arasında yazılmış olmasıdır.

İçerik çözümlemesi sonuçlarına göre yapıtlarda çevreye yönelik duyuşsal eğilimler türündeki temalardan duygular, hayranlık ve tutumlarla ilgili kodlamalara sıkça rastlanırken diğer temalara (merak, duyarlık ve niyet) ise oldukça az rastlanmıştır. Çevreye yönelik sorumlu davranışlardan sadece "tüketime dönük eylem"e ilişkin kodlamalar yapılmıştır.

Ana dili öğretimi bireylere; doğru, açık ve etkili bir iletişim gerçekleştirebilecek dilsel becerileri kazandırmanın yanında onların düşünme güçlerini geliştirme, yetkinleştirme ve toplumsal konulardaki duyarlıklarını arttırmayı da hedefler. Çünkü dil becerileri sadece okulda değil yaşamın her alanında, her türlü iletişimin temelini oluşturmaktadır. Ana dili eğitiminin temel alanlarından biri olan okuma becerisi, aynı zamanda yaşamın her alanında yeni bilgilere ulaşmanın aracıdır. Bu açıdan okuma becerisinin geliştirilmesi sadece Türkçe derslerinin değil, tüm derslerin ortak bir amacı olarak düşünülmelidir. Bu araştırmanın sonuçları, okuma beceri ve alışkanlığının geliştirilmesinin öğrencilerin çevre konusunda daha bilinçli ve duyarlı olmasına katkı sağlayabileceğini ortaya koymaktadır.

#### *Öneriler*

Çevre eğitimi sadece fen eğitiminin bir parçası olarak düşünülmemeli; sanat, edebiyat ve diğer insani bilimlerden de çevre eğitiminde yararlanılmalıdır. Edebiyat yapıtlarının okunması yoluyla öğrencilere güçlü değerler kazandırılabilir. Disiplinlerarası bir yaklaşımla ilköğretim ve ortaöğretime yönelik hazırlanan 100 Temel Eser'den çevre eğitiminde de yararlanılmalıdır.

Bundan sonraki araştırmalarda bu çalışmada incelenen yapıtlar dışındaki Türk edebiyatı ve dünya edebiyatına ait yapıtlar da çevre eğitimi açısından incelenebilir. Özellikle çağdaş Türk çocuk edebiyatına ait yapıtlar üzerinde yapılacak bir araştırmanın sonuçları bu araştırmanın sonuçları ile karşılaştırılabilir.

*Anahtar Sözcükler:* Çevre okuryazarlığı, içerik analizi, 100 Temel Eser, Türkiye