

## Research Article

# Examination of Primary School Teachers' Opinions on Cultural Heritage Education in Life Science Lesson

Onur BATMAZ \*<sup>1</sup> 

<sup>1</sup> Yozgat Bozok University, Yozgat, Turkey, [onur.batmaz@yobu.edu.tr](mailto:onur.batmaz@yobu.edu.tr)

\* Corresponding Author: [onur.batmaz@yobu.edu.tr](mailto:onur.batmaz@yobu.edu.tr)

### Article Info

**Received:** 23 January 2023

**Accepted:** 23 March 2023

**Keywords:** Life science, primary school teachers, cultural heritage.

 **10.18009/jcer.1241337**

**Publication Language:** English

### Abstract

A case study was used in this study, which was conducted to examine the opinions of primary school teachers on cultural heritage education in the Life Science lesson. The participants of the study consisted of 15 primary school teachers working in primary schools in Yozgat. The convenience sampling method was used while determining the participants. A semi-structured interview form was improved by the researcher and expert opinions were used to collect the data for the study. The descriptive analysis technique was used analysis of the obtained data. At the end of the data, it was concluded that teachers' opinions on cultural heritage are mostly in the form of cultural heritage elements. The majority of the teachers stated that they did not receive any education on cultural heritage or did not participate in the activity. In addition, a significant part of the teachers expressed that they found and the cultural heritage education the Life Science curriculum insufficient.



**To cite this article:** Batmaz, O. (2023). Examination of primary school teachers' opinions on cultural heritage education in life science lesson. *Journal of Computer and Education Research*, 11 (22), 429-446. <https://doi.org/10.18009/jcer.1241337>

## Introduction

Culture, which is the sum of common material and moral elements that people come together, is a concept specific to societies. Culture separates societies from each other or brings societies with similar cultures closer together. Societies can preserve their culture, enrich their culture by being influenced by different cultures, and take them wherever they go. In addition, they form the basis of cultural heritage by transferring their cultures and cultural elements from generation to generation. Çankaya (2006) also defines cultural heritage as a series of data that the individual gets rich by making use of her/his past experiences in the periods he is in and ensures continuity transferring it to the next generations. Cultural heritage is an important concept that starts with the life of the individual, feeds from the individual, and affects individuals in different ways (Şahin &

Güner, 2006). In addition, cultural heritage is a part of the process of making sense of an individual's life and is a fundamental component of social identity, an important way of establishing peace and understanding among individuals (Ölçer-Özünel, 2017). Cultural heritage, which is the memory of society, includes tangible and intangible cultural heritage elements. Tangible cultural heritage is defined as "the movable and immovable elements from the past, while the intangible cultural heritage is the practices and values that show the cultural texture of the society and are transferred from generation to generation" (Demirezen & Aktaş, 2020).

Cultural heritage occurs in the form of parents to their children in the family environment, from teachers to students at school, and from masters to apprentices in professional life (Scovazzi, 2015). Therefore, children are confronted with culture and cultural heritage with the education they receive in the first family and environmental environments and then in the school environment. With the questions children ask their parents about the old furniture in the house and the sculptures they see around, the stories or legends that the parents tell their children, and the proverbs or idioms they use, they lay the foundations for their children's cultural heritage. Cultural heritage education has an important function in both the conservation and transfer of cultural heritage after the family in the cultural heritage process (Çulha-Özbaşı, 2014). Considering that children are introduced to cultural elements and identities at an early age, it becomes more and more important to develop a culture of responsibility and protection through cultural heritage education from an early age and to ensure that children feel and grow up as individuals connected to their environment (Haddad, 2014). Giving today's children the responsibility of protecting and protecting cultural heritage through education from early ages to higher education is considered important in raising social awareness about cultural heritage (Yeşilbursa & Uslu, 2014). Bean (1999) also states that one of the most important duties of societies is to understand, protect and sustain cultural heritage correctly. Therefore, societies have a responsibility in recognizing, protecting, and transferring cultural heritage to future generations. Cultural heritage education plays an important role in fulfilling these responsibilities. With this education, both children and young people need to be aware of the society they live in and the global common heritage, interpret this heritage in the context of time-continuity-change and take responsibility for transferring it to the next generations (Demirezen & Aktaş, 2020). Cultural heritage education is aimed to help children discover

historical and cultural heritage, gain knowledge, skills, and experience with these discoveries, understand the difference between local and universality, and raise future generations. In addition, cultural heritage education helps children to understand, know and maintain not only the local cultural heritage but also universal cultural heritage (Çulha-Özbaş, 2014). Hooper-Greenhill (2004) states that cultural heritage education not only offers different alternative ways to look at the world but also encourages intercultural dialogue and helps children understand diversity by learning from each other. Cultural heritage education raises children's awareness of the themes, events, and values that encompass their cultural heritage (Hunter, 1992). In addition, with this education, children have responsibilities not only to increase their knowledge about historical places, events, and objects but also to instill a sense of ownership over cultural heritage elements and to take an active role in the conservation of cultural heritage (Copeland, 2004). Interaction of children with cultural heritage also helps them to perceive and understand the environment they live in (Ivon & Kuscevic, 2013). The sensitivities that arise in children from early age strengthen their awareness by contributing to the protection of cultural heritage. It is considered significant that especially school-age children get to know diverse cultures and create awareness about cultures. Because schools are one of the most significant sources in the protection and transfer of cultural heritage (Uçar, 2014).

Cultural heritage education in schools is mostly given in History, Turkish, Turkish Language and Literature, and Social Studies lessons. However, for children to realize their cultural values and transfer them to their lives by accepting them as heritage, it is necessary to draw attention to and give the necessary importance to cultural heritage education at the primary school level (Çulha-Özbaş, 2014). It may be necessary to give more importance to cultural heritage education in the Life Science lesson, which has an important place, especially in the primary school period, and prepares the child for life. Among the 23 basic life skills in the Life Science curriculum, there is the skill of "recognition of national and cultural values". Among the issues to be considered in the implementation of the program, there is a statement that "care should be taken to make in-school and out-of-school practices while teaching the lesson". In addition, cultural heritage is brought to the forefront by emphasizing "out-of-school practices such as oral history, local history, museum visits, nature education, getting to know official institutions and organizations and private institutions-organizations, especially in relevant gains" (Ministry of National Education

[MoNE], 2018). The first lesson in which primary school students acquire the knowledge, skills, attitudes, and behaviors necessary for recognizing, adopting, and transferring the history, culture, values, and social system of the society they live in is the Life Science lesson (Sönmez, 2010). Therefore, it is of particular importance to consider cultural heritage education in the Life Sciences lesson, where students gain basic knowledge, skills, and awareness about cultural heritage. Primary school teachers have important duties in understanding, protecting, and transferring cultural heritage education to future generations by students starting from primary school. The relationship between cultural heritage and the transfer of cultural heritage with education is important in the preservation of culture and it is seen that teachers play a significant role in the conservation and transfer of cultural heritage (Güngör, Mutlu-Öztürk, & Gülay-Ogelman, 2022). When the literature is investigated, it's seen that there are studies on primary school Turkish textbooks (Yılar, 2016) and studies on cultural heritage education in the Social Studies lesson (Avcı & Memişoğlu, 2016; Çengelci, 2012). Regarding the Life Science lesson, it's seen that there are restricted studies (Yıldırım, 2021) on the examination of the place of intangible cultural heritage in the curriculum and textbooks. However, the fact that there is no study on the opinions of primary school teachers about cultural heritage education in the Life Science lesson reveals the original value of this study. In addition, it is thought that determining the opinions of primary school teachers over cultural heritage education in Life Science lessons, which is one of the basic lessons of primary school, will both contribute to the literature and fill the gap in the literature. In this study, which was conducted to examine the opinions of primary school teachers on cultural heritage education in the Life Science lesson, answers the following questions will be sought.

1. What are your opinions on cultural heritage?
2. Have you participated in a scientific activity or event for cultural heritage or have you received any education?
3. Do you conduct studies on cultural heritage education in the Life Science lesson? If you do, can you tell us about these studies?
4. Are there any methods/techniques you use for cultural heritage education in the Life Science lesson? Can you tell me if there is?
5. Do you have any materials that you use in the Life Science lesson for cultural heritage education? If so, what are they?

6. What are your thoughts on the adequacy of cultural heritage education in the Life Science curriculum?
7. What are the problems encountered in the process of cultural heritage education in the Life Science lesson?
8. Do you think cultural heritage education, values education, etc. lessons should be included in primary school? Why is that?
9. What are your suggestions for cultural heritage education in the Life Science lesson? Would you tell?

## Method

### *Research Model*

In this study, which was conducted to determine the opinions of primary school teachers on cultural heritage education in the Life Science lesson, the case study method, one of the qualitative research approaches, was used. The case study includes systematically obtaining information about how a limited system works, and examining the system in depth (Chmiliar, 2010). For this reason, in this study, the case study was used as it was aimed to examine the opinions of primary school teachers on cultural heritage education in the Life Science lesson depth.

### *Study Group*

The study group research consists of primary school teachers working in primary schools in Yozgat. 15 primary school teachers who were willing and voluntarily to participate in the research were selected with the convenience sampling method. Convenience sampling is a type of sampling conducted on volunteers who are near the researcher, available or easy to reach, and willing to participate in the study (Erkuş, 2017). Information about teachers participating in the research is given in Table 1.

**Table 1.** Information about teachers in the study group

		<i>f</i>
Gender	Female	8
	Male	7
Education Status	Bachelor degree	12
	Master's degree	3
Professional experience	6-10 years	3
	11-15 years	4
	16-20 years	3
	Over 20 years	5

### *Data Collection Tool*

The data of the research were collected with a semi-structured interview form prepared by researcher. To increase the validity of the research, expert opinions about the interview form were obtained from two faculty members and two teachers. The interview form was finalized with the adjustments made in line with the expert opinions (related to language and expression, changes in the place of the questions). Using the finalized interview form, pilot interviews were conducted with the teachers who were not in the study group. The pilot interviews, it was aimed to increase the reliability of the research by determining the situations that may arise during the interview.

### *Data Collection and Analysis*

The school administration and classroom teachers in the schools where the research will be conducted were informed about the content of the research and the study was carried out with the teachers who wanted to participate voluntarily. Semi-structured interviews with the study group of the research were carried out by the researcher taking notes or using a voice recorder, depending on the preferences of the teachers and their permission to use the voice recorder. To prevent data loss that may occur in the interviews where the researcher took notes, the interview notes were examined by the teachers, and they were asked to indicate if there were any cases they wanted to add. In addition, the audio recordings taken were also transcribed. The data obtained from the interviews were analyzed by four experts (two faculty member and two primary school teachers). Experts agreed on the answers given to the interview questions. The data obtained during the research process were analyzed by making descriptive analyses. Descriptive analysis is a type of analysis that takes place based on a question or subject data collection tools like interviews, observations, or documents used in the process of research (Ekiz, 2020). In this study, the data were analyzed in line with the previously prepared questions. The findings of the study were supported by direct quotations from answers given by teachers to questions during the interview. The teachers participating in the research were coded as T1, T2....

## **Finding**

In this section, the findings obtained by analyzing the data obtained from the interviews with the teachers are included.

To the primary school teachers who participated in the research “What are your opinions on cultural heritage?” question has been asked. The findings regarding the teachers' responses are presented in Table 2.

**Table 2.** Opinions of primary school teachers on cultural heritage

Opinions	<i>f</i>
Tangible cultural heritage elements (Architectural buildings, inns, bridges, etc.)	15
Intangible cultural heritage elements (tales, anecdotes, plays, folk dances, lullabies, weddings, celebrations, etc.)	15
Material/spiritual belongings left by our ancestors	6
Values carried from the past to the present	6
The link between the past and the future	3
Travel to the past	2

According to Table 2, it was found that the opinions of primary school teachers on cultural heritage were mostly directed toward tangible and intangible cultural heritage elements ( $f=15$ ). In addition, teachers expressed their opinions on material/spiritual belongings left by our ancestors ( $f=6$ ), the values carried from the past to the present ( $f=6$ ), the link between the past and the future ( $f=3$ ), and travel to the past ( $f=2$ ) about cultural heritage. T1's view is that *“We can call cultural heritage a journey to the past that enables societies to understand the foundations of the time they live in and the process they have gone through. In addition, cultural heritage provides a chance to delve into the essence of our culture and provides a link between the past and the future. There are also many elements such as inns, baths, architectural structures, folk songs, plays, tales.”* stated as.

To the primary school teachers who participated in the research, “Have you participated in a scientific activity or activity for cultural heritage or have you received any education?” question has been asked. The findings regarding the answers of the teachers are presented in Table 3.

**Table 3.** Opinions of primary school teachers regarding the scientific activities, activities or educations they attended for cultural heritage

Opinions	<i>f</i>
I received education	1
I participated	2
I did not participate	12

According to Table 3, it was seen that the majority of the primary school teachers ( $f=12$ ) did not participate in a scientific activity or event for cultural heritage and did not receive any education. One of the teachers stated that he received education on cultural

heritage, and two of them participated in activities related to cultural heritage. T2 stated his opinion, *"I did not receive any education, but I participated in the activities. I participated in different activities for cultural heritage in many museums and ruins. Like museums, historical places."* expressed as. T6 said, *"I did not participate in any activities or education on cultural heritage. But I would love to participate."* form of opinion.

To the primary school teachers who participated in the research, "Do you conduct studies on cultural heritage education in the Life Science lesson? If you do, can you tell us about these studies?" question has been asked. The findings regarding the answers of the teachers are presented in Table 4.

**Table 4.** Opinions of primary school teachers on their studies on cultural heritage education in the life science lesson

Opinions	<i>f</i>
Benefiting digital content	9
Visiting museums and archaeological sites	6
Playing traditional games	6
Animation	4
Using visual elements	4
Interviewing family elders	4
Using traditional items	2
Doing research	2
Introducing traditional dishes	1
Giving place to verbal expressions (epics, anecdotes, mania, etc.)	1

According to Table 4, when the teachers' studies on cultural heritage education in the Life Sciences lesson were examined, it was seen that the teachers mostly ( $f=9$ ) benefited from digital content. In addition, the teachers reported opinions such as visiting museums and archaeological sites ( $f=6$ ), playing traditional games ( $f=6$ ), animation ( $f=4$ ), using visual elements ( $f=4$ ), interviewing family elders ( $f=4$ ), using traditional items ( $f=2$ ), doing research ( $f=2$ ), introducing traditional dishes ( $f=1$ ) and giving place to verbal expressions (epics, anecdotes, mania, etc.) ( $f=1$ ). T4's opinion is that *"Tours, visits, ethnographic museum visits for cultural heritage. We are animating Nasreddin Hodja jokes, we are making other animations. We play traditional children's games. I have knucklebones, I have a spinning top, we do things with them."* stated.

To the primary school teachers who participated in the research, "Are there any methods/techniques you use for cultural heritage education in the Life Science lesson? Can

you tell me if there is?" question has been asked. The findings regarding the answers of the teachers are presented in Table 5.

**Table 5.** Opinions of primary school teachers on the methods/techniques they use for cultural heritage education in the life science lesson

Opinions	<i>f</i>
Demonstration (Video playback)	12
Expression	12
Travel-Observation	6
Drama	4
Cooperative learning	1

According to Table 5, it was seen that demonstration and expression methods ( $f=12$ ) were mostly used for cultural heritage education in the Life Science lesson of primary school teachers. In addition, it was found that the teachers also used travel-observation, drama, and cooperative learning methods for cultural heritage education in the Life Science lesson. T5 said, "I usually open the narrative method for cultural heritage, then videos from the smart board. We are talking about cultural heritage elements. If there are videos, I definitely make them watch." form of opinion. To the primary school teachers who participated in the research, "Do you have any materials that you use in the Life Science lesson for cultural heritage education? If so, what are they?" question has been asked. The findings regarding the answers of the teachers are presented in Table 6.

**Table 6.** Opinions of primary school teachers on the materials they use for cultural heritage education in the life science lesson

Opinions	<i>f</i>
Digital materials	6
Traditional items	5
Textbook	5
Traditional children's games materials	4
Traditional clothes	3
Dumb maps	2
Cultural heritage exhibition	1
Cultural heritage cards	1

According to Table 6, when the teachers' opinions on the materials they used for cultural heritage education in the Life Science lesson were examined, it was seen that they mostly ( $f=6$ ) benefited from digital materials. In addition, teachers benefited from traditional items ( $f=5$ ), textbook ( $f=5$ ), traditional children's games materials ( $f=4$ ), traditional clothes ( $f=3$ ), dumb maps ( $f=2$ ), cultural heritage exhibition ( $f=1$ ) and cultural heritage cards ( $f=1$ ) in

cultural heritage education. T3 expressed his opinion: *"I have materials related to children's games in cultural heritage education in the Life Science lesson. I am using them. Among them, there is a spinning top, and a few knucklebones, which we use in our lessons."*

To the primary school teachers who participated in the research, "What are your thoughts on the adequacy of cultural heritage education in the Life Science curriculum?" question has been asked. The findings regarding the teachers' responses are presented in Table 7.

**Table 7.** Opinions of primary school teachers on the adequacy of cultural heritage education in the life science curriculum

Opinions		<i>f</i>
Sufficient	It's enough because they're in the concrete period	1
Partially Sufficient	Should be detailed Gains that students will experience directly should be included. Gains should also cover different sensory areas. It should be included in different units.	6
Insufficient	Insufficient content Insufficient gains	8

According to Table 7, most of the primary school teachers stated that the cultural heritage education in the program is insufficient ( $f=8$ ) due to the inadequacy of the contents and gains. In addition, six of the teachers stated that the cultural heritage education in the program was partially sufficient, while one of them expressed that it was sufficient. T7's view is that *"It is not sufficient. It is located superficially. The contents remain simple, and the subject is expanded and enriched by the efforts of the teachers. Today, I think that cultural heritage education should be more at the forefront."* stated. T9 said, *"I think it is sufficient for a primary school child. Because I think it's sufficient because they can't get concrete information and see it."* stated.

To the primary school teachers who participated in the research, "What are the problems encountered in the process of cultural heritage education in the Life Science lesson?" question has been asked. The findings regarding the teachers' responses are presented in Table 8.

**Table 8.** Opinions of primary school teachers on the problems encountered in the life science lesson cultural heritage education process

Opinions	<i>f</i>
Inability to embody the subjects	9
Students' lack of experience	7

Teachers' lack of knowledge, experience, attitude, etc.	4
Lack of digital applications	4
Lack of material	3
Low level of readiness of students	3

According to Table 8, the majority of the primary school teachers (f=9) expressed their opinions on the inability to embody the subjects. In addition, the teachers made opinions about the lack of experience of the students (f=7), teachers' lack of knowledge, experience, attitude, etc. (f=4), lack of digital applications (f=4), lack of material (f=3) and the low level of readiness of the students (f=3). T12's opinion *"We do not have enough materials and difficulties experienced while visiting museums so that they are more memorable."* expressed as. T14, *"They cannot experience life without preliminary information such as what cultural heritage items are in the province or region they live in and where they are located. So I think these are the main problems."* form of opinion.

To the primary school teachers who participated in the research, "Do you think cultural heritage education, values education, etc. lessons should be included in primary school? Why is that?" question has been asked. The findings regarding the teachers' responses are presented in Table 9.

**Table 9.** Opinions of primary school teachers on the situation of teaching cultural heritage education, values education, etc. in primary school

Opinions	f
Should be included	14
For in-depth education	
For better promotion and promotion of our culture	
To raise awareness at an early age	
To ensure more effective family participation	
Should not be included	1
Since it should be given more space in other lessons	

According to Table 9, almost all of the teachers stated that cultural heritage education, values education, etc. lessons should be included in primary school. However, one of the teachers expressed the opinion that it should not be included because it should be contained more space in other lessons. T15's opinion was *"I think it should be included. Every child should know their past and culture better so that they can build their future. I think this would be better with a separate lesson."* expressed as.

To the primary school teachers who participated in the research, "What are your suggestions for cultural heritage education in the Life Science lesson? Would you tell?"

question has been asked. The findings regarding the teachers' responses are presented in Table 10.

**Table 10.** Opinions of primary school teachers regarding cultural heritage education in life science lesson

Opinions	<i>f</i>
Digital content, applications should be presented	10
Cultural trips should be organized	9
More visual elements should be included.	3
Concrete materials should be used (traditional clothing, items, etc.)	3
The number of gains should be increased	2
To be offered as a lesson	1
A traveling cultural heritage tool should be created	1

According to Table 10, when the opinions of the primary school teachers regarding the cultural heritage education in the Life Sciences lesson were examined, it was seen that the teachers mostly ( $f=10$ ) stated that digital content and applications should be presented. In addition, the teachers stated that cultural trips should be organized for the Life Science lesson ( $f=9$ ), more visual elements should be included ( $f=3$ ), concrete materials should be used ( $f=3$ ), the number of gains should be increased ( $f=2$ ), to be offered as a lesson ( $f=1$ ) and a traveling cultural heritage tool should be created ( $f=1$ ). T13's opinion was, "I think that possible items such as local clothes and old items should be shown and used in the classroom environment." stated as.

### Conclusion, Discussion and Suggestions

In the current study was concluded that primary school teachers' opinions on cultural heritage were mostly directed towards tangible and intangible cultural heritage elements. In addition, the teachers expressed opinions on cultural heritage as travel to the past, the link between the past and the future, the material/spiritual belongings left by our ancestors, and the values carried from the past to the present. In the study of Avcı and Memişoğlu (2016) with Social Studies teachers, teachers made opinions about cultural heritage such as "material-spiritual values of a nation from the past to the present", and "artifacts from the past to the present". In addition, in the same study, it was found that among the cultural heritage elements that teachers consider important, they mostly express the tangible cultural heritage elements. In Devci's (2009) study, it was seen that in the cultural portfolios prepared by the pre-service teachers, while expressing their own culture, they mentioned cultural elements such as weddings, meals, folk dances, historical artifacts, and holidays.

Taylor (2004) also emphasizes the importance of protecting tangible and intangible cultural heritage elements and supporting them with protective approaches. In Azrak and Yalçinkaya's (2020) study, it was concluded that teachers expressed their opinions on cultural heritage elements, both tangible and intangible cultural heritage elements. In the studies conducted in the literature (Çal & Demirkaya, 2017; Mutlu-Öztürk, Güngör & Gülay-Ogelman, 2021), the statements about cultural heritage also support this finding of the study.

It was concluded that the majority of primary school teachers did not participate in a scientific activity or activity for cultural heritage and did not receive any education. It was observed that a small number of teachers received education on cultural heritage or participated in the activity. In the study of Çal and Demirkaya (2017), it was stated that the majority of the participants did not participate in any activities related to cultural heritage. In the study conducted by Mutlu-Öztürk, Güngör and Gülay-Ogelman (2021), it was concluded that the majority of the teachers did not take part in any project related to cultural heritage and did not participate in education. Therefore, it may be beneficial for the teachers to receive an education on cultural heritage education or to ensure the participation of teachers in different activities with trips organized at regular intervals, in terms of the effective realization of the cultural heritage education process.

When the studies of the primary school teachers on cultural heritage education in the Life Science lesson were examined, it was found that the teachers mostly benefited from the digital content. In addition, it has been observed that teachers work on visiting museums and archaeological sites, playing traditional games, and animation, using visual elements, interviewing family elders, using traditional items, doing research, introducing traditional dishes, and giving place to verbal expressions within the scope of cultural heritage education. It has been concluded that primary school teachers mostly use demonstration and expression methods for cultural heritage education in the Life Science lesson. In addition, it was found that the teachers also used travel-observation, drama, and cooperative learning methods for cultural heritage education in the Life Science lesson. In the studies of Avci and Memişoğlu (2016), it was found that the way of presentation, visual use, brainstorming, and museum and cultural trips are the most used methods and techniques. In Azrak and Yalçinkaya's (2020) study, it was concluded that teachers mostly benefited from travel observations as out-of-class activities, and the use of visual materials, drama, and virtual museums as in-class activities.

When the materials used by primary school teachers for cultural heritage education in the Life Science lesson are examined, it is concluded that the teachers mostly benefit from digital materials. In addition, it has been observed that teachers benefit from traditional items, textbooks, traditional children's games materials, traditional clothes, dumb maps, cultural heritage exhibitions, and cultural heritage cards in cultural heritage education. In the study of Çal and Demirkaya (2017), the participants were "Slides describing cultural heritage", "Lessons and activities", "Organizing trips to cultural heritage sites", "Simulations", "Documentaries, films and brochures and books", "Cultural They emphasized that materials such as "heritage board" should be developed. In the study conducted by Mutlu-Öztürk, Güngör and Gülay-Ogelman (2021), it was concluded that teachers expressed local goods, visual materials, and videos as the materials they most prefer to use.

Most of the primary school teachers stated that the cultural heritage education in the program is insufficient due to the inadequacy of the contents and achievements. In addition, while a significant part of the teachers stated that the cultural heritage education in the program is partially sufficient, one teacher expressed that it is sufficient. It can be said that almost all of the teachers do not find the cultural heritage education in the Life Science lesson curriculum sufficient. In the study conducted by Avcı and Memişoğlu (2016), it was concluded that the cultural heritage education in the program is not sufficient. However, in the study of Azrak and Yalçınkaya (2020), a significant part of the teachers stated that cultural heritage education is sufficiently included in the Social Studies curriculum. Similarly, it was concluded that Çengelci (2012) and Bıyıklı (2010) included cultural heritage elements in the Social Studies curriculum and textbooks. Also, Hunter (1988) argues that the most effective way to include cultural heritage education in a curriculum is by integrating all of its subjects with existing curriculum materials based on heritage education. Kailash (2001) also stated that cultural heritage education should be included in the curriculum from the preschool period.

Most of the teachers stated that they had problems with the fact that the subjects could not be embodied in the process of cultural heritage education in the Life Science lesson. In addition, it was concluded that the teachers faced problems such as the lack of experience of the students, teachers' lack of knowledge, experience, attitude, etc., lack of digital applications, lack of material, and a low level of readiness of the students. In the

studies of Avcı and Memişoğlu (2016), it has been observed that teachers face problems such as the inadequacy of museums and ruins visits related to cultural heritage education, insufficient knowledge of the student, student's inability to understand the subject in abstract subjects, the inadequacy of family education and the inadequacy of museums where our cultural heritages are exhibited. In Çengelci's (2013) study, it was concluded that students did not sufficiently benefit from outside classrooms, cultural activities, and literary products within the scope of Social Studies lesson. In Azrak and Yalçinkaya's (2020) study, it was concluded that teachers faced problems such as "Problems with school management", "Lack of materials", "Problems with students", and "Student indifference". In the studies of Mutlu-Öztürk, Güngör and Gülay-Ogelman (2021), it was seen that the first of the problems faced by teachers in cultural heritage education is the inability to find sufficient materials.

Almost all of the primary school teachers stated that cultural heritage education, values education, etc. lessons should be included in primary school. However, one of the teachers stated that it should not be included as more space should be given in other lessons. In the study conducted by Azrak and Yalçinkaya (2020), Social Studies teachers stated that cultural heritage education should also be given in different lessons. In the studies of Mutlu-Öztürk, Güngör and Gülay-Ogelman (2021), teachers emphasized that cultural heritage education should be given in preschool education.

In the Life Science lesson of primary school teachers, teachers suggested that digital content and applications should be presented the most for cultural heritage education. In addition, the teachers made suggestions that cultural trips should be organized for the Life Science lesson, more visual elements should be included, concrete materials should be used, the number of gains should be increased, to be offered as a lesson and a traveling cultural heritage tool should be created. In Avcı and Memişoğlu's (2016) studies, teachers made suggestions regarding cultural heritage education such as "Museum and ruins visits should be emphasized", "Cultural activities should be increased in schools", "Posters should be prepared", "Subjects should be enriched with visuals". In addition, in the study, it was found that cultural heritage education should be given with a separate lesson. In the study conducted by Ulusoy (2009) on the teaching of culture and heritage learning areas for 4th and 5<sup>th</sup> grade students, it was emphasized that activities using different visual elements reflecting culture and heritage should be done.

In line with the results of the study, in-service education can be given to primary school teachers within the scope of cultural heritage education. The number of gains for cultural heritage education can be increased in the Life Science curriculum, and the content of the subjects can be included more. Within the scope of the Life Science lesson, digital content and applications for cultural heritage education can be prepared and made available to teachers. In addition, it can be suggested to add the gains to the curriculum and the content to the textbooks for the concretization of the subjects within the scope of cultural heritage education in the Life Science lesson. Studies can also be conducted to examine cultural heritage education in different lessons.

#### *Ethical Committee Permission Information*

*Name of the board that carries out ethical assessment: Yozgat Bozok University Ethics Commission*

*The date and number of the ethical assessment decision: 21.09.2022-36/37*

#### *Author Contribution Statement*

**Onur BATMAZ:** *Conceptualization, literature review, methodology, implementation, data analysis, translation, and writing.*

### References

- Avcı, M., & Memişoğlu, H. (2016). Kültürel miras eğitime ilişkin sosyal bilgiler öğretmenlerin görüşleri [Opinions of social studies teachers on cultural heritage education]. *Elementary Education Online*, 15(1), 104-124.
- Azrak, S., & Yalçınkaya, E. (2020). Sosyal bilgiler öğretmenlerinin tarihi kültürel miras eğitime ilişkin görüşleri (Denizli şehri örneği) [Opinions of social studies teachers on historical cultural heritage education (Example of Denizli city)]. *Kastamonu Education Journal*, 28(3), 1307-1320. <https://doi.org/10.24106/kefdergi.3866>
- Bean, G. E. (1999). *Eskiçağda güney kıyılar* (Çev. İ. Delemen ve S. Çokay) [Southern coasts in antiquity (Trans. İ. Delemen and S. Çokay)]. İstanbul: Arion Yayınevi.
- Bıyıklı, S. G. (2010). *Representation of cultural heritage in textbooks: Examination of the illustration in the 4th and 5th grade social studies textbooks (1974-2009) in Turkey*. (Unpublished master's thesis). Koç University, İstanbul.
- Chmiliar, I. (2010). Multiple-case designs. A. J. Mills, G. Eurepas & E. Wiebe (Eds.), *Encyclopedia of case study research* içinde (s. 582-583). USA: SAGE Publications.
- Copeland, T. (2004). *Heritage and education: A European perspective*. Proceedings of the Europa Nostra Forum 2004, 19-22. Netherlands: Pan European Federation for Heritage.
- Çal, Ü. T., & Demirkaya, H. (2017). Sosyal bilgiler öğretmen adaylarının kültürel mirasın korunmasına yönelik görüşleri [Opinions of social studies teacher candidates on the protection of cultural heritage]. XI. *International Turkic Culture, Art and Protection of Cultural Heritage Symposium/Art Activity "Turkey-Belarus Relations"*, (s. 61-67). Baranovichi/Belarus.

- Çankaya, E. (2006). *Somut olmayan kültürel mirasın müzecilik bağlamında korunması*. (Yayınlanmamış yüksek lisans tezi) [Conservation of intangible cultural heritage in the context of museology. (Unpublished master's thesis)]. Yıldız Teknik University, İstanbul.
- Çengelci, T. (2012). Sosyal bilgiler öğretim programında somut olmayan kültürel mirasın yeri [The place of intangible cultural heritage in social studies curriculum]. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, 25(1), 185-203.
- Çengelci, T. (2013). Sosyal bilgiler dersinde yararlanılan toplumsal ve kültürel kaynakların belirlenmesi [Determining the social and cultural resources used in the social studies lesson]. *Elektronik Sosyal Bilimler Dergisi*, 43(12), 219-236.
- Chmiliar, I. (2010). Multiple-case designs. A. J. Mills, G. Eurepas & E. Wiebe (Ed.), *Encyclopedia of case study research içinde* (s. 582-583). USA: SAGE Publications.
- Çulha-Özbaş, B. (2014). İlköğretim Sosyal Bilgiler derslerinde kültürel miras eğitimi [Cultural heritage education in primary school Social Studies lessons]. Safran, M. (Ed.), *Sosyal bilgiler öğretimi* [In social studies teaching](ss. 743-762) içinde. Ankara: Pegem Akademi.
- Demirezen, S., & Aktaş, G. (2020). Sosyal bilgiler öğretmenlerinin somut olmayan kültürel miras öğretimine ilişkin görüşlerinin belirlenmesi [Determining the views of social studies teachers on teaching intangible cultural heritage]. *Bayburt Eğitim Fakültesi Dergisi*, 15(30), 413-434. <https://doi.org/10.35675/befdergi.699782>
- Deveci, H. (2009). Sosyal bilgiler dersinde kültürden yararlanma: öğretmen adaylarının kültür portfolyolarının incelenmesi [Benefiting from culture in social studies lesson: Examining pre-service teachers' cultural portfolios]. *Elektronik Sosyal Bilimler Dergisi*, 8(28), 1-19.
- Ekiz, D. (2020). *Bilimsel araştırma yöntemleri* [Scientific research methods]. Ankara: Anı Yay.
- Erkuş, A. (2017). *Davranış bilimleri için bilimsel araştırma süreci* [Scientific research process for behavioral sciences]. Ankara: Seçkin Yayıncılık.
- Güngör, H., Mutlu-Öztürk, H., & Gülay-Ogelman, H. (2022). Metaphor analysis on the perceptions of preschool education teaching undergraduate students about the concept of "cultural heritage". *Manas Sosyal Araştırmalar Dergisi*, 11(2), 511-521.
- Haddad, N. A. (2014). *Heritage multimedia and children edutainment: Assessment and recommendations*. Advances in Multimedia.
- Hooper-Greenhill, E. (2004). Measuring learning outcomes in museums, archives and libraries: The learning impact research project (LIRP). *International Journal of Heritage Studies*, 10(2), 151-174.
- Hunter, K. (1988). *Heritage education in the social studies*. ERIC Digest.
- Hunter, K. (1992). A commitment to education: Designing a heritage education for National Trust: A final report. *Historic Preservation Forum*, 6(1), 15-20.
- Ivon, H., & Kuscevic, D. (2013). School and the cultural-heritage environment: Pedagogical, creative and artistic aspects. *CEPS journal*, 3(2), 29-50.
- Kailash, K. M. (2001). *Curriculum development for cultural heritage studies*. Retrieved from <https://ignca.gov.in/curriculum-development-for-cultural-heritage-studies>.
- Ministry of National Education [MoNE]. (2018). *Hayat bilgisi dersi öğretim programı (İlkokul 1,2 ve 3. sınıflar)* [Life science lesson curriculum (Primary school 1,2 and 3rd grades)]. Ankara: Millî Eğitim Bakanlığı Yayınları.

- Özünel-Ölçer, E. (2017). "A plan of action for people, planet and prosperity": A critical approach to the intangible cultural heritage and the 2030 sustainable development goals. *Milli Folklor Dergisi*, 15(116), 18-32.
- Şahin, S. K., & Güner, S. (2006, November). *Kültürel miras koruması ve sivil toplum örgütleri arasındaki ilişki* [Relationship between cultural heritage protection and non-governmental organizations]. Uluslararası Geleneksel Sanatlar Sempozyumu, İzmir.
- Scovazzi, T. (2015). Intangible Cultural Heritage as Defined in the 2003 UNESCO Convention. in Golinelli, G. M. (Ed.), *Cultural heritage and value creation: Towards new pathways* (p. 105-126). Springer, Switzerland.
- Sönmez, V. (2010). *Hayat Bilgisi öğretimi ve öğretmen kılavuzu: Yeni programa göre düzenlenmiş ders planı örnekleri* [Life science teaching and teacher's guide: Lesson plan examples arranged according to the new curriculum]. Ankara: Anı Yayıncılık.
- Taylor, K. (2004). Cultural heritage management: A possible role for charters and principles in Asia. *International Journal of Heritage Studies*, 10(5), 417-433.
- Uçar, M. (2014). Evaluation of the effectiveness of education on cultural property and conservation at primary school level and the contribution of non-governmental organizations to education. *Megaron*, 9(2), 85.
- Ulusoy, K. (2009). Evaluation of the teaching of culture and heritage learning area of Social Studies lesson by 4th and 5th grade students. *Akademik Bakış Uluslararası Hakemli Sosyal Bilimler e-Dergisi*, 18, 1-26.
- Yeşilbursa, C., & Uslu, S. (2014). The comparison of Turkish and American preservice social studies teachers' attitudes toward heritage education. *Turkish Studies*, 9(8), 879-891.
- Yılar, R. (2016). Investigations on the texts in primary school Turkish textbooks in terms of the values they convey. *Journal of Bayburt Education Faculty*, 11(2), 491-506.
- Yıldırım, G. (2021). Reflection of intangible cultural heritage in education programs: Life Science teaching. *Uluslararası Sosyal ve Eğitim Bilimleri Dergisi*, 16, 231-247. <https://doi.org/10.20860/ijoses.974198>