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The Review of Primary School Science Textbooks in the Context of Values

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Abstract. The first requirement for the elimination of social problems in a country is education. The curriculums, which are one of the concrete criteria of the quality of education, play an active role in achieving this goal. The gains in the curricula should include acquisitions aimed at reducing social problems. The permanence of early learning indicates the importance of including values in the gains, in other words, the implementation of value education. Reviewing the existing programs' gains is important in guiding the program developers and the textbooks towards including values education. This study examines the values in the primary school 3rd and 4th-grade science textbooks in the 2020-2021 academic year and determines their distributions and ratios. The study was carried out with document analysis, one of the qualitative research methods, and data were collected by descriptive content analysis from the relevant textbooks. The results showed that ten core values identified in the curricula are not adequately addressed and are unevenly distributed in the reviewed textbooks. Therefore, it is suggested that the core values identified for the content of the textbooks should be included at a sufficient level and that they should be distributed evenly.

Keywords. Science, value education, core value.

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Human beings can keep up with rapidly developing science and technology through education. Education, on the other hand, is provided only through qualified education and training programs. The curriculum is one of the concrete criteria of education and constitutes its cornerstone. Demirel (2010) defines the curriculum as "the mechanism of learning experiences provided through planned activities in and out of school."

Curriculums are the prerequisite for the preparation of textbooks. The curriculums determine the gains in the textbooks, the size of the fonts, the characteristics of the texts, and the visuals covered in the texts. The MoNE directive on the analysis and evaluation of textbooks and educational tools, published in the Journal of Notifications no 2597, states that course and student workbooks should be prepared considering the content, language, lecture & style, learning, teaching & measurement-evaluation, technique, design, and organization (Ministry of National Education [MoNE], 2007). The textbooks prepared according to these criteria were thought to be more qualified and explanatory. The updated curricula define the concept of value included in the textbooks as "An abstract measure to determine the importance of something; the value that something is worth, worthwhileness; the sum of the material and spiritual elements including the social, cultural, economic and scientific values of a nation" (Turkish Language Institution [TLI], 2021). Although value acquisition occurs at all ages, it is most important in primary education. Because the learning gained at a young age lasts for a lifetime. Value education in schools has always been important. However, values were not mentioned under the title "value education" in the curriculums before 2017-2018, and values were given through latent programs. The discipline approach in schools and society's expectations from school and teacher role models also necessitate value development (Akbaş, 2004). Increasing the importance given to the acquisition of national and spiritual values was emphasized as one of the reasons for the curriculum's renewal since 2017. The title "Values Education in Curriculum" was added to the beginning of the curriculum, and value education was mentioned (Tedmem, 2021). Ten core values (justice, friendship, honesty, self-control, patience, respect, love, responsibility, patriotism, and helpfulness) have been identified for the renewed curriculum that has been gradually implemented since 2018. These values will come to life in the learning-teaching process by addressing them alone, through associated sub-values and other core values (MoNE, 2018). The attitudes and behaviors associated with the core values added to the programs with the renewed curriculum are explained in the statement of the Board of Education. These attitudes and behaviors are worth justice; justice, equal treatment, sharing; friendship worth; altruism, trust, understanding, solidarity, loyalty, loyalty, cooperation; honesty

worth; being clear and understandable, being truthful, being reliable, keeping one's word; self-control worth; controlling their behavior, taking responsibility for their behavior, having self-confidence, apologizing when necessary; worth patience; being persistent, enduring, knowing how to wait; worthy of respect; to be humble, to treat others as one would like to be treated, to value other people's personalities, to observe the position, characteristics and condition of the interlocutor; worth love; giving importance to family unity, making sacrifices, trusting, being compassionate, being loyal; the value of responsibility; being responsible to himself, his environment, his country, his family; keeping their word, being consistent and reliable, taking on the consequences of their actions; patriotic worth; hardworking, solidarity, obeying the rules and laws, being loyal, sensitive to the historical and natural heritage, love for the society and benevolence; be generous, cooperate, be compassionate, be hospitable, share, etc. expressed as (TTKB, 2017). The Science textbooks, which is one of the courses taught in primary schools, should be reorganized in line with the title of "Values Education" brought with the 2017 draft curriculum, and the values included in the program as core values should be covered adequately in the visuals and texts of the textbooks. This study examines the values in the primary school 3rd and 4th-grade science textbooks in the 2020-2021 academic year and determines their distributions and ratios.

Method

Research Model

This study was conducted to determine the core values in the 3rd and 4th-grade science books of primary school and to examine the extent to which these values were included; the document analysis method was used. Document analysis is a qualitative research method used to analyze the content of written documents meticulously and systematically (Wach & Ward, 2013).

Scope of Study

The universe of the study consists of science textbooks taught in the 3rd and 4th grades in 2020-2021. The study sample consists of only MoNE publications among the science textbooks that the Ministry of National Education recommended to be taught for primary school's 3rd and 4th-grades in the 2020-2021 academic year.

Data Collection Tools

The core values included in the Science Curriculum and detailed by the Board of Education were taken as criteria, and a form was developed. The data obtained from the 3rd and 4th-grade science textbooks covered in the study were analyzed in this direction.

Process

Since the study's data sources are primary school science textbooks, the document analysis method was used as the data collection method. Document analysis involves document and archive reviews. In this method, the content of written documents is analyzed systematically (Wach & Ward, 2013). Some stages should be taken into account and followed in reviewing documents. These stages are: accessing the documents, checking the originality of the documents, understanding the documents, analyzing the data, and using the data (Yıldırım & Şimşek, 2016, p.94).

Data Analysis

The visuals and texts in the accessed books were matched in terms of the values and analyzed. The data collected by the document review were analyzed using the descriptive analysis technique. The main purpose of the descriptive analysis is to present the findings to the reader in a summarized and interpreted way (Özen & Hendekçi, 2016). In the study, the visuals and texts in the primary school science textbooks were addressed one by one. Core values, included in the science curriculum and detailed by the Board of Education and Discipline, are accepted as criteria. The data associated with the definitions of the values are presented in the tables. The answers to the subproblems, namely "The values included in the text and visuals" and "The frequency of the values included in the text and images" are given in tables, then analyzed and interpreted.

Results

In this section, the data obtained from the analysis of primary school's 3rd and 4th-grade science textbooks are presented and interpreted. The frequencies and percentages of the values covered in the primary school 3rd-grade science textbooks are given in Table1.

Table 1.

Frequencies and percentages of the values covered in the primary school 3rd-grade science textbooks

Values	f	%	Visual Expression	Written Expression
Justice	4	3.6	3	1
Friendship	5	4.5	5	0
Honesty	1	0.9	0	1
Self-control	13	11.7	4	9
Patience	0	0.0	0	0
Respect	9	8.1	7	2
Love	9	8.1	8	1
Responsibility	41	36.9	10	31
Patriotism	18	16.2	14	4
Helpfulness	11	9.9	4	7
Overall	111	100.0	55	56

Regarding the values in the primary school 3rd-grade science textbooks stated in Table 1, "responsibility" (36.9%), which was addressed with 41 expressions, is in the first place, followed by "Patriotism" (16.2%) addressed with 18 expressions, "self-control" (11.7%) with 13 expressions, "helpfulness" (9.9%) with 11 expressions, "love and respect" (8.1%) with 9 expressions, "friendship" (4.5%) with 5 expressions, "justice" (3.6%) with 4 expressions and "honesty" (0.9%) with 1 expression. Patience was not found in the written and visual expressions of the primary school 3rd-grade Science textbook. The findings regarding the core values specified in Table 1 are given below.

Justice

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 1 written and 3 visual expressions related to the justice value. In overall, justice was included 4 times (3.6%) in the 3rd-grade Science textbook. Justice is the seventh most mentioned value in the examined Science textbook. *The expression related to the justice value in the 3rd-grade Science textbook is as follows:*

"Let each of your group mates throws the ball up and catches the falling ball taking turns." This expression emphasizes justice by implying taking turns; therefore, it is associated with the equality sub-theme.

A visual related to the justice value in the 3rd-grade Science textbook is as follows:



Figure 1. Justice (Page 67).

Figure 1 shows that the teams are evenly distributed in the game; thus, it is associated with justice.

Friendship

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 5 visual expressions related to the friendship value but no written expression. In overall, friendship was included 5 times (4.5%) in the 3rd-grade Science textbook. Friendship is the sixth most mentioned value in the examined Science textbook.

A visual related to the friendship value in the 3rd-grade Science textbook is as follows:



Figure 2. Friendship (Page 56).

Figure 2 shows children happy to be together and play; thus, it is associated with friendship.

Honesty

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 1 written expression related to the honesty value but no visual expression. In overall, honesty was included once (0.9%) in the 3rd-grade Science textbook. Honesty is the eighth most mentioned value in the examined Science textbook.

The expression related to the honesty value in the 3rd-grade Science textbook is as follows:

"One day a child went home

There was no one at home.

He opened the closet

He thought that the medicine was sugar.

He eaten all, finished them,

The pain started in the evening

Do not do that either.

Do not think that the medicine is sugar...."

This expression emphasizes that students should be reliable; therefore, it is associated with honesty.

Self-control

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 9 written and 4 visual expressions related to the self-control value. In overall, self-control was included 13 times (11.7%) in the 3rd-grade Science textbook. Self-control is the 3rd most mentioned value in the examined Science textbook.

The expressions related to the self-control value in the 3rd-grade Science textbook are as follows:

"We should use natural resources sparingly." "We can contribute to the recycling of wastes." "We can walk to places within walking distance." "We can participate in environmental protection efforts." "We can support the efforts to protect the environment we live in." "We have to protect our potable water resources and avoid wasting water." "Other drivers should slow down and give way to the ambulance for the safety of the patient and the traffic." "I do not leave the water running while brushing my teeth." "When we come home from outside, we must wash our hands immediately." These expressions emphasize controlling the behaviors; therefore, they are associated with self-control.

A visual related to the self-control value in the 3rd-grade Science textbook is as follows:



Figure 3. Self-control (page 87).

Figure 3 illustrates how important it is to control their behavior and that if the behavior is not controlled, problems will arise; thus, it is associated with self-control.

Patience

Regarding the findings in Table 1, the 3rd-grade Science textbook contains no written and visual expressions related to the patience value.

Respect

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 2 written and 7 visual expressions related to the respect value. In overall, respect was included 9 times (8.1%) in the 3rd-grade Science textbook. Respect is the fifth most mentioned value in the examined Science textbook.

The expressions related to the respect value in the 3rd-grade Science textbook are as follows:

"Other drivers should slow down and give way to the ambulance for the safety of the patient and the traffic." "How do the drivers in traffic understand that the fire truck is coming and give way to it even though they do not see it coming behind them?" These expressions emphasize that drivers should treat others the way they would like others to treat them; therefore, it is associated with respect.

A visual related to the respect value in the 3rd-grade Science textbook is as follows:



Figure 4. Respect (page 49).

Figure 4 emphasizes respecting a living thing instead of harming it and not taking away its right to live by not plucking the flower; thus, it is associated with respect.

Love

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 1 written and 8 visual expressions related to the love value. In overall, love was included 9 times (8.1%) in the 3rd-grade Science textbook. Justice is the fifth most mentioned value in the examined Science textbook.

The expression related to the love value in the 3rd-grade Science textbook is as follows:

"To prevent this, protective child locks should be installed at the sockets in the houses." This act is for protecting the child, which is thought to imply love for the child; therefore, it is associated with love.

A visual related to the love value in the 3rd-grade Science textbook are as follows:



Figure 5. Love (page 190).

Figure 5 shows children happy to be together at school. It shows the love for school; thus, it is associated with love.

Responsibility

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 31 written and 10 visual expressions related to the responsibility value. In overall, responsibility was included 41 times (36.9%) in the 3rd-grade Science textbook. Responsibility is the most mentioned value in the examined Science textbook.

The expressions related to the responsibility value in the 3rd-grade Science textbook are as follows:

"Other drivers should slow down and give way to the ambulance for the safety of the patient and the traffic." This expression is associated with the theme that people should treat others the way they would like others to treat them; therefore, it involves responsibility.

"We must fulfill our responsibilities when working individually or in groups." This statement implies that people should undertake the consequences of situations they control in individual or group work; therefore, it is associated with responsibility.

"How do the drivers in traffic understand that the fire truck is coming and give way to it even though they do not see it coming behind them?" This expression implies that drivers take the consequences of the situations in which they will act consciously to save the lives and property of others and take control; therefore, it is associated with responsibility.

A visual related to the responsibility value in the 3rd-grade Science textbook are as follows:



Figure 6. Responsibility (page 151).

Figure 6 depicts a child getting up by herself when he hears the alarm sound without needing a family member's intervention; thus, it is associated with responsibility.

Patriotism

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 4 written and 14 visual expressions related to patriotism. In overall, patriotism was included 18 times (16.2%) in the 3rd-grade Science textbook. Patriotism is the second most mentioned value in the examined Science textbook.

The expressions related to the patriotism value in the 3rd-grade Science textbook are as follows:

"Other drivers should slow down and give way to the ambulance for the safety of the patient and the traffic." "How do the drivers in traffic understand that the fire truck is coming and give way to it even though they do not see it coming behind them?" These expressions are associated with the sub-theme of love for the individuals that constitute the society; therefore, they involve responsibility.

"Natural light sources are insufficient in the evenings and dark environments; therefore, people have produced their artificial light sources." "Ibn Sina tried to treat mental illness with music and developed some techniques." These statements emphasize the value of diligence, implying that people meet their own needs with their efforts, which is a sub-theme of patriotism.

A visual related to the patriotism value in the 3rd-grade Science textbook is as follows:



Figure 7. Patriotism (page 44).

Figure 7 shows folk dances from the national culture; thus, it is associated with patriotism.

Helpfulness

Regarding the findings in Table 1, the 3rd-grade Science textbook contains 7 written and 4 visual expressions related to the helpfulness value. In overall, helpfulness was included 11 times (9.9%) in the 3rd-grade Science textbook. Helpfulness is the 4th most mentioned value in the examined Science textbook.

The expressions related to the helpfulness value in the 3rd-grade Science textbook are as follows:

"Let's get help from our teacher while using scissors." "In case of any accident, we must inform our teacher immediately." "We should get help from our elders when removing and replacing the batteries of toy cars and inserting and removing batteries from the charger." " We can get a free battery collection box by contacting TAP. When our battery box is full, we can ship it free of charge and send it to TAP." "We should have the repair work done by specialists." "If someone tries to help the electrocuted person without turning the switches off, the helping person may also be electrocuted." "We should call the emergency services and report the situation." These statements emphasize that cooperation should be made with other individuals. Since cooperation is a sub-theme of helpfulness, these statements involve helpfulness.

A visual related to the helpfulness value in the 3rd-grade Science textbook is as follows:



Figure 8. Helpfulness (page 22).

Figure 8 emphasizes collaboration, which is one of the sub-themes of helpfulness; thus, it is associated with helpfulness. The frequencies and percentages of the values covered in the primary school 4th-grade science textbooks are given in Table 2:

Table 2.

Frequencies and percentages of the values covered in the primary school 4th-grade science textbooks

Values	f	%	Visual Expression	Written Expression
Justice	0	0.0	0	0
Friendship	1	1.4	0	1
Honesty	0	0.0	0	0

Self-control	3	4.1	1	2
Patience	0	0.0	0	0
Respect	1	1.4	0	1
Love	16	21.9	11	5
Responsibility	11	15.1	2	9
Patriotism	18	24.7	9	9
Helpfulness	23	31.5	8	15
	73	100.0	31	42

Regarding the values in the primary school 4th-grade science textbooks stated in Table 2, "helpfulness" (31.5%), which was addressed with 23 expressions, is in the first place, followed by "Patriotism" (24.7%) addressed with 18 expressions, "love" (%21.9) with 16 expressions, "responsibility" (%15.1) with 11 expressions, "self-control" (%4.1) with 3 expressions, "friendship and respect" (%1.4) with 1 expression. Justice, honesty, and patience were not mentioned in the written and visual expressions of the primary school 4th-grade science textbook. The findings regarding the core values specified in Table 2 are given below.

Justice

Regarding the findings in Table 2, the 4th-grade Science textbook contains no written and visual expressions related to the justice value.

Friendship

Regarding the findings in Table 2, the 4th-grade Science textbook contains 1 written expression related to the friendship value, whereas there is no visual expression. In overall, friendship was included once (1.4%) in the 4th-grade science textbook. Friendship is the sixth most mentioned value in the examined Science textbook.

The expression related to the friendship value in the 4th-grade Science textbook is as follows:

"My son went to visit a sick friend." Visiting a sick friend is thought to be related to the importance given to friendship; therefore, it is associated with friendship.

Honesty

Regarding the findings in Table 2, the 4th-grade Science textbook contains no written and visual expressions related to the honesty value.

Self-control

Regarding the findings in Table 2, the 4th-grade Science textbook contains 2 written and 1 visual expression related to the self-control value. In overall, self-control was included 3 times (4.1%) in the 4th-grade science textbook. Self-control is the fifth most mentioned value in the examined Science textbook.

The expressions related to the self-control value in the 4th-grade Science textbook are as follows:

"First of all, you should protect yourself; you should never stay in a smoking environment." "To protect our eye health, we should not look directly at the sun or other light sources." These statements emphasize that we should control our behaviors; therefore, they are associated with self-control.

A visual related to the self-control value in the 4th-grade Science textbook is as follows:



Figure 9. Self-control (page 193).

Figure 9 depicts an individual noticing and correcting a wrong sitting posture; thus, it is associated with self-control.

Patience

Regarding the findings in Table 2, the 4th-grade Science textbook contains no written and visual expressions related to the patience value.

Respect

Regarding the findings in Table 2, the 4th-grade Science textbook contains 1 written expression related to the respect value, whereas there is no visual expression. In overall, respect was included 1 time (1.4%) in the 4th-grade Science textbook. Respect is the sixth most mentioned value in the examined Science textbook.

The expression related to the respect value in the 4th-grade Science textbook is as follows:

"You should know your rights. You should know that harming others by smoking is a violation of rights, and you should inform your close circle about this." This statement emphasizes not to violate rights and to respect the rights of others; therefore, it is associated with respect.

Love

Regarding the findings in Table 2, the 4th-grade Science textbook contains 5 written and 11 visual expressions related to the love value. In overall, love was included 16 times (21.9%) in the 4th-grade science textbook. Love is the 3rd most mentioned value in the examined Science textbook.

The expressions related to the love value in the 4th-grade Science textbook are as follows:

"He hugs his grandmother, who opened the door." "Arda thought to make a puppet show for his family after dinner." "... their parents immediately take care by taking off his thick clothes." "We should prepare a shopping list as a family and take care to follow this list." "He caressed Tugba's head and thanked her for noticing the open faucet and turning it off." These statements refer to the relationships between family members. These are related to show care; therefore, they are associated with love.

A visual related to the love value in the 4th-grade Science textbook is as follows:



Figure 10. Love (page 69).

Figure 10 shows a child hugging his grandfather; thus, it is associated with love.

Responsibility

Regarding the findings in Table 2, the 4th-grade Science textbook contains 9 written and 2 visual expressions related to the responsibility value. In overall, responsibility was included 11 times (155.1%) in the 4th-grade science textbook. Responsibility is the 4th most mentioned value in the examined Science textbook.

The expressions related to the responsibility value in the 4th-grade Science textbook are as follows:

"Meryem and Ali talk with a food engineer for a research assignment on the naturalness and freshness of foods." "If we reuse the waste by recycling, nature and the environment will be less polluted." "If we use lighting tools economically, we will pay less for electricity bills. Thus, we will make serious benefits to the family and the country's budget. "We all have to prevent light pollution." "This is why we have to be very careful when consuming our resources. These seemingly endless resources are rapidly decreasing as a result of people's unconscious behavior. "We should prepare a shopping list as a family and take care to follow this list." "If we do not use our food sources in a balanced and careful way, we may face problems such as hunger in the future." These expressions in the 4th-grade science textbook emphasize knowing one's responsibilities, fulfilling one's duty, and accepting the consequences of situations resulting from their behavior; therefore, they are associated with responsibility

A visual related to the responsibility value in the 4th-grade Science textbook is as follows:



Figure 11. Responsibility (page 61).

Figure 11 shows two children taking help from an elder to do their homework in the best possible way. It emphasizes that they are aware of their homework and try to do their duty best; thus, it is associated with responsibility.

Patriotism

Regarding the findings in Table 2, the 4th-grade Science textbook contains 9 written and 9 visual expressions related to the patriotism value. In overall, patriotism was included 18 times (24.7%) in the 4th-grade Science textbook. Patriotism is the second most mentioned value in the examined Science textbook.

The expressions related to the patriotism value in the 4th grade Science textbook are as follows:

"The prevention of selling cigarettes to individuals under the age of 18 and broadcasting public service ads on television about the harms of smoking are some of the measures taken." "You should know your rights. You should know that harming others by smoking is a violation of rights, and you should inform your close circle about this." "We can contribute to the country's economy by throwing our waste into the bins separated for paper, bottle, battery, etc.." "If we use lighting tools economically, we will pay less for electricity bills. Thus, we will make serious benefits to the family and the country's budget." These expressions are associated with the sub-theme of love for society and the country's economy; therefore, they involve patriotism.

A visual related to the patriotism value in the 4th-grade Science textbook is as follows:



Figure 12. Patriotism (page 56).

Figure 12 shows a doctor who cares about society, works, does his job; thus, it is associated with patriotism.

Helpfulness

Regarding the findings in Table 2, the 4th-grade Science textbook contains 15 written and 8 visual expressions related to the helpfulness value. In overall, helpfulness was included 23 times (31.5%) in the 4th-grade science textbook. Helpfulness is the most mentioned value in the examined Science textbook.

The expressions related to the helpfulness value in the 4th-grade Science textbook are as follows:

"Let's mix some sand and iron powder with our teacher." "... let's divide it into two with the help of our teacher." "Meryem and Ali talked with a food engineer for a research assignment on the naturalness and freshness of foods." "You can also work for the benefit of society by joining the Green Crescent Club." "Tugba thought about what she could do to prevent the decrease of the most basic resources for our life. She decided to go to school and share this with her friends." "Let's form five groups to use the station technique." These expressions of the 4th-grade science textbook express the necessity and importance of cooperation. Since cooperation is a sub-theme of helpfulness, these statements are associated with helpfulness.

A visual related to the helpfulness value in the 4th-grade Science textbook is as follows:



Figure 13. Helpfulness (page 151).

Figure 13 shows a lady offering cologne to her guest. Hospitality is a sub-theme of helpfulness value; thus, it is associated with helpfulness.

Discussion and Conclusion

This study examined the visuals and texts in primary school 3rd- and 4th-grade Science textbooks regarding value education. The most emphasized values in the visual and text of the science textbooks are responsibility for 3rd-grades and helpfulness for 4th-grades. On the other hand, the least emphasized values are honesty for the 3rd-grades and friendship, respect, and self-control

for the 4th-grades. As a result, it was found that the visuals and texts in the textbook are not sufficient for the transfer of values. Regarding other studies in the literature, the same results are observed (Karagöz, 2009; Somuncu, 2008; Şen, 2008). Şen (2008) found that the texts are insufficient in processing values, and there is an imbalance in the distribution of values. Some values such as love, respect, and responsibility occupy a significant place, whereas some are not mentioned. Their findings are similar to the findings in our study. Somuncu (2008) stated that the authors do not write their texts for universal gain, but the texts selected for the textbooks should have such a concern, which supports the findings of this study. The conclusion that justice was not adequately addressed in Karagöz's (2009) study overlaps with the findings of this study. Yaşaroğlu (2013) reported that responsibility is the most emphasized value, and patience and honesty are missing. These results are also consistent with the findings of this study.

Külünkoğlu (2010) found that nature love was the most addressed value. Aktan (2014) reported that love, helpfulness, and respect were mentioned the most. Güzel (2013) found that the most emphasized values were love, responsibility, and giving importance to family unity. Gönen et al. (2011) stated that love, respect, solidarity, helpfulness, and honesty were the most frequently used values. According to Aktan and Padem's (2013) study, responsibility, helpfulness, and love values were emphasized the most. Aral (2008) found that patriotism, love, and respect were the most common values. The results of the study overlap with similar studies (Aktan, 2014; Aktan & Padem, 2013; Aral, 2008; Gönen et al., 2011; Güzel, 2013; Külünkoğlu, 2010). Şimşek (2017) found that diligence, love, sensitivity, and solidarity were the most common values. Patriotism was taken as a subcategory of helpfulness in Şimşek's study; therefore, these outcomes are in line with the findings of this study. The findings in the literature are generally similar to the findings of this study. It should be noted that some values are given more place, whereas some values are not included at all.

Recommendations

Based on the study results, it is suggested to give more place to *justice, friendship, honesty, patience, and love*, which are not or insufficiently included in the existing textbooks, by rearranging the texts and visuals of science textbooks. At the same time, it is suggested to clarify the connections between the texts and visuals in the science textbooks and the value expressions. These value expressions should be distributed evenly among the activities in the books.

For the researchers, it is recommended to analyze the visuals and expressions in first-and second-level Science textbooks in terms of values education and compare the differences and similarities of the results. In addition, science textbooks and other courses' textbooks may be examined in terms of values education, and the differences and similarities of the results may be compared. The books of different publishers for the 3rd- and 4th-grade Science courses should be analyzed to reveal the differences and similarities in including values.

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Conflict of Interest

It has been reported by the authors that there is no conflict of interest.

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Ethical Standards

Ethical Standards We have carried out the research within the framework of the Helsinki Declaration; the document analysis was carried out in this research.

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References

- Akbaş, O. (2004). *Türk milli eğitim sisteminin duyuşsal amalarının (değerlerinin) ilköğretim II. kademedeki gerekleşme derecesinin deęerlendirilmesi* [Unpublished doctoral dissertation]. Gazi Üniversitesi.
- Aktan, O., & Padem, S. (2013). İlköğretim 5. sınıf sosyal bilgiler ders kitabında kullanılan okuma metinlerinde yer alan deęerler. *Asya Öğretim Dergisi*, 1(2), 44-55.
- Aktan, O. (2014). 100 Temel eserde yer alan deęerlerle din kültürü ve ahlak bilgisi öğretim programındaki deęerlerin uyumu. *Asya Öğretim Dergisi*, 2(1), 64-76.
- Aral, D. (2008). *Milli Eğitim Bakanlığı'nın hazırladığı 6. sınıf türke ders kitabında yer alan deęerler üzerine bir araştırma* [Unpublished master thesis]. Abant İzzet Baysal Üniversitesi.
- Demiray, K., Köker, Ö. (2019). *3. sınıf fen bilimleri ders kitabı* (1. baskı). Ankara: Milli Eğitim Bakanlığı.
- Demirel, Ö. (2010). *Eğitimde program geliştirme*. Ankara: Pegem Akademi.
- Gönen, M., Katrancı, M., Uygun, M., & Uuş, Ş. (2011). İlköğretim birinci kademe öğrencilerine yönelik çocuk kitaplarının, içerik, resimleme, fiziksel özellikleri açısından incelenmesi. *Eğitim ve Bilim*, 36 (160), 250-265.
- Güzel, D. (2013). *3. sınıf hayat bilgisi ders kitaplarının temel evrensel deęerleri içermesi bakımından incelenmesi* [Unpublished master thesis]. Çanakkale Onsekiz Mart Üniversitesi.
- Karagöz, B. (2009). *Yapılandırmaı yaklaşıma göre ilköğretim 6 ve 7. sınıf türke ders kitaplarındaki deęerlerin incelenmesi* (Muęla ili örneęi) [Unpublished master thesis]. Muęla Üniversitesi.
- Külünkoęlu, T. (2010). *İlköğretim birinci kademe türke ders kitaplarındaki metinlerin iletteęi deęerler açısından incelenmesi*. [Unpublished master thesis]. Atatürk Üniversitesi.
- MEB. (2007). Ders kitapları ile eğitim araçlarının incelenmesi ve deęerlendirilmesine ilişkin yönerge. *Tebliğler Dergisi*, 70 (2597). <http://mevzuat.meb.gov.tr/dosyalar/588.pdf>
- MEB (2018). *Fen bilimleri dersi öğretim programı*. Ankara: Milli Eğitim Bakanlığı.
- Özen, F., & Hendeki Arslan, E. (2016). Türkiye'de eğitim denetimi alanında 2005–2015 yılları arasında yayımlanan makale ve tezlerin betimsel analizi. *Uluslararası Toplum Araştırmaları Dergisi*, 6 (11), 621-650.
- Somuncu, S. (2010). İlköğretim türke ders kitabındaki edebî metinlerin içerdeęi evrensel deęerlere ve metin seçimine ilişkin bazı tespitler. *Seluk Üniversitesi Edebiyat Fakültesi Dergisi (SEFAD)*, (24), 193-219.
- Şen, Ü. (2008). Altıncı sınıf türke ders kitaplarındaki metinlerin iletteęi deęerler açısından incelenmesi. *Uluslararası Sosyal Araştırmalar Dergisi*, 1(5), 763-779.
- Şimşek, Ş. (2017). Türke ders kitaplarındaki okuma metinlerinde karakter eğitimi. *Uluslararası Eğitim Bilimleri Dergisi*, 4(13), 357-364.
- Talim Terbiye Kurulu Başkanlığı (2017). *Müfredatta Yenileme ve Deęişiklik Çalışmalarımız Üzerine*. https://ttkb.meb.gov.tr/meb_iys_dosyalar/2017_07/18160003_basin_aciklamasi-program.pdf
- TDK (2021). <https://sozluk.gov.tr/>.
- TED (2021). *Öğretim Programı Taslaklarında Deęerler Eğitimi*.

<https://tedmem.org/mem-notlari/gorus/ogretim-programi-taslaklarinda-degerler-egitimi>.

- Wach, E., & Ward R. (2013). *Learning about qualitative document analysis*. Institute of Development Studies, Brighton.
- Yaman, E., Akan, R., Doğan, M. ve Sarı, Ö. (2019). 4. sınıf fen bilimleri ders kitabı (2.B.). Ankara: Milli Eğitim Bakanlığı.
- Yaşaroğlu, C. (2013). Hayat bilgisi dersi kazanımlarının değerler eğitimi açısından incelenmesi. *Journal of Turkish Studies*, 8(7), 849-858.
- Yıldırım, A., & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin Yayıncılık.