

# Secondary school students' metaphoric perceptions of values related to the concept of sustainable consumption\*<sup>1</sup>

Journal of Innovative Research in Teacher

Education, 5(1), 75-93,

ISSN: 2757-6116

<http://www.jirte.org>

DOI: 10.29329/jirte.2024.650.5

Received: 28/12/2023

Revised: 01/03/2024

Accepted: 16/03/2024

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## Abstract

This study explores the acquisition of sustainable consumption behavior among secondary school students by investigating their perceptions of values such as responsibility, sensitivity, and saving within the Social Studies curriculum. The research employs an interpretive (hermeneutic) approach within qualitative research methods. The study involved 205 students enrolled in secondary schools in the Antalya province during the fall semester of the 2023-2024 academic year, selected through the convenience sampling method. To gather data, the researchers administered the "Metaphor Form for Sustainable Consumption Values of Secondary School Students." Through this form, students were prompted with three questions structured as "Responsibility / Sensitivity / Saving is similar to..." followed by "...Because..." The collected data underwent content analysis to discern students' perceptions. The study's findings indicate that students predominantly associated the value of responsibility with metaphors such as duty, homework, mother, life, and father. Likewise, the value of sensitivity was expressed through metaphors encompassing empathy, help, mothering, respect, love, and kindness. Additionally, the value of saving was predominantly associated with metaphors involving water, money, father, and piggy bank. However, a noteworthy observation emerged as students struggled to establish a connection or relationship between these values and the concept of sustainable consumption. In light of this, the study recommends incorporating the concept of sustainable consumption into the content of the social studies course, specifically emphasizing its relevance to the values of responsibility, sensitivity, and saving. This suggestion aims to enhance students' understanding and awareness of the interconnectedness between these values and sustainable consumption practices.

**Keywords:** Metaphor, Phenomenology, Value, Sustainable Consumption.

**Cite:** Duygu, H., & Ersoy, F. (2024). Secondary school students' metaphoric perceptions of values related to the concept of sustainable consumption. *Journal of Innovative Research in Teacher Education*, 5(1), 75-93. <https://doi.org/10.29329/jirte.2024.650.5>

\* The preliminary version of paper was presented as an oral presentation at the V. International Geography Education Congress held in Antalya on 5-8 October 2023.

<sup>1</sup> This research was approved by the decision of Non-Interventional Clinical Research Ethics Committee of Burdur Mehmet Akif Ersoy University on 06.09.2023, with meeting number 2023/09 and decision number 2023/451

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## INTRODUCTION

Metaphors are interpretation and concretization tools that we frequently use consciously and unconsciously in our daily lives to organize cognitive processes through analogies in understanding concepts (Aykaç & Çelik, 2014, p. 326). Metaphors connect abstract ideas and information to more concrete experiences so that these experiences become more familiar and understandable. Moreover, metaphors are more than symbolic intellectual processes. They influence the conceptual understanding of our experiences and help to describe our daily realities (Godor, 2019, p. 51). With these features, metaphors are effectively used in education and training.

In the contemporary world, the depletion of natural and human resources is occurring at an alarming rate, giving rise to social and environmental challenges such as hunger, thirst, environmental pollution, global warming, and income inequality. There is a growing emphasis on sustainable consumption studies to address these issues, focusing on consumers as the primary actors (Atrek & Madran, 2017, p. 3). Recognized as a crucial value for the sustainability of human life, states and international organizations stress the significance of individuals and societies consuming natural and human resources judiciously, with a commitment to preserving them for future generations. In the pursuit of sustainable social life, individuals bear substantial responsibilities and duties, particularly in safeguarding, regulating, and advancing the rights of others. Moreover, individuals are expected to act responsibly and conscientiously in various aspects of life, including communication, interaction, production, and consumption (Güzel-Candan et al., 2014, p. 135). This underscores the imperative for individuals to play an active role in promoting sustainability, not only for their benefit but also for the collective well-being of society and the preservation of the planet's resources for future generations.

Individuals and societies have moral values such as honesty, respect, favor, love, etc. In this context, the concepts of behavior, value, and morality complement each other (Esemen, 2020, p. 90). The education of all these values and behaviors is an intertwined process with the individual's life, starting with the family and continuing with the school (Öztekin-Ağır, 2017, p. 15). Education and training activities positively shape the perceptions and behaviors of individuals and, therefore, societies on moral, economic, environmental, etc. values. For humanity to have sufficient natural and human resources in the future, individuals of all ages today need to gain awareness of consumption, responsibility, sensitivity, and savings in their behavior through various means, especially education.

The evolving paradigm of education and training increasingly emphasizes not only the transmission of knowledge but also the preparation of students for real-life challenges. In the current Turkish social studies curriculum, economic topics are mostly included in the 'production, distribution and consumption' learning area. The aim of teaching economic concepts is to acquire skills in research, decision-making, financial literacy, self-regulation, innovation and entrepreneurship, as well as values of responsibility and saving (Dere & Aktaşlı, 2019, p. 285). The 2018 Social Studies Curriculum underscores the importance of fostering a sustainable understanding of the environment and consumption among students. Specific program objectives aim to cultivate students' sensitivity to limited natural resources and the environment. In the learning area of "Production, Distribution, and Consumption," the curriculum endeavors to instill in students the recognition of resource limitations, the significance of preserving existing resources, and the understanding that proactive efforts are required to enhance personal and national economic conditions. An illustrative learning outcome within this context is "analyzing the effects of unconscious consumption of resources on living life" (Ministry of National Education [MoNE], 2018, p. 21). Upon examining the values embedded in the 2018 Social Studies Curriculum in correlation with these objectives, it is evident that responsibility, sensitivity, and savings are intricately connected to sustainable consumption. These values are imparted to secondary school students through the Social Studies course, reflecting a holistic approach to education that integrates ethical values with environmental and economic awareness.

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### **The concept of sustainable consumption**

Research shows that global environmental, economic, and social challenges resulting from human interactions negatively affect the quality of life on the planet (Gibbs, 2021, p. 5). Consumption activities are increasing rapidly due to population growth and socioeconomic developments from the past to the present. This situation reveals the importance of sustainable consumption of resources. Sustainable consumption was defined at the Oslo Symposium in 1994 and by the Norwegian Ministry of the Environment. Accordingly, sustainable consumption uses natural resources and toxic substances that meet basic needs and provide a better quality of life that does not endanger the needs of future generations (United Nations Environment Programme [UNEP], 2015, p. 9). Consumption activities are realized more sustainably if conscious consumers use products and services. Conscious consumers are defined as individuals who perform their consumption behavior by considering the balance between need and waste, who can distinguish their wants and needs correctly, who can analyze the nature-environment-society relationship regarding the products they purchase, and who know and practice their citizenship rights (Baş & Duran, 2022, p. 33). Conscious consumers realize socially responsible consumption by incorporating social and environmental concerns into their preferences (Gonzalez et al., 2009, p. 25). Consumers need to acquire values, skills, and habits at an early age to become conscious. Education and training activities play an active role in gaining this awareness and responsibility. Individuals are raised as citizens who make conscious and sustainable consumption, especially through the social studies course (Aktaşlı & Dere, 2020, p. 254).

The concept of sustainable consumption is widely recognized in the literature as the utilization of resources by current generations while preserving them for the benefit of future generations. Sustainable consumption entails utilizing resources that allow individuals to operate within the sustainability framework, acknowledging the finite nature of resources while satisfying their needs (Akdoğan, 2023, p. 51). Against the backdrop of escalating consumption of natural and human resources in recent years, there has been an increased discourse on potential plans and solutions for fostering sustainable use and consumption behaviors (Göcen & Şahin, 2021, p. 1355). Sustainability has increasingly become a "magic formula" suitable for steering social change in the right direction for all components. Therefore, this formula has become an important requirement for the behavior of all social groups (Balderjahn et al. 2013, p.181).

Based on the literature review on sustainability and sustainable consumption, Lim (2017, p.71) bases sustainable consumption on the ideologies of progress and rationality. According to him, sustainable consumption is an adaptable and balanced consumption that meets the basic needs of the current generation. It does not impoverish future generations and does not cause irreversible damage to the environment. It does not cause loss of function in natural systems (ecological and human value systems; environmental and social responsibility). It also increases resource use efficiency and quality of life. It prevents consumerism and modern overconsumption.

The imperative to shift consumption behavior towards a more sustainable approach is crucial in addressing our planet's ecological crisis. Researchers such as Dermody et al. (2015) highlight three primary reasons why citizens can readily adopt sustainable consumption behavior:

- I. Improving the quality of life of people living on the planet by equalizing the distribution of resources.
- II. Integrating the needs of future generations into today's choices, using resources in a measured way.
- III. Reducing the negative environmental impact of excessive consumption to minimize ecological destruction significantly.

Upon closer examination, it becomes evident that these reasons align well with the objectives and content of the Social Studies course. Consequently, instilling sustainable consumption behavior through the Social Studies curriculum holds paramount significance in ensuring a sustainable future for humanity, as the children of the present generation will grow to become adult citizens of the future. Nurturing them as individuals equipped with advanced critical thinking, problem-solving, and decision-making skills is imperative. This approach is essential for fostering the development of healthy and productive individuals and, in turn, contributing to the sustainability of our planet (Aquino, 2018, p. 19).

### **Responsibility Value**

The value of responsibility can be defined as an individual's awareness of the duties expected from them by their environment and the subsequent action by their situation, in harmony with their self (Onay, 2021, p. 32). The prosperity of a society hinges on individuals who assume responsibility for national and global values. Consequently, the Turkish education system endeavors to equip each individual with the values, competencies, and behaviors essential for the future of society. In addition to this objective, a fundamental task of the education system is to instil in the new generation the values, habits, and behaviors anticipated by society and the global environment in which they reside (MoNE, 2018, p. 4).

Responsibility is a prominent value among citizenship values. Individuals who feel responsible as citizens are motivated to take action and thus participate in individual and social problems. For responsible individuals, values such as equality, freedom, helpfulness, sharing, solidarity, patriotism, altruism, and compassion are indispensable. Citizens who are literate in rights and responsibilities will carry the necessary responsibility for individual and social issues using their knowledge and skills (Dere & Gökçinar, 2022, p. 21).

One of the specific aims of responsibility value education is to help students understand that our social responsibilities go beyond local and national borders (Zajda, 2014, p. 5). In this context, the Social Studies course aims to raise individuals who protect their homeland, nation, cultural, historical, geographical, and spiritual heritage, such as flag and language, through values education. All these material and spiritual heritage can be used sustainably and passed on to future generations through individuals with the value of responsibility. The concepts of responsibility and sustainable consumption complement each other. In the Turkish education system, the Social Studies course is one of the disciplines in which this value and concept are taught to students.

### **Sensitivity Value**

In the 2018 Social Studies Course Program's special objectives, students are expected to grow as individuals who show sensitivity to issues concerning their country and the world by adopting national, spiritual, and universal values (MoNE, 2018, p. 8). The value of sensitivity, which is one of these values, can be defined as not being indifferent to the events that occur in the immediate and distant environment or in the country and the world where we live and to show the necessary reaction (Yılar et al., 2022, p. 436). Based on this definition, the value of sensitivity is closely related to the purpose and content of the social studies course. Sensitivity value is included in the social studies course curriculum in detail as sensitivity to historical and cultural heritage and sensitivity to the natural environment (Güçlü, 2019). The social studies course aims to raise sensitive individuals who shape their behaviors by considering the sustainability of human life today and in the future. It is considered necessary for human beings, who meet their unlimited desires by using natural and human resources, to avoid waste, both

for their own lives and for future generations to live a spacious life (Taş, 2012, p. 19). In this context, the social studies course aims to gain sensitive value and the benefit of sustainable consumption behavior for humanity's future overlap.

## **Savings Value**

The value of saving is characterized by thoughtful planning for the future while utilizing existing resources and taking precautions against potential negative outcomes in the consumption process (Çam et al., 2020, p. 350). Saving consciousness entails utilizing resources judiciously in alignment with one's needs and cultivating this approach as a behavioral norm (Taş, 2012, p. 18). As evident from these definitions, the value of saving is inherently linked to the concept of sustainable consumption. Practicing thriftiness facilitates the sustainable utilization of consumed resources, making it possible to meet needs without unnecessary waste. Imparting the value of saving to future generations holds immense significance in ensuring sustainable consumption. In Turkey, educational activities, particularly within the context of Social Studies courses, play a pivotal role in instilling the value of saving and promoting sustainable consumption.

## **Research on Metaphors in the Field of Education**

Metaphors have proven effective tools in educational research globally and in Turkey. Upon reviewing various studies in the field, it is evident that the focus is often on the metaphorical perceptions of teachers and students. For example, Aktepe et al. (2020), Bolat (2020), Çakmak et al. (2017), Çelik and Doğan-Kahtalı (2022), Kıyanççek (2020), Şekerci and Doğan (2020), Ünalmiş et al. (2023), Yalçın and Güleç (2022) examined students' metaphorical perceptions in various disciplines. In addition, Dere (2019), Faiz and Karasu-Avcı (2019), Kartal and Ergün (2022), Öztaş (2020), Pürsün et al. (2021), Seyhan (2019), Salur (2023), Torun and Şahin (2023), Uzunöz et al. (2020), Yılar et al. (2022) focused on prospective teachers' metaphorical perceptions. Susar-Kırmızı and Tarhan (2020) examined teachers' metaphorical perceptions. Çelik and Güleç (2022) examined doctoral theses in the field of social studies education in terms of values. In his doctoral thesis Yontar (2013), discussed the relationship between the responsibility value and empathy skills that are aimed to be gained in the social studies program. Many other studies have been conducted in the field of education in the literature (Chimbi & Jita, 2023; Fábíán, 2013; Neuman & Guterman, 2018; Nikitina & Furuoka, 2011; Orifjonovich, 2023; Zhu et al., 2019).

Gezer (2020) conducted a thematic content analysis of metaphor studies in the field of social studies education in Turkey, analyzing 28 articles and 13 thesis studies published between 2017 and 2020. Another noteworthy work is by Sönmez and Özer-Aytekin (2020), who explored trends in metaphor research in the broader field of education using content analysis. Their research involved the analysis of 259 articles in journals screened by ULAKBİM between 2016 and 2018, examining characteristics such as publication year, language, research method and design, data collection tools, and validity and reliability methods. These studies contribute to understanding how metaphors are utilized and studied within the educational context. Indeed, in the literature, some studies delve into metaphors and perceptions related to sustainable consumption. Notably, studies by Cici-Karaboğa (2022), Ağlargöz (2022), and Hamşioğlu (2020) stand out in this regard.

Despite of many studies, there is no study in social studies education related to sustainable consumption and the values of responsibility, sensitivity and savings that support sustainable consumption behaviors. This study was carried out to explore secondary school students' perceptions of responsibility sensitivity and savings values as values related to the concept of sustainable consumption in the content of the 2018 Social Studies Course Curriculum. Exploring perceptions will shed on the current situation. It is thought that a more sustainable future can exist if today's students are taught these values and sustainable consumption behavior. In line with this aim and target, answers were sought to the following questions:

- I. What metaphors did secondary school students articulate regarding the values of "responsibility," "sensitivity," and "saving"?
- II. What categories can be derived from the metaphors expressed by secondary school students concerning the values of "responsibility," "sensitivity," and "saving"?

## METHOD

In this study, a hermeneutic qualitative research approach was employed to elucidate secondary school students' perceptions regarding the values of responsibility, sensitivity, and saving within sustainable consumption, as covered in the Social Studies course. The hermeneutic research approach is rooted in the understanding of describing, comprehending, and interpreting a singular event or reality from various perspectives (Merriam, 2009). This approach reveals natural constraints in elucidating knowledge and phenomena related to the social world. Researchers, teachers, and students utilize the hermeneutic research approach to unveil the nature of intellectual pursuits (Kissack, 2002, p. 177).

In this study, metaphors were employed to transform the phenomenon associated with the values of responsibility, sensitivity, and saving—integral to sustainable consumption—from the abstract cognitive structures of students into concrete categories. This method facilitated understanding the meanings attributed to the phenomenon and organizing them into categories. To achieve this objective, students were presented with open-ended questions, such as "Responsibility / Sensitivity / Saving is similar to .... Because ...". These open-ended questions were posed to elicit responses. Based on the obtained answers, an attempt was made to comprehensively unveil students' perceptions regarding the values of responsibility, sensitivity, and saving within sustainable consumption.

### The Working Group

The research encompassed a study group comprising 205 5th, 6th, 7th, and 8th-grade students, all enrolled in secondary schools within the Alanya district of Antalya province. Participants were selected using the easily accessible sampling method, as it made the research practical in terms of time and cost. Demographic details of the participating students are outlined in the table below.

**Table 1.** Demographic Information of the Students Participating In the Study

Class Level	Male	Female	Total
Grade 5	22	31	53
Grade 6	29	28	57
Grade 7	33	18	51
Grade 8	16	28	44
<b>Total</b>	100	105	205

### Data Collection Tools

The data for the study was collected using the "Metaphor Form for Middle School Students' Sustainable Consumption Values," prepared by the researchers by scientific processes. At the beginning of this form, students are provided with instructions about the research and the form. The form consists of three sections: demographic information, metaphor examples, and metaphor questions. Through the form, qualitative data regarding the metaphors created by students and demographic information were obtained. Students were asked open-ended questions such as "Similar to Responsibility / Sensitivity / Conservation..., because..." These questions aimed to prompt students to create metaphors related to the values of responsibility, sensitivity, and conservation associated with sustainable consumption and to express their justifications.

Before the data collection process, necessary research permissions were obtained. Ethical approval for this study was obtained from the Non-Interventional Clinical Research Ethics Committee of Burdur Mehmet Akif Ersoy University on 06.09.2023, with meeting number 2023/09 and decision number 2023/451. Additionally, permission was obtained from the Antalya Provincial Directorate of National

Education to initiate the data collection process during the fall semester of the 2023-2024 academic year. Initially, a pilot implementation was conducted with 48 students in two classes selected from a voluntary school. The data obtained during the implementation provided significant feedback regarding the clarity of the form. The main study data were collected in different voluntary schools that agreed to participate in the research. In determining the schools for data collection, discussions were held first with the school administration and social studies teacher to decide which branches of classes at different levels would implement the form. Care was taken to ensure that the selected class had an average level of academic success. The Metaphor Form for Middle School Students' Sustainable Consumption Values and the implementation process were initially explained to the teacher. The social studies teacher of the class implemented this form within one class hour in a safe and conducive classroom environment, initially by explaining the instructions. The data collection sessions lasted approximately 30-35 minutes.

## Data Analysis

The data obtained through the metaphor form administered to the students was subjected to content analysis in accordance with a hermeneutic research approach. Within the scope of content analysis, students' responses were bracketed, similar data were grouped together based on specific concepts and themes, and interpreted in a manner comprehensible to the reader (Yıldırım & Şimşek, 2018, p. 242). The first step in data analysis involved coding each form, for example, K1 for participant 1, K2 for participant 2, etc. Secondly, the responses in the form were transferred in full text to an Excel program by the researchers. Analyses were conducted based on this text. In this context, the concepts in the students' responses were considered as codes. Similar codes were grouped together to create categories. Frequencies (f) were calculated according to these categories. Codes and categories were systematically presented in tables in the findings section. Noteworthy findings among the metaphors expressed by the students were analyzed descriptively. In this context, the findings were explained with direct quotations.

Due to the subject of this research, metaphors can be seen as a powerful way to reveal students' perceptions of the subject (Patton, 2014, p.504). In order to explain student perceptions as objectively as possible, the researchers created concepts during the coding phase based on student responses. Collaboratively, during the data analysis and interpretation process, the researchers conducted three planned meetings consisting of at least two sessions each and one panel. Throughout all stages of the research, including defining the problem situation, determining the method, preparing the metaphor form, obtaining necessary permissions, data collection and analysis, and reporting the results, the researchers collaborated closely.

## FINDINGS

The opinions obtained from students through the metaphor form in the study were categorized separately, addressing responsibility, sensitivity, and saving values. The information is presented and interpreted in the tables below.

**Table 2.** Secondary School Students' Metaphors about the Value of Responsibility

Metaphor	Frequency	Metaphor	Frequency	Metaphor	Frequency
Task/Job	31	Profession	2	Order	1
Homework	13	Column (building)	2	Right	1
Mother	10	Sea	2	Mother's love	1
Life /Living	7	Forest	1	Air	1
Father	7	Working	1	Future	1
Student	5	Outfit	1	Cat	1
Ant	4	Glass cup	1	Pages of the book	1
Teacher	4	Food	1	Mountain	1
Flower	4	Cooking	1	Car	1
Load	3	Electricity	1	Respect	1
Water	3	Fruit	1	The Game	1

School	3	Boomerang	1	Breathing	1
Family	3	Rusted bicycle	1	Weight	1
Bee	3	Recycling	1	Pool	1
Bird (mother)	2	Fire	1	Love	1
Lion	2	Understanding	1	Lawyer	1
Clock	2	Animal	1	Backpack	1
Human	2	Garbage	1	Sun	1
Bottomless pit	2	Sapling	1	Brain	1
Tree sprout	2	Truck	1		
Total				59	154

Table 2 shows that out of the participating students in the study, 154 generated a metaphor associated with the value of responsibility. These students collectively produced 59 distinct metaphors. Conversely, 51 students opted to define the value of responsibility directly or provided information about it, such as "obeying the classroom rule" or "being organized at work." The most prevalent perception of responsibility among students is duty or work (31), potentially influenced by the definition of responsibility in the 5th-grade Social Studies course content. Furthermore, students predominantly crafted metaphors related to homework (13), mother (10), life (7), father (7), student (5), ant (4), teacher (4), flower (4), burden (3), water (3), school (3), family (3), bee (3), bird (2), lion (2), clock (2), human (2), bottomless well (2), tree sprout (2), profession (2), column (2), sea (2). In addition, students devised metaphors like "forest, work, clothes, food, recycling, fire, garbage, air, breathing, love, brain" concerning the value of responsibility.

**Table 3.** Categories Related to Secondary School Students' Perceptions of Responsibility Value

Category	Examples of metaphors related to the category
<b>Responsibility as action/work</b>	Duty, Homework, Work, Burden, Work, Cooking
<b>Responsibility as a profession/role</b>	Mother, Father, Student, Teacher, Lawyer, Family, Profession
<b>Responsibility as life/life</b>	Life, Human, Tree sprout, Lion, Flower, Bee, Ant, Sapling, Cat, Breathing, Sun, Brain

Table 3 illustrates that students perceive the value of responsibility in three main categories: responsibility as action/job, responsibility as profession/role, and responsibility as life/life. Here are some examples of students' views on the value of responsibility:

The student participants predominantly perceived the value of responsibility as an action, job, task, or assignment that requires considerable effort. For instance, P7 characterizes responsibility as a job that needs to be done, stating, "Responsibility is our duties, the work that we need to do." Similarly, P1 expresses, "Responsibility is like people's work. Because people are happy and peaceful when they do them." Moreover, P93 notes, "There are difficult tasks and easy tasks as our responsibilities. We have to fulfill those tasks in every way," indicating that he views the value of responsibility as a job or duty. Students who created metaphors related to homework consistently mentioned in their comments that neglecting their homework or failing to fulfill their responsibilities would lead to various problems. For instance, P40 articulates, "Responsibility is like homework. Because if we do not do our homework, we cannot do it, and other responsibilities are the same." Additionally, P8 emphasizes, "Responsibility is like homework. Because we should do our homework without fail," providing another example of this perspective.

Students who perceive the value of responsibility as a profession or role often highlighted the responsibilities of parents in their comments. Here are examples of some students' perceptions, comments, and justifications regarding the value of responsibility as a profession/role:

P50: "Mothers usually take care of their children. Fathers work somewhere and take care of the needs of the house. These are the responsibilities of mothers and fathers" and identifies the value of responsibility

with the role of mother and father. P121, on the other hand, likens the value of responsibility to the teaching profession with the statement, "Teachers remember their responsibilities and fulfill them no matter what." In addition to these examples, P174 stated, "My father fulfills his responsibilities very well." Again, P40's statement, "Our parents fulfill their responsibilities towards us," exemplifies this situation. Some students perceived the value of responsibility as life itself. According to these students, responsibility is equivalent to survival. For example, P99's statement, "Responsibility is like breathing because you have to do it," exemplifies this perspective. Similarly, P76 compares responsibility to the brain, stating, "Responsibility is like the brain. There is no human being without it; there should not be a human being without it," viewing the value of responsibility as integral to living life. Furthermore, P187 expresses, "Responsibility is like an ant. Because it always works and fulfills its responsibility." P3's statement, "A bee fulfills its responsibilities by collecting honey from many flowers," also exemplifies this perception.

**Table 4.** Secondary School Students' Metaphors about the Value of Sensitivity

<b>Metaphor</b>	<b>f</b>	<b>Metaphor</b>	<b>f</b>	<b>Metaphor</b>	<b>f</b>
Empathy	17	Friendship	2	Factory	1
Helping	14	Mercy	2	Flower	1
Mother	14	Living things	2	Generosity	1
Respect	11	Teacher	2	Care	1
Love	9	Cleaner	2	Ear and mouth	1
Favor	7	Friend	2	Doctor	1
Father	6	Tolerance	2	Solidarity	1
Human	6	Helping	1	Patience	1
Listening	6	bell	1	Fire	1
Animal Adoption	5	Soup kitchen	1	Sadness	1
Feeling/emotion	5	Herb	1	Nature	1
Water	5	Soil	1	Health employee	1
Protecting the environment	3	Ant	1	Spark	1
Friend	3	Bandage	1	Human heart	1
Brother	3	World	1	Beauty	1
Ataturk	2	Forest	1	Not keeping silent	1
Bird	2	Hour	1	Polar bear	1
Family	2	Needle	1	Thorn	1
Moon	2	Soil	1	Rain	1
Interest	2	Fire Department	1	Magnet	1
Child	2	Donation	1		
Total				62	174

Upon examining Table 4, it is evident that 174 students in the study generated 62 distinct metaphors related to the value of sensitivity. Additionally, 31 students provided definitions or wrote information about the sensitivity value, such as "being kind to a person" or "not throwing garbage on the ground." Notably, students most frequently (17 times) likened the value of sensitivity to the metaphor of empathy. The second most common metaphor (14 times) was helping a mother. Furthermore, students predominantly crafted metaphors representing respect (11), love (9), kindness (7), father (6), human (6), adopting an animal (5), emotion/feeling (5), and water (5). Other metaphors included protecting the environment (3), friend (3), brother (3), Atatürk (2), bird (2), family (2), moon (2), interest (2), child (2), friendship (2), compassion (2), living creatures (2), teacher (2), cleaner (2), tolerance (2), and friend (2). Additionally, students created metaphors such as clock, donation, human heart, spark, solidarity, patience, and rain.

**Table 5.** Categories Related to Secondary School Students' Perceptions of the Value of Sensitivity

Category	Examples of metaphors related to the category
<b>Sensitivity as helping</b>	Empathy, Listening, Help, Care, Concern, Friend, Kindness, Tolerance, Caring, Human heart, Solidarity, Donation
<b>Sensitivity as a profession/role</b>	Mother, Father, Human, Brother, Sister, Family, Child, Teacher, Cleaner, Doctor, Health worker,
<b>Sensitivity as emotion/feeling</b>	Respect, Love, Emotion/Feeling, Compassion, Generosity, Patience, Sadness

Table 5 demonstrates that students perceive the value of sensitivity through aiding others, professional/role responsibilities, or emotional/feeling responses. Here are some selected examples that reflect these categories, as extracted from the students' perspectives:

Students who perceived the value of sensitivity as helping often explained that people who empathize are helpful and, therefore, sensitive to problems. For instance, P140's statement exemplifies this perspective: *"Sensitivity is like empathy. Because sensitive people understand everyone's situation."* Similarly, P1 and P183 used expressions such as *"being sensitive by putting yourself in someone else's shoes"* and *"if we empathize with someone, we are sensitive."* Furthermore, statements from P50 and P129, such as *"helping someone you do not know is sensitivity"* and *"helping someone who needs help is sensitivity,"* reflect the students' perceptions of this issue.

Students who perceive the value of sensitivity as a profession or role often emphasized that their mothers, fathers, and teachers were sensitive to events and phenomena in various subjects. For instance, P205's statement illustrates this perspective: *"Sensitivity is like my mother. Because my mother never ignores whoever has a problem."* Similarly, P21 exemplifies this situation: *"Mothers are sensitive to every situation; they help."* Furthermore, P33's statement, *"Wherever doctors see someone in need of help, they help them,"* indicates that some students associate the value of sensitivity with the profession of a doctor.

Students who perceive the value of sensitivity more as an emotion or feeling generally associate it with emotions such as love, respect, compassion, and sadness. For example, P68's statement, *"Sensitivity is an emotion and a feeling of helping and helping someone in need,"* exemplifies this perspective. Similarly, P69's statement, *"Sensitivity is a beautiful feeling; it makes people happy,"* indicates that she associates the value of sensitivity with emotions and feelings. P122 said, *"Sensitivity is similar to compassionate people. Because they think and empathize,"* explaining the value of sensitivity with an emotional metaphor. Additionally, P116's statement, *"Sensitivity is like a tiny spark. If we listen to someone's problems, that person will listen to the problems of others,"* links sensitivity with emotions and feelings.

**Table 6.** Secondary School Students' Perceptions of the Value of Savings

Metaphor	Frequency	Metaphor	Frequency	Metaphor	Frequency
Water	24	Order	2	Glass	1
Money	11	Beverage	1	Turtle	1
Father	8	Favor	1	Air	1
Spending less	6	Sensitivity	1	Wind turbine	1
Piggy Bank	5	Integrity	1	Fish	1
Not wasting money	4	Grandfather	1	Rain	1
Family	4	Food	1	Grandmother	1
Attitude	4	Birds	1	Human	1
Recycling	4	Livelihood	1	Drop	1
Not an expenditure	3	Happiness	1	Scale	1
Measure	2	Brother	1	Balance	1
Lamp	2	Weed	1	Life	1
Book	2	Seed	1	Paper	1
Ant	2	Dream	1	Dam	1

Stinginess	2	Library	1	Sea	1
Time	2	Lake	1	Respect	1
Total				48	118

It becomes evident in Table 4 that 118 students involved in the study formulated 48 distinct metaphors related to the value of saving. Additionally, 87 students provided definitions or information regarding the value of saving, such as "using resources regularly," "without saving, there would be scarcity," and "we should not leave the tap open." Notably, students most frequently likened the value of saving to the metaphor of water (24). This prevalence may be attributed to the common usage of "saving water" in educational contexts and daily life. Furthermore, students predominantly created metaphors associated with money (11), father (8), spending less (6), piggy bank (5), not wasting (4), family (4), attitude (4), and recycling (4). Other metaphors included not spending (3), measure (2), lamp (2), book (2), ant (2), stinginess (2), time (2), order (2), as well as various others like a drink, favor, food, birds, brother, sister, seed, library, turtle, wind turbine, scales, paper, and dam.

**Table 7.** Categories Related to Secondary School Students' Perceptions of Sensitivity Value

Category	Examples of metaphors related to the category
<b>Savings as essential resources</b>	Water, Money, Time, Food, Livelihood, Seed
<b>Saving as accumulation</b>	Spending less, Piggy Bank, Not wasting, Attitude, Recycling, Not spending, Measure, Scale, Balance, Balance, Dam, Drop, Stinginess, Lake
<b>Saving as a feeling/feeling</b>	Kindness, Sensitivity, Honesty, Happiness, Dream, Respect

Students frequently drew connections between resources such as water, money, and time and the value of saving. For instance, P50's statement, "*Saving is like water. Because a drop becomes a lake,*" is an illustrative example. Similarly, P145's remark, "*If you spend money on the materials you need, it will not run out quickly, but if you spend it on things you do not need, you will neither have money nor meet your needs,*" demonstrates an association between the source of money and the value of saving. Furthermore, P147's statement, "*We should not use everything (food) more than necessary,*" presents a parallel example. P188's assertion, "*it is necessary to spend the money in the right amount,*" also exemplifies the link between the money source and the value of saving.

A significant number of students perceived the value of saving as an accumulation. These students commonly use metaphors such as piggy bank, attitude, measure, and dam in connection with the value of saving. It is plausible that students may have been influenced by their families to save money in piggy banks, leading them to associate saving with accumulation. For instance, P121 underscores this idea: "*Saving money and not wasting money always produces good results.*" Additionally, P130's statement, "*You can benefit by saving your money in a piggy bank,*" exemplifies this perspective. Moreover, P170's assertion, "*Saving is like a drop. Because every drop creates a lake,*" serves as another instance. The statement from student P192, "*Saving is like a piggy bank. Because every time we throw money in, we think of the proverb 'a drop becomes a lake,'"* is a clear example of the piggy bank metaphor linked to the value of saving.

Numerous students created metaphors about the value of saving that incorporated spiritual values and emotions, such as favor, happiness, sensitivity, and honesty. For instance, P79's statement, "*Saving is like a dream. It may be necessary to give up some things in both,*" illustrates this perspective. Similarly, P121 remarked, "*It is like honesty. Both are difficult and mostly not done by people,*" elucidating the metaphor of saving and providing justification. Furthermore, P141 associated the value of saving with acting sensitively in the expression, "*It is a person's sensitive use of things.*" Meanwhile, P195 established a connection between the value of saving and respect with the statement, "*If you respect nature, it gives more; if you save, you keep more.*"

## DISCUSSION CONCLUSION AND RECOMMENDATION

This research deals with the values of responsibility, sensitivity and savings related to the concept of sustainable consumption within the scope of the social studies course in terms of the metaphorical perceptions of secondary school students. In this context, when the literature related to the research is examined, there are studies on the concepts of sustainability and sustainable consumption. For example, Kruger et al. (2020) conducted their study with college students at a university in the USA to evaluate attitudes, concerns about environmental issues and awareness of the university's activities. As a result of this research, items such as "recycling", "economic sustainability" and "fair treatment for everyone" were defined as an integral part of the concept of sustainability. It has been observed that elements related to social justice are more distantly linked to sustainability. In another study, Passos-Ibiapina et al. (2020) conducted an intercultural study that Brazilian and German students had similar attitudes and behaviors regarding sustainability. In addition, despite cultural differences, it was revealed that both groups of students had a moderately narrow view of environmental behavior. Sharma (2022) examined the impact of social learning forms on environmentally sustainable consumption behavior among school children. The study is experimental, and the sample consists of 760 students. The results of the research revealed that social learning forms influence environmentally sustainable consumption behavior among school children.

The findings of this study align with existing research, demonstrating that students associated the value of responsibility with metaphors such as duty, homework, life, father, mother, student, and teacher. Comparable studies on the value of responsibility also support these results. Notably, metaphors like duty, homework, life, mother, and father emerged most frequently in some studies examining responsibility value (Ünalmiş et al., 2023; Çakmak et al., 2017). Similarly, Yalçın and Güleç (2022), in their study on 5th-grade students' perceptions of the value of responsibility in the Social Studies course, found that students predominantly produced metaphors related to need, profession, and doing homework concerning the value of responsibility. These metaphors were categorized into life, success, and duty in their study. Additionally, Çelik and Kahtalı (2022), in their investigation of metaphorical perceptions of secondary school students about core values, concluded that students' perceptions of responsibility were primarily expressed as a sense of duty and fulfilling assigned responsibilities. Furthermore, students perceived the value of responsibility as obligatory work and actions that result in negative consequences when left undone. Yontar (2013), in his doctoral dissertation study conducted with 5th-grade students, identified categories such as order, respect, homework, duty, benevolence, and saving from students' perspectives on their responsibilities at school and home.

Analyzing the metaphors created by students regarding the value of responsibility, three main categories emerged: responsibility as action, responsibility as a profession, and responsibility as life. Considering these metaphors, categories, and written explanations, it can be inferred that students emphasize the importance of fulfilling their duties and responsibilities. Consequently, there is a potential for students to acquire sustainable consumption behavior when provided with the necessary information and training in conjunction with the value of responsibility.

The study's findings indicate that students generated metaphors related to empathy, helping, mothering, respect, and love concerning the value of sensitivity. These outcomes align with a study by Yılar et al. (2022), where pre-service social studies teachers associated sensitivity with respect, responsibility, and benevolence. This consistency in results suggests that there may be shared perceptions and understandings of sensitivity across different groups of individuals.

The metaphors created by students about the value of sensitivity led to the identification of three categories: sensitivity as helping, sensitivity as a profession/role, and sensitivity as a feeling/feeling. The findings suggest that students exhibit an awareness of the importance of protecting the rights of others and nature. This alignment between students' understanding and the principles of sustainable

consumption indicates that they already possess sensitivity and empathy skills. Therefore, it is anticipated that providing education on sustainable consumption could further enhance their perception of the need to protect natural and human resources for the well-being of humanity. This suggests a potential for transforming their existing sensitivity into behaviors aligned with sustainable practices.

The metaphors created by students about the value of saving predominantly revolved around concepts such as water, money, spending less, recycling, not wasting, and piggy bank. These findings align with similar results observed in studies examining the value of saving. For instance, Uzunöz et al. (2020) discovered that pre-service social studies teachers frequently used metaphors such as piggy bank, money, water, tree, family, mother, minimum wage, faucet, state, raindrop, and time in their perceptions of saving. Similarly, Kıyanççek (2020), in a study on elementary school students' metaphorical perceptions of the value of saving, found that the most common metaphors created by students included money, water, and recycling.

The analysis of the metaphors created by students about the value of saving revealed three distinct categories: saving as a necessary resource, saving as accumulation, and saving as a feeling/feeling. These categories exhibit a close connection to the concept of sustainable consumption. Consequently, it can be inferred that providing students with education on the value of saving and insights into the concept of sustainable consumption may contribute to their development as individuals who prioritize saving and adopt sustainable consumption practices.

In conclusion, there is an anticipation that the sustainable consumption approach, its practices, and behavior acquisition processes should be thoroughly discussed, researched, and incorporated into the curriculum of relevant courses, particularly Social Studies. Secondary school students possess knowledge, perceptions, and opinions regarding values like responsibility, sensitivity, and saving, which are integral to values education in the Social Studies course. It is hypothesized that supplementing values education with sustainable consumption content will enhance students' awareness and behavior. Consequently, a future where individuals, and consequently societies, exhibit more sustainable consumption behavior becomes a plausible outcome.

Upon analyzing the data in the study, it becomes apparent that while students provided insights into the values of responsibility, sensitivity, and saving, along with their knowledge, perceptions, and definitions related to these values, they failed to establish any connection or relationship between these values and the concept of sustainable consumption. None of the students incorporated "sustainable consumption" into their statements. As a recommendation, the concept of sustainable consumption should be introduced to students by establishing clear connections between values such as responsibility, sensitivity, saving, etc., within the content of the Social Studies course. This approach aims to enable students to holistically perceive values and sustainable consumption behavior and subsequently translate them into actions.

Based on the results of the research, it can be suggested that social studies teachers should firstly convey the concept of sustainable consumption to students as a whole by teaching responsibility, sensitivity and savings values in their lessons. Additionally, in courses such as Turkish, religious culture and ethics, the concept of sustainable consumption can be taught in the form of texts or religious information in relation to responsibility, sensitivity and savings values. In addition to the lessons, school administrations create billboards, posters, advertisements, etc. in the physical spaces of the school that emphasize responsibility, sensitivity, savings values and sustainable consumption behavior. Can prepare visual and auditory stimuli. Again, the school administration and teachers for students regarding responsibility, sensitivity, saving value and sustainable consumption behavior, can organize award-winning competitions.

## Statement of Researchers

**Researchers' contribution rate statement:** The authors contributed equally to the article.

**Conflict statement:** The authors declared no potential conflicts of interest.

**Support and thanks:** None

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