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The Effect of Activities for Sustainability Awareness on Students' Sustainable Living Awareness in the Social Studies Course*

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Abstract

As an active member of the society, the social studies course contributes to the development of awareness on social and environmental issues among students. Today, the concept of sustainability is gaining importance, as environmental problems are increasing day by day and in negative forms all over the world. The aim of this study is to investigate the effect of activities for sustainability awareness on students' sustainable living awareness in 6th grade social studies course. The research was carried out according to the embedded experimental design which is one of the mixed-method designs. The participants consist of students attending in a 6th grade of a public secondary school in Eskişehir in the 2021-2022 academic year. Data were collected with "Sustainable Living Awareness Scale" [SLAS] developed by Akgül and Aydoğdu (2020), and semi-structured interviews with students. Quantitative data were analyzed with SPSS 24 Package Program. Inductive analysis was used in qualitative data analysis. As a result of the research, it was found that activities for sustainability awareness significantly increased the sustainable living awareness levels of the students in the experimental group. Additionally, students emphasized that activities for sustainability awareness had a significant effect on the increase in sustainable living awareness level. In this context, suggestions put forth that activities for sustainability awareness can be used to improve students' sustainable living awareness levels in the social studies course.

Keywords: Social studies, sustainability awareness, sustainable living, sustainable development.

Introduction

Throughout history, human beings have been in a relationship with their environment. The balance in this relationship has started to deteriorate as a result of the increase in man's power over nature in line with his needs and activities. Factors such as the advancement of technology, the speed of industrial activities and the gradual increase in population have caused environmental problems. In the face of economic, social and environmental problems that threaten the future, it is aimed to produce solutions within the framework of sustainability and sustainable development (Acar, 2021). Sustainability is a concept that can be used to ensure continuity and aims to ensure the longevity of limited natural resources used to meet human needs (Özgen, 2019). Sustainability, in its most general sense, means using resources in a way that does not prevent future generations from meeting their needs while meeting the needs of the present. In the sense used today, sustainability was defined for the first time in the 1987 Brundtland Report produced by the United Nations World Commission on Environment and Development as follows: "Meeting today's needs without compromising the ability of future generations to meet their own needs" (Bozlağan, 2004, p. 2). Measures to be taken in problems such as controlling population growth, balancing the use of natural resources in production, planned urbanization, social and legal equality are determined by the decisions of countries in national and international policies. Sustainability and sustainable development goals are set as a solution to the problems experienced in economic, social and environmental dimensions by drawing attention to their importance through international agreements. In order for these goals to be implemented effectively, it is of great importance that they are understandable by people and that they gain awareness. Education at a young age in the family and at school plays a key role in raising sustainability awareness in people.

In 2015, the United Nations Sustainable Development Summit was held with the participation of 193 countries (Ar & Çelik Uğuz, 2017). "Transforming Our World: 2030 Agenda for Sustainable Development", 17 goals were set. These goals are a framework for sustainable development (United Nations [UN], 2015). The Sustainable Development Goals have been prepared to cover the sub-goals of

environmental, social and economic dimensions. There are articles that will solve the problems experienced and prevent the emergence of new problems. The principle of inclusiveness based on the equality of all living beings lies at its foundation. In addition, importance has been given to the continuation and support of development in accordance with today's conditions.

Sustainable development education ensures a just society with environmental integrity, economic sustainability and cultural diversity, as well as the right to equal education, social transformation for good, and attitudes, behaviors and values necessary for a sustainable future (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2013 as cited in Akgül, 2020). The answers sought for ways to create equality between industrialized countries and non-industrialized countries, the depletion of natural resources and environmental problems have formed the basis of sustainable development education (Kaya & Tomal, 2011). Social studies is a course that is intertwined with contemporary life and aims to provide students with social personality. Environmental problems, economic problems and social problems have become ordinary elements of daily life. While science and technology are developing rapidly, the destruction caused by humanity on natural resources and the environment has reached a level that cannot be ignored. All these developments bring the concept of sustainability to the forefront in the field of education. Sustainability makes it necessary to consider the need of future generations for these resources while consuming today's resources. One of the courses that can play a role in raising sustainability awareness among students is the social studies course. Because the social studies course includes both social issues, environmental issues, and economic issues in its content, and addresses all these issues from an interdisciplinary perspective in accordance with the developmental level of students. Therefore, it is thought that this study will contribute to the development of sustainability awareness in the social studies course.

It is seen that studies on sustainability education are generally carried out in the context of science disciplines (Affeldt, Tolppanen, Aksela, & Eilks, 2017; Jeronen, Palmberg, & Yli-Panula, 2016). Social studies course is one of the courses where this awareness can be gained in line with its special objectives and the values and skills it contains. In the content of the social studies course, issues related to sustainability are included in an integrity. The formation of learning areas with an interdisciplinary structure consists of information that falls within the scope of the dimensions of sustainable development. Social studies course has an important subject content such as natural resources, environmental problems, economic knowledge, justice, rights and responsibilities. The social studies course, which aims to provide students values and skills as well as conceptual knowledge, also focuses on the environment-society relationship. In this direction, individuals are expected to be citizens who are sensitive to their environment, and society in the context of past, present and the future. Within the scope of social studies course, there are some studies on sustainability and sustainable development in the literature. Among these, there are studies examining social studies curricula within the scope of sustainable development (Aktaş, Dinçol Özgür, and Yılmaz, 2020; Bulut and Çakmak, 2018; Kaya and Tomal, 2011; Oğuz Hacat and Demir, 2019; Tanrıverdi, 2009), examining social studies textbooks in terms of sustainability (Mentiş Taş and Özkara, 2016), revealing the views of social studies teachers (Aydoğan, 2010; Azrak, 2022; Dinç and Acun, 2017) and studies on the sustainable development awareness of pre-service social studies teachers (Acar, 2021; Ateş, 2018; Özsoy, 2021; Öztürk Demirbaş, 2015; Türer, 2010; Uyanık, 2021). However, it is seen that studies on organizing activities to raise sustainability awareness in the social studies course are limited. Developing students' awareness towards sustainable living is important in terms of raising individuals who are sensitive to the natural

environment and who can make sense of and interpret social and economic developments on the basis of sustainability.

It is thought that it is important to conduct a study that will reveal the effect of learning environments and activities to be created in the social studies course on students' awareness levels towards sustainable living. The aim of the research is to reveal the effect of the activities implemented to raise sustainability awareness in the 6th grade social studies course on students' awareness of sustainable living. In this context, answers to the following questions were sought within the scope of the research:

1. Does the activities related to sustainability awareness significantly affect 6th grade students' sustainable living awareness in the social studies course?
2. What are the 6th grade students' views on the implementation process of the activities aimed at raising sustainability awareness in the social studies course?

Method

Research Design

In this study, which aims to examine the effect of activities aimed at raising sustainability awareness in the social studies course on students' awareness of sustainable living, embedded experimental design, one of the mixed method designs, was used (Creswell & Plano-Clark, 2007). It is seen that the quantitative approach is dominant in embedded experimental design research. The study starts with quantitative research and then qualitative data are included (Creswell, 2014). In the quantitative dimension of the study, a single group pretest-posttest design was used. In this design, the effect of the experimental procedure is examined with a single group study (Büyüköztürk et al., 2020, p. 208).

In the study, quantitative pre-test data were collected first. Then, a 3-week pilot study and a 5-week experimental implementation process were carried out. With the completion of the implementation process, quantitative post-test data were collected. After the quantitative pre-test and post-test data were obtained, the embedded experimental design process was completed by obtaining the qualitative data of the study through semi-structured interviews with the students in the experimental group.

Participants

The study group consisted of students studying in a 6th grade class in a public secondary school in Eskişehir in the 2021-2022 academic year. In the process of determining the school where the research will be conducted, the schools in Eskişehir city center were listed and information about the student density was obtained. The school, which was thought to be suitable for the implementation of the application, was selected according to the adequacy of the number of students. Additionally, the willingness of teachers and students and the school administration to participate in the research are considered as criteria. The sustainable awareness scale, which was also used as a data collection tool, was applied to the 6th grade students and the experimental group of the research was determined in line with the results. The sustainable awareness scale, which was also used as a data collection tool, was applied to the 6th grade students and the experimental group of the study was determined according to the results. While 28 students 13 of whom were female and 15 of whom were male in the experimental

group took part in the quantitative dimension of the study, 14 students 7 of whom were female and 7 of whom were male voluntarily took part in the qualitative dimension. Separate permission documents were obtained from the teacher of the relevant class, the students in the experimental group and the parents of the students for participation in the study.

Data Collection Tools

The quantitative data of the study were collected with the "Sustainable Living Awareness Scale" [SLAS] developed by Akgül and Aydoğdu (2020). The scale consists of three factors: society, environment and economy. Cronbach's Alpha coefficient as the internal consistency of the scale was calculated as .76, .73 and .69 for the society, environment and economy dimensions of the SLAS, respectively. For the 20-item SLAS, it was calculated as .77. Within the scope of this study, in which the effect of activities aimed at raising sustainability awareness in the social studies course on students' awareness of sustainable living was examined, a pilot study was conducted for the SLAS. In this context, the 20-item SLAS was applied to 294 6th grade students in other schools outside the practice school. In line with the data obtained, Confirmatory Factor Analysis [CFA] was performed on the scale and the internal consistency of the scale was examined. AMOS program was used for this process. The path diagram was drawn with the graphic menu of the AMOS program and then the cohesion statistics were examined. Confirmatory factor analysis results are given in Table 1.

Table 1. *Confirmatory factor analysis results*

CMIN	DF	P	RMR	CMIN/DF	GFI	CFI	RMSEA
201,972	160	0,014	0,024	1,262	0,938	0,894	0,030

Table 1 shows confirmatory factor analysis results. After confirmatory factor analysis, it was concluded that the cohesion statistics of the scale were at a good and acceptable level, and in this direction, it was concluded that the cohesion statistics obtained by CFA confirmed the structure put forward by Akgül and Aydoğdu (2020). After the confirmatory factor analysis, the internal validity of the scale was examined. The internal consistency coefficient (Cronbach's Alpha) of the scale was found to be .73. This is an accepted value in the literature (Tavakol & Dennick, 2011). Pre-test and post-test data were collected from the experimental group with 28 students using this measurement tool.

After the lessons prepared for sustainable development in the social studies course were completed, qualitative data were collected through face-to-face semi-structured interviews with a total of 14 students, 7 male and 7 female. With these interviews, it was aimed to reveal the students' thoughts about sustainable life and the activities implemented. The interviews were conducted one-on-one with each student in the school environment and recorded with permission. The recorded interviews were transferred to a Word document as written text by the researcher. Interview transcripts were analyzed by inductive analysis. The qualitative findings obtained in line with the purpose of the study were reported to support the quantitative data.

Data Collection and Analysis Process

The experimental application process started on March 7, 2022, and ended on April 6, 2022 lasted for a total of 5 weeks, 3 course hours per week. At the beginning of the implementation, SLAS was administered to the students as a pre-test. During the application phase of the activities prepared for sustainable living, efforts were made to ensure that students actively participated in the process. In order for students to participate in the lessons, they were asked to read from time to time and given the

opportunity to ask questions. Students tried to note down the information that attracted their attention on their own volition. The activity materials that the students applied in the lessons were collected at the end of the lesson and filed with the date of the relevant day. The lesson process ended after all the learning outcomes were covered. After the end of the lessons, the awareness scale for sustainable living was applied to the experimental group students as a post-test. Quantitative data were analyzed with SPSS 24 Package Program. Wilcoxon Signed Ranks Test was applied for pre-test/post-test comparison of the scale.

After the end of the lessons and the post-test process, semi-structured interviews were conducted with 14 students, 7 girls and 7 boys. Through semi-structured interviews, it was aimed to reach the opinions of the students about the activities prepared to raise sustainability awareness and the connection of sustainability with the social studies course. Inductive analysis was used in qualitative data analysis. The unbiased interpretation of the qualitative data of the research is important for credibility. Confirmation of the study process conducted by the researcher and the data collected by transferring them to another expert is a stage that increases credibility. This stage contributes to the validity and consistency in interpreting the data and reaching conclusions (Yıldırım & Şimşek, 2021, pp. 291-292). In this direction, 20% of the data analyzed by the researcher and transformed into themes were presented to the expert opinion. The data were coded and thematized by the expert independently of the researcher. The themes created separately by the researcher and the expert were compared and a consensus was reached. The students were given code numbers and these numbers were indicated in the direct quotations from the opinions.

Ethical Permits of Research

In this study, all the rules specified to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were complied with. None of the actions specified under the heading "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, have been taken.

Ethics Committee Permission Information:

Name of the committee that made the ethical evaluation = Anadolu University, Social and Human Sciences Research and Publication Ethics Commission

Date of ethical review decision=27.01.2022

Ethics assessment document issue number=248175

Findings

In this section, the findings obtained by analyzing the data collected within the scope of the research and the interpretations made in line with these findings are presented. The statistical test results and semi-structured interviews obtained by analyzing the data collected on awareness towards sustainable living are presented under two headings.

Quantitative Findings on the Effect of Activities for Raising Sustainability Awareness in Social Studies Course on Students' Awareness of Sustainable Living

Under the heading of findings, firstly, descriptive statistics and normality distributions of the pre-test and post-test data obtained with the responsibility scale are given. In order to determine whether the pre and post-tests of the awareness scale for sustainable living were normally distributed

according to the groups, the values in Table 1 as well as the histogram and box plots were examined. First of all, it is seen that the skewness and kurtosis values are between -1 and +1 in all measurements except the post-test measurement of the experimental group. In addition, Shapiro-Wilk values were examined for normality distribution. After examining the histogram and box plots, it is seen that the pre-test data obtained from the awareness scale for sustainable living met the normality conditions; however, the post-test measurements of the experimental group did not meet the normality condition. The data on the normality distribution of the awareness scale for sustainable living are given in Table 2.

Table 2. *Normality distribution values of the sustainable living awareness scale*

		Number of people	Mean	SS	Skewness	Kurtosis	Shapiro-Wilk
Pre-test	experimental	28	51,67	4,86	-,080	-,4,12	,499
					-1,350	1,300	,001
Post-test	experimental	28	53,14	5,42			

It was determined that the pre-test data collected to examine the effect of activities aimed at raising sustainability awareness in the social studies course on students' awareness towards sustainable living were normally distributed, but the post-test data were not normally distributed. For this reason, nonparametric tests were used for the pre-test/post-test comparison of the awareness scale for sustainable living of the experimental group. In this context, Wilcoxon Signed Rank Test was used. Wilcoxon Signed Rank Test is one of the nonparametric tests used in cases where normal distribution is not provided for dependent groups t-test (Özdoğan, 2022, p. 251). The pre-test/post-test comparison of the awareness scale for sustainable living in the experimental group is given in Table 3.

Table 3. *Wilcoxon Signed Rank test results for the pre-test/post-test comparison of the sustainable living awareness scale for in the experimental group*

Post-test/Pre-test	N	Mean Rank	Sum of Ranks	Z	P	Effect Size
Negative Ranks	8	10,75	86,00	-2,281*	,023	0,30
Positive Ranks	18	14,72	265,000			
Ties	2	-	-			

*Based on negative rank

The difference between the pre-test and post-test scores of the experimental group's awareness scale for sustainable living is given in Table 3. When the table is examined, it is seen that there is a statistically significant difference between the post-test scores of the experimental group students from the academic achievement test and their pre-test scores ($p=,023<.05$). When the rank averages and rank sums are examined, it is noteworthy that this difference is in the direction of the positive rank representing the post-test measurements. In this context, it can be said that the 5-week experimental process statistically significantly increased the level of awareness of the students in the experimental group towards sustainable living. In addition, the effect size for the Wilcoxon Signed Rank test was also calculated and the effect size value was found to be ,30. The effect size value is considered as 0,10 small, 0,30 medium and 0,50 large effect size (Cohen, 1988 as cited in Özdoğan, 2022, p. 250). Accordingly, it is seen that the effect size in this study is of medium effect size value.

Qualitative Findings Regarding the Implementation Process of Activities for Raising Sustainability Awareness in Social Studies Course

In line with the inductive analysis of semi-structured interviews with students, three themes were reached: the relationship between the social studies course and sustainability, the relationship between sustainability and daily life, and the activities implemented in the social studies course.

Findings Regarding Their Views on The Relationship Between the Social Studies Course and Sustainability

The findings regarding their views on the relationship between the social studies course and sustainability are presented in Figure 1.

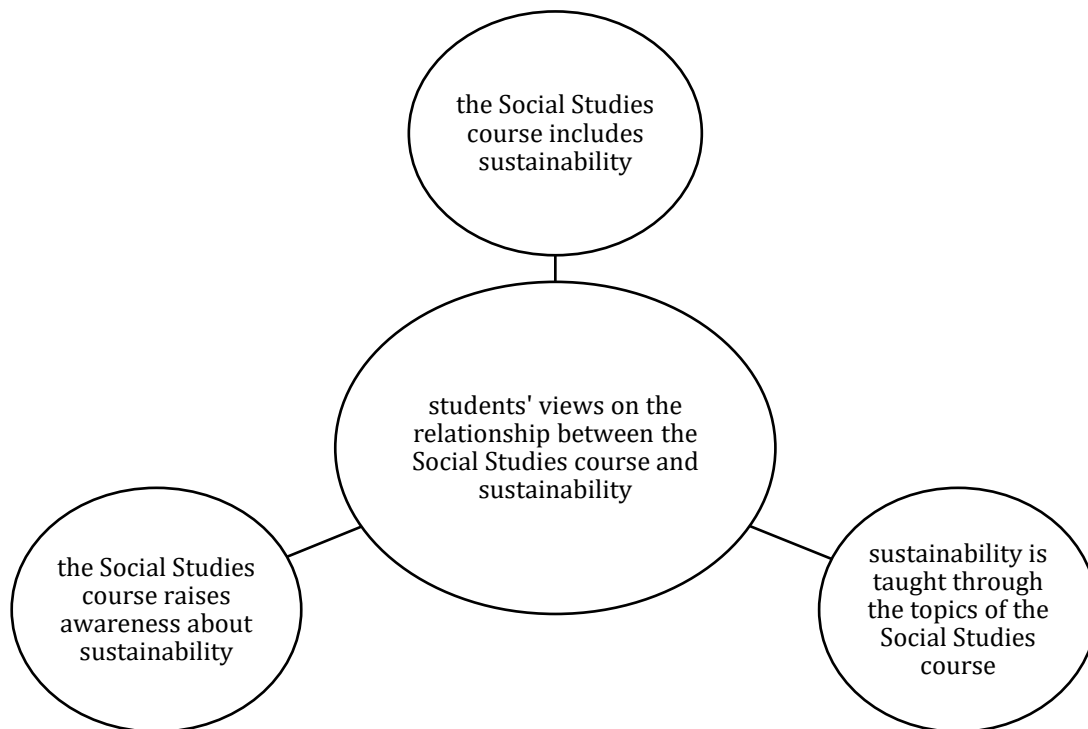


Figure 1. Students' views on the relationship between the social studies course and sustainability

As seen in Figure 1, students think that there is a strong relationship between the social studies course and sustainability. Students think that the topics of the social studies course includes sustainability, that sustainability is taught through the topics of the social studies course, and that the social studies course raises awareness about sustainability.

Student 5, who stated that sustainability issues were taught in the social studies course, explained that he made a connection with sustainability by talking about the issues learned in the social studies course as follows. "Now we said waste, we said water, we said mines, we said mines, sustainability can also come to mind from the fact that our mines do not run out, our water does not run out.". Student 7, who thinks that it is related to sustainability by explaining natural resources in the social studies course and emphasizing the importance of using these resources in a way that will be passed on to future generations, expressed his opinion as follows: "We talked about sustainable resources as the majority, we talked about the need to be passed on to future generations of these resources." Student 14, who thinks that since the social studies course is related to human life,

sustainability issues should be learned in this course, stated his opinion by saying "Since social studies is already a course related to our life and geography, we need to learn about sustainable development in the social studies course." Student 12, who thinks that they try to teach how sustainability is in the social studies course, stated that they try to teach people not to waste and made the following explanation ".We learn how sustainability is in the social studies course, and the relationship between sustainability and sustainability is that social teachers try to teach it in this way so that people produce sustainability, that is, so that they do not waste..." There were also students who thought that the social studies course raised their awareness. For example, Student 1: "In the social studies course, we learn how these things can be continued in terms of sustainability, and more awareness-raising activities are carried out about this."

The students stated that the issues related to society and the environment addressed in the social studies course are related to sustainability. When the finding of the study on the relationship between the social studies course and sustainability is analyzed, it may be possible to say that it is mostly due to the topics covered in the course and its connection with the agenda in life. It is thought that students may have established a relationship with sustainability in the social studies course both because it contains information such as natural resources, environmental and social problems, and because it tries to gain skills such as environmental literacy, critical thinking, problem solving and values such as justice, equality, savings and responsibility.

Students' Views on The Relationship Between Sustainability and Daily Life

Students' views on the relationship between sustainability and daily life are presented in Figure 2.

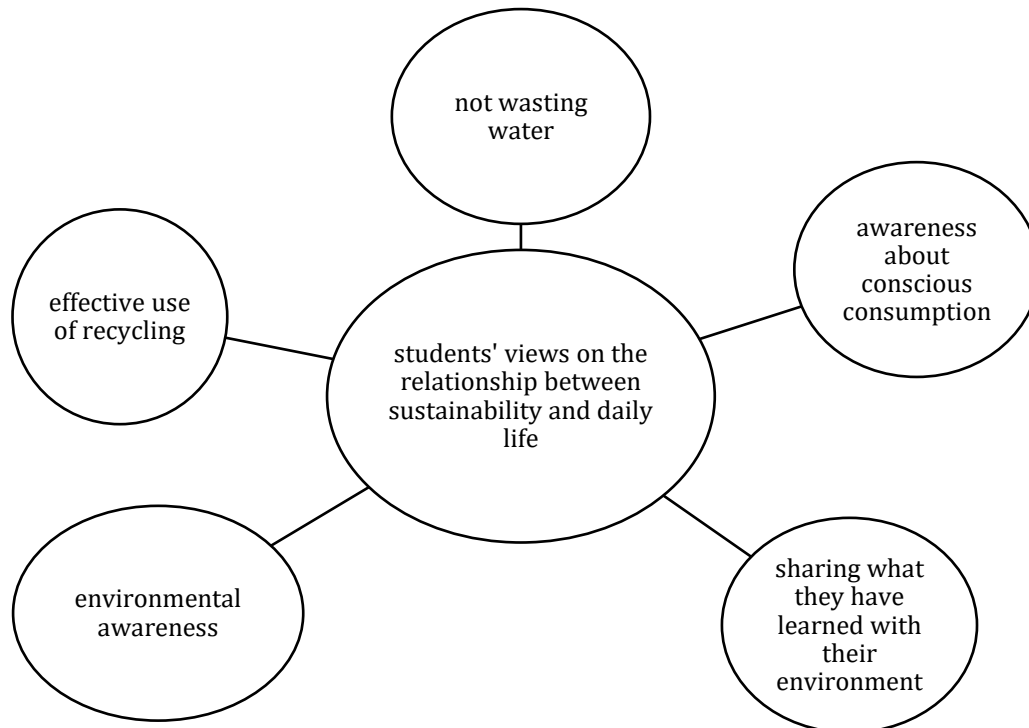


Figure 2. Students' views on the relationship between sustainability and daily life

As can be seen in Figure 2, students' views on the relationship between sustainability and daily life consist of the themes of not wasting water, awareness about conscious consumption, sharing what

they have learned with their environment, environmental awareness and effective use of recycling. It is seen that the activities implemented for sustainable living in the social studies course are mostly about saving water in students' daily lives. In addition, students generally stated that their level of awareness increased thanks to the activities implemented. There were students who stated that they started to feel more sensitive to the environment, as well as students who stated that they were sensitive about not throwing garbage on the ground. In addition to being sensitive to the environment, some of the students also explained that they started to take steps to use products sustainably.

Student 7, who stated that he used resources consciously after the practices in the lesson and especially did not waste water, explained the points he paid attention to in daily life as follows.

"Before I did these activities, I thought I was a very economical individual, and then I realized that I was a person who spent resources in a rambling way, and then I started to take precautions for myself. I use the water as much as I need." S.13, who thinks that he realized the importance of using energy resources as much as needed as well as natural resources and that he shared this with his environment and raised their awareness, stated as follows: "For example, we were unconsciously opening natural gas, and now, when I tell both my family and my friends, they use it as much as they need." Student 1: "For example, I like to eat chocolate on my way back to school, now I don't throw chocolate package on the ground anymore, and even when I see the recycling package, I start throwing it in it.." and explained that after the activities related to sustainable living, he paid attention to recycling, the use of sustainable products in his daily life and especially to share this information with his environment. Giving an example of recycling through the material he used, student 5, "When I was washing my hands, I used to leave the water on, but from now on, I don't leave the water on ". Student 3, who thought that she developed sensitivity towards the natural environment, drew attention to other living things in nature by saying "I gave water and food to animals". Student 9 explained that he became more sensitive to the environment and natural resources with his statements such as "I avoided wasting water more, I paid attention not to throw garbage on the ground, when I saw garbage on the ground, I picked it up and threw it away...". Student 6 stated that he started to pay attention to the use of water in his daily life after the activities implemented in the lesson and said, "I never paid attention to water before, for example, I used too much water while washing my hands, and after I learned that these are very valuable, I tried to use less and I succeeded."

In the findings on students' daily behaviors related to sustainable living, it is seen that there are behaviors such as saving money by using resources consciously and showing sensitivity to the environment. Students are aware that the steps they take individually will be effective in protecting their environment. There are even students who show sensitivity in this regard, knowing that it is important to warn their relatives about the behaviors that can be done for sustainable living. The structure of the social studies course provides students with an advantage in adopting the information they learn in the course and the values and skills they try to acquire. The fact that it takes its content directly from life is very effective, and in this direction, it is an important and expected situation that an abstract subject such as sustainable living begins to be adopted by students.

Students' Views on The Activities Implemented in The Social Studies Course

Students' views on the activities implemented in the social studies course are presented in Figure 3.

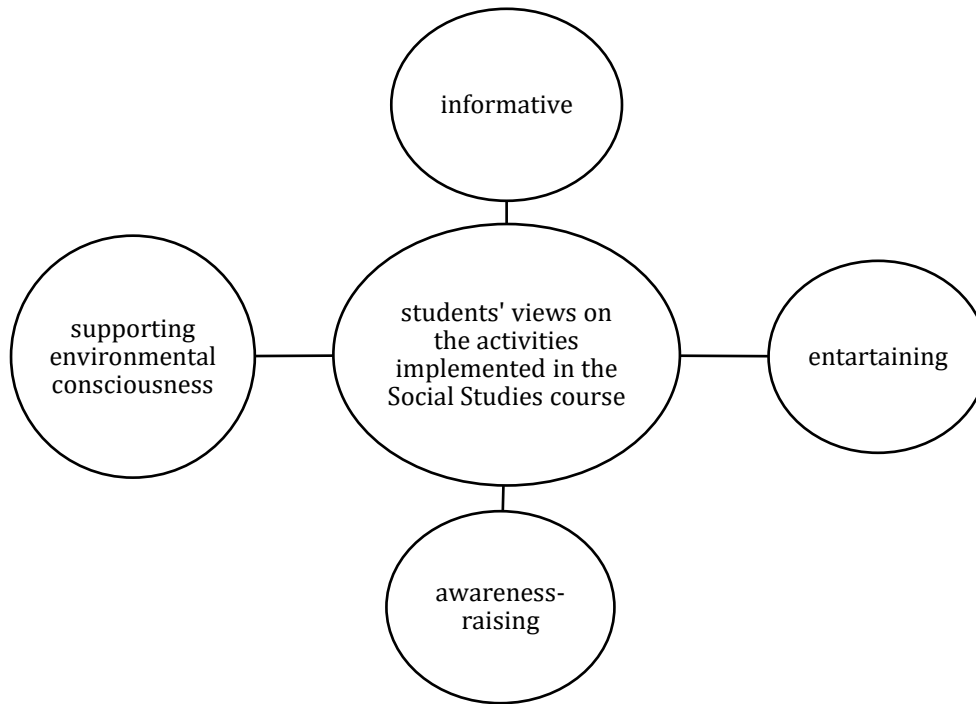


Figure 3. Students' views on the activities implemented in the social studies course

As can be seen in Figure 3, students' views on the activities implemented in the social studies course were grouped under the themes of informative, entertaining, awareness-raising and supporting environmental consciousness. Most of the students found the activities related to sustainable living implemented in the social studies course informative and entertaining. In addition, it was thought that the activities raised awareness and contributed. Some students also stated that they liked the lesson thanks to the activities.

Student 14, who thought that he became more conscious by obtaining more detailed information after the activities for sustainable living implemented in the social studies course and drew attention to renewable energy resources, explained his opinion as follows: "Now I have become more conscious, I have learned in more detail, for example, I did not know much about how geothermal energy is so beneficial to us, solar energy, wind energy is so beneficial to us." In this statement, the student stated that he gained new information about natural resources and that this raised his awareness. Additionally, students explained that the activities benefited them and that they reached new information by realizing the mistakes they knew right about sustainable life. Another student expressed his thoughts about the activities implemented in the social studies course as follows: "All of them were very good, and taught me more about what I should do about my environment, how to prevent it if someone around me makes a mistake, how to apply to the necessary places." He stated that he could take responsibility for the behaviors of the people around him on sustainability and raise awareness by warning them. Another student stated that the activities implemented in the social studies course were fun and informative as "I think they were very fun activities and they also informed us". Student 7 expressed his thoughts that he had fun and learned in the lesson as "These activities helped us to learn many things that I covered in the lesson more easily like a game, I think they were very fun."

Student 6 stated that he liked the lesson and understood it better thanks to the activities for sustainable living implemented in the social studies course: "I did not care much before, but after doing these activities, I started to like the lesson more, I started to socialize with my friends in the lesson, I

started to understand the lessons better myself." In the student's statement, it is stated that he socialized with his friends. The objectives of the social studies course include ensuring social cohesion of individuals by supporting their communication with their immediate environment, and it is thought that joint work during the activities supports this situation. Student 10, who found the activities implemented in the social studies course useful and thought that her interest and skills in the course increased, expressed her thoughts as follows "I think it was useful, the activities you gave me were both fun and made me get used to the lesson and it was very good." The student who learned by having fun in the lesson also stated that he developed a positive attitude towards the social studies lesson. Student 3 stated that the activities were useful and that they raised awareness about sustainable life with the thought "I think they were very useful for us, I mean, we knew ourselves, we could see what kind of a person I can be, we saw how conscious we are, it was very useful and we had fun".

When we look at the finding regarding the students' opinions about the activities implemented in the social studies course, it is seen that they learned new things in the lessons and also had fun. It is thought that the fact that the activities implemented in the lessons allow each student to participate in the lesson may have an effect on this. There are statements that students started to develop awareness of their immediate environment and sustainable life by questioning the information they acquired.

Based on the answers and examples given by the students about the relationship between the social studies course and sustainability, the behaviors they pay attention to sustainable living in their daily lives, it can be argued that the Sustainable Living Awareness Scale supports the significant positive difference between the pre-test and post-test results.

Discussion and Conclusion

In this study, the effect of activities aimed at raising sustainability awareness in the social studies course on students' awareness levels towards sustainable living was examined. It was concluded that the experimental process statistically significantly increased the level of awareness of the students in the experimental group towards sustainable living. In the studies conducted in the literature, it is seen that the practices developed on sustainability awareness and environmental education generally give positive results on students. The results of the study conducted by Salsabila et al. (2019), in which the effect of the evidence-based discussion method on raising sustainability awareness in secondary school students was examined, showed that the evidence-based discussion method had a positive effect on raising sustainability awareness in students. The results of the study conducted by Akanlar (2019), which aimed to examine the effect of teaching the subject of "energy resources and recycling" with drama method on students' academic achievement, attitudes and conceptual changes, showed that the lessons taught with drama method had a positive effect on students' conceptual development on energy resources and recycling. In the study conducted by Çimen (2021) aiming to determine the effect of problem-based science, technology, engineering, and mathematics [STEM] activities on students' academic achievement and awareness on the subject of household waste and recycling, it was determined that the problem-based STEM activities increased the academic achievement level and awareness of the students. It was seen that the activities applied to the experimental group helped the students to make more accurate determinations about which of the wastes can be recycled and which are not, and to recognize and classify the wastes correctly. Hoque, Yasin, and Sopian (2022) examined the studies on teaching renewable energy at the secondary school level. In these studies, it was emphasized that sustainable development lessons and activities involving renewable energy had a

positive effect on students. The qualitative findings obtained through the analysis of the semi-structured interviews conducted with the students in the study revealed that the students thought that there was a strong relationship between the social studies course and the issue of sustainability. Similarly, in Azrak's (2022) study aiming to reveal the views of social studies teachers and middle school eighth-grade students on sustainable development in the social studies course, it was concluded that social studies teachers think that the social studies course has an important role in raising awareness about sustainable development among middle school students. Secondary school eighth grade students agreed that they learned about sustainable development in the social studies course. Buchanan and Crawford (2015) found that the training given to pre-service social studies teachers on environmental sustainability in the teaching methods course increased their awareness of local and global sustainability. In the study conducted by Dinç and Acun (2017), teachers' views on the use of current events in teaching topics within the scope of economy and sustainable development in the social studies course were investigated. In the study, it was determined that teachers benefit from current events while teaching topics related to economy and sustainable development. The findings of this study overlap with the literature in terms of revealing the relationship between social studies and sustainability education.

Within the scope of the research, students' opinions on the activities implemented in the social studies course were determined as informative, entertaining, awareness-raising and awareness-raising. Research on sustainability and environmental awareness shows that practice-based activities are evaluated positively by students. In the study conducted by Yalçın (2022), it was aimed to determine how the concept of sustainability and the program prepared for sustainable education were perceived by 9th grade students. It was concluded that the program created sensitivity and awareness in students on related issues. In Selanik Ay's (2010) study investigating students' views on the use of media products in raising environmental awareness in the social studies course, it was determined that students thought that using media products in raising environmental awareness contributed to obtaining information on environmental issues, gaining environmental awareness, and increasing their sensitivity towards the environment.

The significant positive difference between the pre-test and post-test data analyzed within the scope of the research revealed that the activities for raising sustainability awareness implemented in the 6th grade social studies course increased students' awareness of sustainable living. As a result of the quantitative data, it is seen that the activities implemented positively affect the awareness towards sustainable living. The students' opinions obtained through semi-structured interviews conducted in the qualitative dimension of the research support the quantitative data. Students think that the social studies course includes topics covered within the scope of sustainability and sustainable development concepts. It is seen that there are students who think that knowledge, skills and values related to sustainability can be taught through the social studies course. In addition, it was stated that the social studies course raises awareness about sustainability.

Students stated that after the activities implemented in the social studies course, they started to pay more attention to the use of natural resources in their daily lives and their sensitivity to the natural environment increased. In this direction, it is thought that findings that support the significant positive difference between the pre-test and post-test results and reveal examples of this difference have been reached. Looking at the students' statements, it is seen that they gave examples of saving money, paying

attention to recycling and sharing the information they learned within the scope of the application with their close environment. It is seen that the results obtained in the research generally coincide with the literature. In addition, the qualitative data analyzed as a result of the research support the results of the quantitative data. In this context, it can be said that it would be useful and effective to organize educational activities based on practice, in which students will participate one-on-one by doing and experiencing in order for students to gain sustainability awareness in the social studies course. It is important to determine the outcomes for sustainability awareness in social studies course and other related courses in an interdisciplinary manner.

Recommendations

In this study, it was determined that the activities aimed at developing sustainability awareness in the 6th grade social studies course increased the awareness of students towards sustainable living. For this reason, in order to increase students' awareness of sustainable living in the 6th grade social studies course, activities aimed at developing sustainability awareness can be used. A guide with examples of activities that can be used in the classroom can be prepared for teachers who want to benefit from activities aimed at developing sustainability awareness in the social studies course. Sustainability and sustainable development can be included in the social studies Curriculum. Research can be conducted to examine the effects of activities to raise awareness of sustainability in the social studies course on students' sensitivity to environmental, social and economic issues.

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There is no material or individual organic connection with the people or institutions involved in the research and there is no conflict of interest in the research.



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Sosyal Bilgiler Dersinde Sürdürülebilirlik Bilinci Kazandırmaya Yönelik Etkinliklerin Öğrencilerin Sürdürülebilir Yaşama Yönelik Farkındalıklarına Etkisi

Giriş

Tarih boyunca insan çevresiyle ilişki içinde olmuştur. Bu ilişkideki denge, insanın gereksinimleri ve etkinlikleri doğrultusunda doğa karşısında gücünün artması sonucu bozulmaya başlamıştır. Teknolojinin ilerlemesi, sanayi faaliyetlerinin hızı ve nüfusun giderek artması gibi unsurlar çevre sorunlarına neden olmuştur. Geleceği tehdit eder duruma gelen ekonomik, sosyal ve çevresel sorunlar karşısında sürdürülebilirlik ve sürdürülebilir kalkınma anlayışı çerçevesinde çözümler üretmek amaçlanmıştır (Acar, 2021).

Sürdürülebilirlik, devamlılığı sağlamak anlamında kullanılabilen bir kavram olmakla birlikte insan ihtiyaçlarını karşılamak üzere kullanılan sınırlı doğal kaynakların uzun ömürlü olmasını amaçlar (Özgen, 2019). Sürdürülebilirlik, en genel anlamıyla; günümüz ihtiyaçlarını karşılarken gelecek nesillerin ihtiyaçlarını karşılamasına engel olmayacak şekilde kaynakları kullanma anlamına gelmektedir. Günümüzde kullanılan anlamında ilk defa Birleşmiş Milletler Dünya Çevre ve Gelişme Komisyonu tarafından oluşturulan 1987 Brundtland (Ortak Geleceğimiz) Raporunda sürdürülebilirlik şu şekilde tanımlanmıştır: “Bugünün gereksinimlerini, gelecek kuşakların da kendi gereksinimlerini karşılayabilme olanağından ödün vermeksizin karşılamak” (Bozlağan, 2004, s. 2). Nüfus artışında kontrol, üretimde doğal kaynak kullanımının dengede tutulması, planlı kentleşme, sosyal ve hukuki eşitlik gibi sorunlarda alınacak önlemler ülkelerin ulusal ve uluslararası politikalarda verecekleri kararlarla belirlenmektedir. Uluslararası anlaşmalarla da önemine dikkat çekilerek ekonomik, sosyal ve çevre boyutlarıyla yaşanan sorunlara çözüm yolu olarak sürdürülebilirlik ve sürdürülebilir kalkınma hedefleri belirlenmektedir. Bu hedeflerin etkili biçimde uygulanabilmesinde insanlar tarafından anlaşılır olması ve bilinçlenerek farkındalık kazanılmasının önemi büyüktür. İnsanlarda

sürdürülebilirlik bilincinin oluşmasında küçük yaşlarda ailede ve okulda verilecek eğitim kilit rol oynamaktadır. 2015 yılında 193 ülkenin katılımıyla Birleşmiş Milletler Sürdürülebilir Kalkınma Zirvesi gerçekleşmiştir (Ar & Çelik Uğuz, 2017). “Dünyamızı Dönüştürmek: 2030 Sürdürülebilir Kalkınma Gündemi” kapsamında 17 amaç belirlenmiştir. Bu amaçlar sürdürülebilir kalkınma konusunda çerçeve niteliğindedir (Birleşmiş Milletler [BM], 2015).

Sosyal bilgiler güncel yaşamla iç içe olan ve öğrencilere toplumsal kişilik kazandırmayı amaçlayan bir derstir. Çevre sorunları, ekonomik sorunlar ve sosyal sorunlar günlük yaşamın olağan unsurları durumuna gelmiştir. Bilim ve teknoloji hızla gelişirken insanlığın doğal kaynaklar ve çevre üzerinde neden olduğu tahribat da göz ardı edilemeyecek bir düzeye gelmiştir. Tüm bu gelişmeler eğitim alanında sürdürülebilirlik kavramının ön plana çıkmasına neden olmaktadır. Sürdürülebilirlik bugünün kaynaklarını tüketirken gelecek nesillerin de bu kaynaklara olan gereksinimini göz önünde bulundurmayı gerekli kılmaktadır. Sürdürülebilirlik bilincinin öğrencilere kazandırılmasında rol oynayabilecek derslerden biri de sosyal bilgiler dersidir. Çünkü sosyal bilgiler dersi içeriğinde hem toplumsal konulara hem çevre ile ilgili konulara hem de ekonomi ile ilgili konulara yer vermekte; tüm bunları öğrencilerin gelişim düzeyine uygun biçimde disiplinler arası bakış açısıyla ele almaktadır. Sosyal bilgiler dersi kapsamında alanyazında sürdürülebilirlik ve sürdürülebilir kalkınma konusunda bazı çalışmalar yapılmıştır. Bunlar arasında sosyal bilgiler öğretim programlarının sürdürülebilir kalkınma kapsamında incelendiği (Aktaş, Dinçol Özgür ve Yılmaz, 2020; Bulut ve Çakmak, 2018; Kaya ve Tomal, 2011; Oğuz Hacat ve Demir, 2019; Tanrıverdi, 2009), sosyal bilgiler ders kitaplarının sürdürülebilirlik açısından incelendiği (Mentiş Taş ve Özkaral, 2016), sosyal bilgiler öğretmenlerinin görüşlerini ortaya koyan (Aydoğan, 2010; Azrak, 2022; Dinç ve Acun, 2017) ve sosyal bilgiler öğretmen adaylarının sürdürülebilir kalkınma farkındalıklarına yönelik (Acar, 2021; Ateş, 2018; Özsoy, 2021; Öztürk Demirbaş, 2015; Türer, 2010; Uyanık, 2021) çalışmalar yapılmıştır. Ancak sosyal bilgiler dersinde sürdürülebilirlik bilincinin kazandırılmasına yönelik etkinliklerin düzenlenmesiyle ilgili çalışmaların sınırlı olduğu görülmektedir. Bu doğrultuda sürdürülebilir yaşama yönelik farkındalığın kazandırılması sürecinde sosyal bilgiler dersinde oluşturulacak öğrenme ortamları ve uygulanacak etkinliklerin öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeylerine olan etkisini ortaya koyacak bir çalışmanın yapılmasının önemli olduğu düşünülmektedir. Araştırmanın amacı 6. sınıf sosyal bilgiler dersinde sürdürülebilirlik bilinci kazandırmaya yönelik uygulanan etkinliklerin öğrencilerin sürdürülebilir yaşama yönelik farkındalıklarına etkisini ortaya koymaktır. Bu bağlamda araştırma kapsamında şu sorulara yanıt aranmıştır:

1. Sosyal bilgiler dersinde sürdürülebilirlik bilinci ile ilgili uygulanan etkinlikler 6. sınıf öğrencilerinin sürdürülebilir yaşama yönelik farkındalıklarını anlamlı bir şekilde etkilemiş midir?
2. 6. sınıf öğrencilerin sosyal bilgiler dersinde sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin uygulama sürecine yönelik görüşleri nelerdir?

Yöntem

Sosyal bilgiler dersinde sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin öğrencilerin sürdürülebilir yaşama yönelik farkındalıklarına etkisini incelemeyi amaçlayan bu çalışmada, karma yöntem desenlerinden gömülü deneysel desen kullanılmıştır (Creswell & Plano-Clark, 2007). Araştırmanın nicel boyutunda tek grup öntest-sontest desen kullanılmıştır. Bu desende, deneysel işlemin etkisi tek bir grup üzerinde gerçekleştirilen çalışma ile incelenir (Büyükoztürk vd., 2020, s. 208).

Araştırmanın çalışma grubunu Eskişehir il merkezinde bir devlet okulunda öğrenim gören 28 tane 6. sınıf öğrencileri oluşturmaktadır. Araştırmanın nicel verileri Akgül ve Aydoğdu (2020) tarafından geliştirilen “Sürdürülebilir Yaşama Yönelik Farkındalık Ölçeği” [SYFFÖ] ile toplanmıştır. Sosyal bilgiler dersinde sürdürülebilir kalkınmaya yönelik hazırlanan dersler tamamlandıktan sonra 7 erkek 7 kız olmak üzere toplam 14 öğrenci ile yüz yüze yarı yapılandırılmış görüşmeler yapılarak nitel veri toplanmıştır. Araştırmada nicel boyut kapsamında uygulanan SYFFÖ ile verilerin toplanması için öncelikle Doğrulayıcı Faktör Analizi yapılmış iç geçerlik katsayısı uygun bulunarak ölçeğin kullanılması kararlaştırılmıştır. Öğrencilere ön-test ve son-test olarak uygulanan ölçeğe ait nicel veriler SPSS 24 Paket programı ile analiz edilmiştir. Uygulanan ölçeğin ön test ve son test sonuçlarına göre normallik dağılımını belirlemek için ortalama, standart sapma, çarpıklık, basıklık değerleri ile histogram ve kutu grafikleri incelenmiştir. Bunun yanında Shapiro-Wilk testi sonucundan yararlanarak normallik dağılımı incelenmiştir. Ön-test sonuçlarında normallik şartlarının sağlandığı ancak son-test değerlerinde normallik şartının sağlanmadığı görülmüştür. Bu doğrultuda Wilcoxon İşaretli Sıralar Testi uygulanmış ve ölçekten elde edilen verilerin ön-test/son-test karşılaştırması yapılmıştır. Araştırmanın nitel verileri tümevarımsal analiz yöntemi ile analiz edilmiştir. Araştırmacı tarafından analiz edilerek temalar haline getirilen verilerin %20’si uzman görüşüne sunulmuştur. Veriler uzman tarafından araştırmacıdan bağımsız biçimde kodlanmış ve temalaştırılmıştır. Araştırmacı ve uzman tarafından ayrı ayrı oluşturulan temalar karşılaştırılarak uzlaşmaya varılmıştır.

Bulgular

Araştırma sürecinde gerçekleştirilen 5 haftalık deneysel işlem sürecinin, deney grubundaki öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeyini istatistiksel olarak anlamlı derecede artırdığı görülmüştür. Ayrıca Wilcoxon İşaretli Sıralar testi için etki büyüklüğü de hesaplanmış ve etki büyüklüğü değeri .30 olarak bulunmuştur. Etki büyüklüğü değeri 0.10 küçük, 0.30 orta ve 0.50 büyük etki büyüklüğü olarak değerlendirilmektedir (Cohen, 1988’den akt. Özdoğan, 2022, s. 250). Bu doğrultuda bu araştırmada etki büyüklüğünün orta etki büyüklüğü değerinde olduğu görülmektedir. Nitel verilerin analizi ile elde edilen bulgular öğrencilerin sosyal bilgiler dersi ile sürdürülebilirlik konusu arasında güçlü bir ilişki olduğunu düşündüklerini göstermektedir. Ayrıca öğrenciler sosyal bilgiler dersinde uygulanan etkinlikleri bilgilendirici, eğlenceli, bilinçlendirici ve farkındalık sağlayıcı biçiminde betimlemişlerdir. Öğrencilerin sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin sürdürülebilir yaşama yönelik farkındalık düzeylerine olumlu yönde etki ettiği görüşüne sahip oldukları belirlenmiştir. Öğrenciler sosyal bilgiler dersinde uygulanan etkinliklerden sonra günlük yaşamlarında doğal kaynakların kullanımına daha fazla dikkat etmeye başladıklarını ve doğal çevreye duyarlılıklarının geliştiğini ifade etmiştir. Öğrencilerin görüşleri incelendiğinde tasarruf yapmaya özen gösterdikleri, geri dönüşüme dikkat ettikleri ve uygulama kapsamında öğrendikleri bilgileri yakın çevreleriyle paylaştıklarına dair örnekler verdikleri görülmektedir.

Tartışma ve Sonuç

Bu araştırmada sosyal bilgiler dersinde sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeylerine etkisi incelenmiştir. Gerçekleştirilen deneysel işlem sürecinin, deney grubundaki öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeyini istatistiksel olarak anlamlı derecede artırdığı sonucuna ulaşılmıştır. Alanyazında yapılan araştırmalarda da sürdürülebilirlik bilinci kazandırma ve çevre eğitimi konusunda geliştirilen uygulamaların genellikle öğrenciler üzerinde olumlu sonuçlar verdiği görülmektedir. Salsabila ve

diğerleri (2019) tarafından gerçekleştirilen ortaokul öğrencilerine sürdürülebilirlik bilinci kazandırmada kanıt temelli tartışma yönteminin etkisinin incelendiği araştırmanın sonuçları da kanıt temelli tartışma yönteminin öğrencilere sürdürülebilirlik bilinci kazandırmada olumlu bir etkisinin olduğu belirlenmiştir. Hoque, Yasin ve Sopian (2022) tarafından yapılan çalışmada ortaokul düzeyinde yenilenebilir enerji konusunun öğretimi konusunda yapılan çalışmalar incelenmiştir. Yenilenebilir enerji konusunu içeren sürdürülebilir kalkınma ders ve etkinliklerin öğrenciler üzerinde olumlu bir etki oluşturduğu vurgulanmıştır.

Araştırmada öğrencilerle gerçekleştirilen yarı yapılandırılmış görüşme verilerinin analizi ile ulaşılan nitel bulgular öğrencilerin sosyal bilgiler dersi ile sürdürülebilirlik konusu arasında güçlü bir ilişki olduğunu düşündükleri ortaya çıkarmıştır. Benzer olarak Azrak'ın (2022) sosyal bilgiler dersinde sürdürülebilir kalkınmaya yönelik sosyal bilgiler öğretmenlerinin ve ortaokul sekizinci sınıf öğrencilerinin görüşlerini ortaya koymayı amaçlayan çalışmasında sosyal bilgiler öğretmenlerinin ortaokul öğrencilerine sürdürülebilir kalkınmaya yönelik farkındalık kazandırmada sosyal bilgiler dersinin önemli bir role sahip olduğunu düşündükleri sonucuna ulaşılmıştır. Ortaokul sekizinci sınıf öğrencileri sosyal bilgiler dersinde sürdürülebilir kalkınmayla ilgili konuları öğrendikleri görüşüne katılmaktadır. Buchanan ve Crawford (2015) sosyal bilgiler öğretmen adaylarına öğretim yöntemleri dersinde çevresel sürdürülebilirlik konusunda verilen eğitimin öğretmen adaylarının yerel ve küresel sürdürülebilirliğe ilişkin farkındalık düzeylerini artırdığı belirlenmiştir. Dinç ve Acun (2017) tarafından gerçekleştirilen çalışmada ise sosyal bilgiler dersinde ekonomi ve sürdürülebilir kalkınma kapsamına giren konuların öğretiminde güncel olayların kullanımına dair öğretmen görüşleri araştırılmıştır. Araştırmada öğretmenlerin sosyal bilgiler dersinde ekonomi ve sürdürülebilir kalkınma ile ilgili konuları öğretirken güncel olaylardan yararlandıkları belirlenmiştir. Bu araştırmanın bulguları sosyal bilgiler sürdürülebilirlik eğitimi ile ilişkisini ortaya koyması bakımından alanyazınla örtüşmektedir.

Araştırma kapsamında öğrencilerin sosyal bilgiler dersinde uygulanan etkinlikler konusundaki görüşleri bilgilendirici, eğlenceli, bilinçlendirici ve farkındalık sağlayıcı biçimde belirlenmiştir. Sürdürülebilirlik ve çevre bilinci konusunda yapılan araştırmalar uygulamaya dayalı etkinliklerin öğrenciler tarafından olumlu değerlendirildiğini göstermektedir. Yalçın (2022) tarafından gerçekleştirilen araştırmada sürdürülebilirlik kavramı ve sürdürülebilir eğitime ilişkin hazırlanan programın 9. sınıf öğrencileri tarafından nasıl algılandığını belirlemek amaçlanmıştır. Program sonrasında çevre bilinci konusunda bilgi sahibi oldukları, adaletli ve eşit bir toplum düzeni istedikleri, eleştirel ve yaratıcı düşünme ile analiz yapma konusunda gelişme gösterdikleri belirlenmiştir. Uygulanan programın ilgili konularda öğrencilerde duyarlılık ve farkındalık oluşturduğu sonucuna ulaşılmıştır. Selanik Ay'ın (2010) sosyal bilgiler dersinde çevre bilinci kazandırmada medya ürünlerinden yararlanma konusunda öğrenci görüşlerini araştırdığı çalışmasında öğrencilerin medya ürünlerinin çevre ile ilgili konularda bilgi edinmelerine katkı sağladığını düşündükleri belirlenmiştir.

Araştırma sonuçlarının genel olarak alanyazınla örtüştüğü görülmektedir. Araştırma sonucunda analiz edilen nitel veriler nicel verilerin ortaya koyduğu sonucu desteklemektedir. Bu kapsamda sosyal bilgiler dersinde öğrencilerin sürdürülebilirlik bilinci kazanmaları için uygulamaya dayalı, öğrencilerin birebir yaparak yaşayarak katılacakları eğitim etkinliklerinin düzenlenmesinin yararlı ve etkili olacağı söylenebilir. Sosyal bilgiler dersinde ve ilgili diğer derslerde disiplinlerarası biçimde sürdürülebilirlik bilincine yönelik kazanımların belirlenmesi önem taşımaktadır.

Öneriler

Bu arařtırmada 6. sınıf sosyal bilgiler dersinde sürdürülebilirlik bilinci geliřtirmeye yönelik etkinliklerin öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeylerini artırdığı belirlenmiştir. Bu nedenle öğrencilerin 6. sınıf sosyal bilgiler dersinde öğrencilerin sürdürülebilir yaşama yönelik farkındalık düzeylerini artırmak amacıyla sürdürülebilirlik bilinci geliřtirmeye yönelik etkinliklerden yararlanılabilir. Sosyal bilgiler dersinde sürdürülebilirlik bilinci geliřtirmeye yönelik etkinliklerden yararlanmak isteyen öğretmenler için sınıf içinde kullanılacak etkinlik örneklerinin yer aldığı bir rehber hazırlanabilir. Sosyal Bilgiler Öğretim Programında sürdürülebilirlik ve sürdürülebilir kalkınma konusuna yer verilebilir. Sosyal bilgiler dersinde sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin öğrencilerin çevresel, toplumsal ve ekonomik konulara duyarlılıklarına etkisini inceleyen arařtırmalar yapılabilir. Sürdürülebilirlik bilinci kazandırmaya yönelik etkinliklerin sosyal bilgiler dersine yönelik tutumlarına ve öğrencilerin değer kazanımına olan etkisini inceleyen arařtırmalar yapılabilir.