The Effect of Educational Games on Students' Attitudes Toward Social Studies

Görkem Akgül[1], Kamil Uygun[2]

[1] Uşak University, Graduate Education Institute, Uşak, Turkey

[2] Uşak University, Faculty of Education, Uşak, Turkey

HOW TO CITE:
Görkem Akgül, Kamil Uygun (2026). The Effect of Educational Games on Students' Attitudes Toward Social Studies. International Journal of Special Education, 41(7s), 975-989

COPYRIGHT STATEMENT:
Copyright: © 2026 Authors. Open access publication underthe terms and conditions of the Creative CommonsAttribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

ABSTRACT:
The purpose of this study was to determine the effects of educational game-based instruction on the attitudes of fifth-grade students in a social studies course. In the research where the experimental method was used, a 'pre-test-post-test control group research design' was applied. There are 25 students in both the experimental and control groups. The study was conducted with two groups of fifth-grade students at a public school in a medium-sized city center in Türkiye. The working group was selected using a convenient sampling method, which is one of the non-random sampling methods. The Social Studies Attitude Scale was used as a data collection tool. For the pre-test comparison of the Social Studies Attitude Scale, an independent samples t-test was applied, and for the post-test comparison, the Mann Whitney U analysis was applied. An examination of the findings reveals that educational game-based instruction positively impacts students' attitudes toward the course. Data indicates a statistically significant increase in students' attitude scores toward the course in the experimental group. The study concluded that the integration of educational games into social studies instruction enhanced students' learning experiences by making them more enjoyable and engaging. Therefore, students stated that they preferred educational games in teaching social studies and that this situation increased their motivation for the course.

Keywords: Educational games, social studies, attitudes.

1. Introduction

Education is defined as a process of consciously and purposefully bringing about change in individual behavior, and as a planned field of activity aimed at creating desired behaviors through personal life experiences. Thus, education can be considered not only a process of transferring knowledge, but also a holistic structure that transforms an individual's values, attitudes, problem-solving and decision-making styles (Ertürk, 1984; Yurtdakal Gönülal, 2023). In this regard, educational institutions, namely schools, are also striving to create the necessary conditions to equip their students with the skills appropriate to the demands of the age, to transform them into individuals who can adapt to rapidly changing social, technological, and cultural conditions, and sometimes to provide them with an environment where they can safely rehearse life (Ünal, 2018). Similarly, it can be said that school is where life is rehearsed.

According to the progressive education approach, school is life itself. Education should be provided in accordance with the student's interests and needs. Activities should be planned according to the students' abilities. A safe environment should be created for students where they can freely express themselves and realize their potential through doing and experiencing (Eti & Tepe, 2023; Yayla, 2023).

Schools are viewed as special social institutions where behaviors and attitudes are improved, contributing to the common good and change of individuals and, consequently, societies; and where learning is imparted to students' minds through social interaction and experiences. In these institutional structures, students not only acquire cognitive knowledge but also have the opportunity to gain many life skills through education, such as social participation, cooperation, taking responsibility, empathy, communication, and problem-solving (Homana, Croninger & Torney-Purta, 2010). Various methods are used to impart knowledge and develop skills in students. One of these methods is educational games. Educational games improve students' physical movements and coordination skills while activating higher-level cognitive processes such as attention, reasoning, problem-solving, decision-making, and strategy formation. They also enrich classroom interaction by strengthening students' social skills such as cooperation, rule-following, empathy, waiting their turn, helping each other, and communication. Emotionally, these games contribute to increased self-confidence and intrinsic motivation for learning by offering opportunities for experiencing a sense of accomplishment, taking risks, making mistakes, and learning from them.

Ayan & Dündar (2009:70) define educational play not merely as a concept of play, but as an integral and complementary element of general education, aiming at the physical, cognitive, affective, and social development of the students. In this context, educational play is not considered a spontaneous and random child activity; rather, it is viewed as a conscious, planned, goal-oriented, and structured set of teaching activities. The teacher selects or designs the game in advance in a way that is appropriate to the learning outcomes of the lesson, organizes the process, and relates the game to the classroom learning objectives. Since the study investigated the use of educational games in relation to students' attitudes towards the lesson, the questions of whether the use of educational games affects attitudes and, if so, to what extent, were a matter of curiosity. Therefore, the relationship between educational games and attitudes was examined.

In order for students to succeed in social studies, they are primarily expected to have an interest in the subject and develop a positive attitude towards it. Since students' values, beliefs, habits, attitudes, and behaviors are evaluated within the scope of affective characteristics, acquiring and developing these affective qualities in social studies is of particular importance. In this context, it can be said that the students' attitudes toward social studies directly affects their level of participation in the subject, their desire to learn, and how they fulfill their citizenship roles in the long term. This is important because it allows children to interact harmoniously with society, become sensitive to the problems of their environment, and be good citizens. Students' positive attitude towards lessons also positively affects their academic success (Aktepe, Tahiroğlu & Sargın, 2014).

One of the environments that attracts students' attention is the play environment. During play, students with different characteristics increase their participation in the lesson. Play is a learning tool, a learning goal, and a learning environment where they realize their potential (Yılmaz Yıldız, 2026). Educational games are increasingly preferred to increase the motivation of students transitioning from primary to secondary school. It is a particularly effective teaching method for ensuring active participation in lessons for 5th-grade students and for teaching abstract concepts in a more lasting way. Because educational games not only help students retain information but also facilitate the synthesis of learned information, developing their imagination and enabling them to create new products. Students who become

aware of their abilities and see that they can realize their potential consequently gain increased self-confidence (Şaşan, 2002). It can be said that students with increased self-confidence become more willing to learn. This suggests that educational games positively influence students' attitudes towards learning.

According to the Turkish Language Association, attitude is defined as the chosen path and behavior, and in social psychology, it is defined as a tendency attributed to an individual that organizes their thoughts, feelings, and possibly behaviors regarding a psychological object (Ateş Aslan & Tanınmış, 2022:296). Tezbaşaran (1996:1) defined attitude as a learned, positive or negative response to a specific object, situation, institution, concept, or other people. Tavşancıl (2010) describes some characteristics of attitudes as follows:

It is not possible to see an individual's attitudes. An individual's attitude toward an object is determined by their growth. People are not born with the attitudes they will have in the future. They learn their attitudes through their lives. An individual's learning process gradually shapes attitudes, which also contribute to an individual's understanding of their environment. A positive or negative attitude toward an object is formed as a result of encountering other objects.

Research problem

This study investigated the effect of educational games in social studies teaching on students' attitudes toward social studies lessons.

Sub-problems

In line with the research problem, the study compared the effects of instructional practices outlined in the 2018 social studies curriculum with those of educational game-based instruction on students' attitudes towards the lesson. In this context, answers have been sought to the following sub-problems:

- "Is there a significant difference between the pre-test scores of the control and experimental groups regarding their attitudes towards social studies lessons?"
- "Is there a significant difference between the pre-test and post-test scores of the control group regarding their attitudes towards social studies lessons?"
- "Is there a significant difference between the pre-test and post-test scores of the experimental group regarding their attitudes towards social studies lessons?"
- "Is there a significant difference between the post-test scores of the control and experimental groups regarding their attitudes towards social studies lessons?"

2. Methodology

This section of the research provides information on methodology, research model, working group, data collection tools, and data analysis.

Research Model

This study was prepared using quantitative research method. The experimental design used a pretest/posttest control group. An experimental study is conducted to demonstrate the impact of one variable on another variable. It is a method commonly preferred in education to measure the effectiveness of teaching methods (Cohen, Manion & Morrison, 2018).

The research model is symbolically shown in the table below.

Table 1. Representation of the symbolic process of the research model

Group	Pre-test	Process	Post-test
Experimental	"Social Studies Attitude Scale" (SSAC)	Teaching Social Studies Through Educational Games	"Social Studies Attitude Scale" (SSAC)
Control	"Social Studies Attitude Scale" (SSAC)	Teaching Social Studies Through Applications in 2018 Social Studies Curriculum	"Social Studies Attitude Scale" (SSAC)

Working Group

The research was conducted in a state school in a medium-sized city center in Turkey during the 2023–2024 academic year. The working group was determined using an appropriate sampling method. Appropriate sampling is one of the non-random sampling methods. The practice school is the closest school to the researchers. There are 50 students in total, 25 in the control group and 25 in the experimental group. The experimental group consists of 15 girls and 10 boys. The control group consists of 13 girls and 12 boys.

Data Collection Tools

SSAC developed by Çetinkaya and Uçar (2019) was applied as a data tool. The 63-item question pool obtained as a result of the literature review was revised in line with the opinions of four social studies teachers, two academics specializing in Social Studies and Measurement and Evaluation, and a Turkish teacher to determine whether the scale items were grammatically correct and understandable, resulting in a draft scale of 40 items, 20 of which were positive and 20 negative.

Validity and reliability studies of the scale have been completed. Factor analysis revealed that the scale consists of 4 factors. As a result of the analyses, it was seen that the scale consists of 29 items. Sub-dimensions: Interest (11 items), Use of Information (7 items), Course Content (5 items), and Reluctance (6 items). Factor analysis revealed that factor loadings range from 0.416 to 0.690. The reliability of the scale was tested using the Cronbach Alpha internal consistency coefficient, which was found to be 0.928 for the entire scale. The reliability coefficients of the sub-dimensions ranged from 0.752 to 0.874. These values indicate that the scale has high reliability. If the reliability of the scale is between 0.80 and 1.00, the result is considered highly reliable. If the reliability of the scale is between 0.60 and 0.79, the result is considered quite reliable. If the reliability of the scale is between 0.40 and 0.59, the reliability is low. If the reliability of the scale is between 0.00 and 0.39, the result is not reliable (Alpar, 2020). The results of the pre-test and post-test were analyzed according to these value ranges.

Table 2. Results of the reliability analysis of the social studies attitude scale

	Orijinal	Pretest	Posttest
Interest	,874	,819	,920
Using Information	,772	,688	,890
Course Content	,765	,815	,906
Unwillingness	,752	,786	,886
Total	,928	,887	,969

As shown in table 2, the Interest subscale was calculated as 0.819 for the pre-test and 0.920 for the post-test. These values indicate that the Interest subscale has a high level of reliability and

maintains its consistency over time. The Use of Information subscale was found to be 0.688 in the pre-test and 0.890 in the post-test. The pre-test reliability coefficient being below 0.70 indicates that the reliability in this measurement is borderline. However, the significant increase in the post-test reliability coefficient to 0.890 shows that the scale has become more consistent in the final measurement. The Course Content subscale pre-test score was calculated as 0.815, and the post-test score as 0.906. In particular, the increase in the post-test reliability coefficient to 0.90 indicates that the items in the scale have become more stable over time. The Reluctance subscale was determined as 0.786 in the pre-test and 0.886 in the post-test. An increase in the reliability coefficient during the post-test phase indicates improved measurement consistency in this sub-dimension. The overall reliability of the scale was calculated as 0.887 for the pre-test and 0.969 for the post-test. In conclusion, it can be said that the scale used in the study has a high level of overall reliability, its reliability increased in the pre-test and post-test phases, and the scale items became more consistent over time. This indicates that an appropriate measurement tool was used for reliable analysis and interpretation of the data obtained in the study.

Data Analysis

The pretest normality distribution findings of the social studies attitude scale are shown in Table 3, and the posttest normality distribution findings are shown in Table 4.

Table 3. Social studies attitude scale pre-test normality distribution results

	Skewness	Kurtosis
Interest	-,349	-,128
Using Information	-,241	-,799
Course Content	-,741	-,158
Lack of Motivation	,337	,662
Total	-,124	-,959

Table 4. Social studies attitude scale post-test normality distribution results

	Skewness	Kurtosis
Interest	-1,083	,501
Using Information	-1,266	,1894
Course Content	-1,515	2,104
Lack of Motivation	-1,816	3,801
Total	-1,579	1,899

When all values are examined, it is seen that the skewness and kurtosis values do not meet the criteria of a normal distribution. In particular, the fact that the skewness values are below -1.5 and the kurtosis values are generally different from 1.5 indicates that the data deviates from a normal distribution. For the pre-test comparison of the SSAC, an independent samples t-test was applied, and for the post-test comparison, the Mann Whitney U analysis was applied. A statistical program was used to analyze the data obtained in the research.

Experimental Process and Teaching Environment

The preparation process prior to the experimental procedures was meticulously planned. All necessary permits were obtained before the application. A pre-implementation briefing meeting was held with the school principal and teacher. Students in both the experimental and control groups were given information about the research process. First, a pre-test was administered to the experimental and control groups. The application process was limited to the 5th-grade Active Citizenship

learning area. In the experimental group, lessons were taught using structured educational games. These included truth/false warm-up games, taboo, who am I, which one is missing and matching games. In the control group, lessons were taught using activities and practices included in the 2018 social studies curriculum. Each group received 3 lesson hours per week (40+40+40 minutes). A total of 6 hours of classes were held per week. The research lasted 7 weeks. All applications in the control group and experimental group were conducted by the researcher. At the end of the process, a final test was administered to both groups.

3. Results

The answer to the question, "Is there a significant difference between the sub-dimensions and total scores of the experimental and control groups' pre-test attitudes towards Social Studies lessons?", which was included in the research, is given in table 5.

Table 5. Pre-test independent samples t-test results of the control and experimental groups' attitudes towards social studies lessons

SSAC Sub-Dimensions Pre-Test	Group	N	$\bar{X}$	Ss	df	t	p
Interest	Control	25	40,20	7,87	48	,308	,759
	Experiment	25	39,60	5,73			
Using Information	Control	25	28,68	5,03	44,394	-,255	,800
	Experiment	25	29,00	3,75			
Course Content	Control	25	18,44	5,10	48	-,171	,865
	Experiment	25	18,68	4,83			
Lack of Motivation	Control	25	13.00	4,41	48	,885	.381
	Experiment	25	11.62	4,21			
Total Score	Control	25	100.32	11,67	48	,385	,702
	Experiment	25	99.20	8,69			

In the study, the pre-test results of the SSAC for the experimental and control groups were compared using an independent samples t-test. The analysis was performed in terms of the four sub-dimensions of the scale (interest, use of information, course content, reluctance) and the total attitude score.

When examining the interest sub-dimension of the SSAC, no statistically significant difference was found between the mean pre-test the experimental group ($\bar{X}$ = 39.60) and the mean pre-test the control group ($\bar{X}$ = 40.20) [t(48) = .308, p > .05].

When the pretest findings of the use of information were examined, no statistically significant difference was found between score of the control group ($\bar{X}$ = 28.68) and score of the experimental group ($\bar{X}$ = 29.00) [t(44,394) = -.255, p > .05].

When evaluated in terms of course content, no significant difference was found between the mean of the control group ($\bar{X}$ = 18.44) and the mean of the experimental group ($\bar{X}$ = 18.68) [t(48) = - .171, p > .05].

When the pre-test findings of the reluctance sub-dimension were reviewed, no statistically significant difference was found between the mean of the control group ($\bar{X}$ = 13.00) and the mean of the experimental group ($\bar{X}$ = 11.62) [t(48) = .885, p > .05].

In terms of total attitude scores, the mean of the control group was ($\bar{X}$ = 100.32), and the mean of the experimental group was ($\bar{X}$ = 99.20). No statistically significant difference was found in the total mean scores of the attitude scale [t(48) = .385, p > .05].

According to the pre-test results, there was no significant difference between the experimental

and control groups in terms of their attitudes towards the social studies lessons. No significant differences were found between the groups in the sub-dimensions of interest, use of information, lesson content, and reluctance. This indicates that the two groups were at similar baseline levels before the experiment.

The answer to the question asked within the scope of the research, "Is there a significant difference between the sub-dimensions and total scores of the experimental and control groups' attitudes towards the Social Studies lesson in the final test?", is shown in Table 6.

Table 6. Post-test Mann Whitney-U test results of control and experimental groups' attitudes towards social studies lessons

SSAC Sub-Dimensions	Group	N	Rank Average	Rank Sum	u	p
Interest	Control	25	14,88	372,00	-5.163	.000
	Experiment	25	36,12	903,00		
Using Information	Control	25	17,66	441,50	-3.834	.000
	Experiment	25	33,34	833,50		
Course Content	Control	25	16,34	408,50	-4.511	.000
	Experiment	25	34,66	866,50		
Lack of Motivation	Control	25	36,24	906,00	-5.251	.000
	Experiment	25	14,76	369,00		
Total Score	Control	25	15,38	384,50	-4.915	.000
	Experiment	25	35,62	890,50		

In this study, the post-test results of the SSAC for the experimental and control groups were compared using the Mann-Whitney U test. This test is a nonparametric test used to determine whether there is a statistically significant difference between two independent groups. The analysis was performed in terms of the scale's four sub-dimensions (interest, use of information, course content, reluctance) and the total attitude score. A significant difference was observed between the control group (O=41) and the experimental group (O=49) in the post-test scores of the Social Studies Attitude sub-dimension (U= -5.163, p<.05). It can be said that there is a significant difference in favor of the experimental group in terms of the social studies attitude interest sub-dimension between the experimental and control groups. The higher rank mean of the experimental group indicates that the students in this group showed a greater increase in their level of interest after the intervention.

In the sub-dimension of using information, a significant difference was observed between the experimental group (O=34) and the post-test scores of the control group (O=27) (U= -3.834, p<.05). It can be said that there is a significant difference in favor of the experimental group in terms of the sub-dimension of using information in social studies. The higher rank average of the experimental group indicates that the level of using information in social studies lessons increased more in this group after the intervention. In the results of the course content sub-dimension, a significant difference was observed in the mean post-test scores between the control group (O=20) and the experimental group (O=25) (U= -4.511, p<.05).

A significant difference in favor of the experimental group emerged in terms of the sub-dimension of the sub-dimension of the sub-dimension of using information in social studies. The higher-ranking average of the experimental group indicates that the intervention contributed to the development of positive attitudes towards the course content among the students in the experimental group. According to the results of the social studies attitude reluctance sub-

dimension, a significant difference was observed between the post-test scores of the experimental group (O=7) and the control group (O=12) (U= -5.251, p<.05). A significant difference was found in favor of the experimental group in terms of the reluctance sub-dimension between the experimental and control groups.

The fact that the experimental groups' rank averages were higher than the control groups' in all dimensions indicates that the experimental process positively changed students' attitudes towards social studies. These findings demonstrate that the experimental intervention was successful and that students developed a more positive attitude towards the subject.

The answer to the question, "Is there a statistically significant difference between the pre-test and post-test scores of the control group in terms of the sub-dimensions and total scores of their attitudes towards Social Studies?", which was included in the research, is presented in table 7.

Table 7. Pre-test and post-test Wilcoxon signed-rank test results of the control group's attitudes towards social studies

SSAC Sub-Dimensions		N	Rank Average	Rank Sum	Z	p
Interest	Negative Rows	13a	14,88	193,50	-,836	,403
Post-test – Pretest	Positive Rows	12b	10,96	131,50		
	No Difference	0				
Using Information	Negative Rows	13d	11,81	153,50	-,880a	,379
Post-test – Pre-test	Positive Rows	9e	11,06	99,50		
	No Difference	3				
Course Content	Negative Rows	9g	12,50	112,50	-,105b	,917
Post-test – Pre-test	Positive Rows	12h	9,88	118,50		
	No Difference	4				
Laack of Motivation	Negative Rows	11	11,95	131,50	-,531	,596
Post-test – Pre-test	Positive Rows	13	12,96	168,50		
	No Difference	1				
Total Score	Negative Rows	14	14,29	200,00	-1,010	,313
Post-test – Pre-test	Positive Rows	11	11,36	125,00		
	No Difference	0				

The control group's pretest and posttest scores on the SSAC were checked using the Wilcoxon Signed-Rank Test. This test is used to determine whether there is a significant change in measurements of the same group at different times.

In the control group, the number of negative ranks (those with low post-test scores) and positive ranks (those with high post-test scores) were calculated as 13 and 12 respectively. No statistically significant difference was found between the pretest and post-test scores of the interest sub-dimension in the control group [z = -0.836, p > .05].

In the use of information sub-dimension, the number of negative ranks in the control group was calculated as 13, the number of positive ranks as 9, and the number of ranks with no difference as 3. When examining the pre-test and post-test scores for the use of information sub-dimension, no statistically significant difference was found.

[z = -0.880, p > .05].

In the control group, the number of negative ranks in the course content sub-dimension was found to be 9, the number of positive ranks was 12, and the number of ranks with no difference was 4. No statistically significant difference was found between pre- and post-application scores in the course content sub-dimension [z = -0.105, p > 0.05].

In the reluctance sub-dimension, the number of negative ranks in the control group was calculated as 9, the number of positive ranks as 13, and the number of ranks with no difference as 3. No statistically significant difference was found between pre- and post-application scores in the interest sub-dimension of the control group [z = -0.531, p > 0.05].

In the analysis of the total score of the SSAC for the control group, the number of negative ranks was determined as 13, and the number of positive ranks as 12. There was no statistically significant difference between the pretest and posttest scores in the interest sub-dimension of the control group [z = -1.010, p > 0.05].

According to the Wilcoxon Signed-Rank Test results, there was no significant change in the attitude of the control group towards the social studies course. When the overall attitude and all sub-dimensions were examined, no statistically significant difference was found between the pretest and posttest scores. These findings indicate that the attitudes of the students in the control group towards the social studies course remained largely unchanged throughout the experimental period.

The answer to the question, "Is there a significant difference between the sub-dimensions and total scores of the experimental group's attitudes towards the social studies course in the pre-test and post-test?" is presented in table 8.

Table 8. Wilcoxon signed-rank test results of the experimental group's attitudes towards social studies course (pre-test and post-test)

SSAC Sub-Dimensions		N	Rank Average	Rank Sum	z	p
Interest Post-test – Pre-test	Negative Rows	1	19,50	19,50	-3.852	.000
	Positive Rows	24	12,73	305,50		
	No Difference	0				
Using Information Post-test – Pre-test	Negative Rows	3	9,00	27,00	-3.386	.001
	Positive Rows	20	12,45	249,00		
	No Difference	2				
Course Content Post-test – Pre-test	Negative Rows	3	5,17	15,50	-3.610	.000
	Positive Rows	19	12,50	237,50		
	No Difference	3				
Lack of Motivation Post-test – Pre-test	Negative Rows	1	2,50	2,50	-4.224	.000
	Positive Rows	20	12,93	297,50		
	No Difference	4				
Total Score Post-test – Pre-test	Negative Rows	1	15,00	15,00	-3.860	.000
	Positive Rows	23	12,39	285,00		
	No Difference	1				

The experimental group's pretest and posttest scores on the SSAC were checked using the Wilcoxon Signed-Rank Test. This analysis was conducted to determine whether there was a significant change in the experimental group's measurements at different times. In the

experimental group, the number of negative ranks (those with lower post-test scores) was calculated as 1, and the number of positive ranks (those with higher post-test scores) was calculated as 24. In the experimental group, a statistically significant difference was found between the pretest and final test results for the interest sub-dimension [$z = -3.852$, $p < .05$].

In the knowledge usage sub-dimension, the number of negative ranks was calculated as 3, the number of positive ranks as 20, and the number of ranks with no difference as 2 in the experimental group. A statistically significant difference was found between the pre- and post-test scores of the knowledge usage sub-dimension [$z = -3.386$, $p < .05$].

In the experimental group, the number of negative ranks in the course content sub-dimension was found to be 3, the number of positive ranks was 19, and the number of ranks with no difference was 3. When the course content sub-dimension of the experimental group was examined, a statistically significant difference was found between their pretest and posttest scores [$z = -3.610$, $p < .05$].

In the experimental group, the number of negative ranks in the reluctance sub-dimension was calculated as 1, the number of positive ranks was 20, and the number of ranks with no difference was 4. When examining the statistical results between pretest and posttest scores related to the subscale of reluctance, a significant difference was found [$z = -4.224$, $p < .05$].

In the analysis of the experimental group's total attitude scores, the number of negative ranks was determined as 1, the number of positive ranks was 23, and the number of ranks with no difference was 1.

When examining the total social studies attitude scores, a statistically significant difference was found between the pretest and posttest scores [$z = -3.860$, $p < .05$].

According to the Wilcoxon Signed-Rank Test results, a significant change was observed in the attitude of the experimental group towards the social studies course. A statistically significant increase was observed between the pretest and posttest in terms of all sub-dimensions and the total attitude score. These findings indicate that the attitudes of the students in the experimental group towards the social studies course improved positively, their level of interest and use of information increased, their attitudes towards the content of the course became more positive, and their level of reluctance decreased.

4. Discussion and Conclusion

According to the findings, the independent samples t-test results showed that the experimental and control groups were initially at similar levels in terms of their attitudes towards the social studies course. No significant difference was found between the groups in all sub-dimensions of the scale (interest, use of information, course content, reluctance) and in the total attitude score. This finding indicates that the initial equality, an important condition for ensuring internal validity in experimental research, has been met (Büyüköztürk et al., 2008).

This result allows for a more robust process of evaluating the effect of the intervention in experimental studies. As emphasized by Fraenkel and Wallen (2009) and Karasar (2014), the statistically similar pre-test levels of the experimental and control groups make it more scientific and reliable to say that the differences observed after the intervention are due to the implemented program.

It is known that attitudes towards social studies lessons directly affect students' levels of participation in the learning process and their acquisition of social skills (Çelikkaya, 2011; Alabaş, 2018). Therefore, the similarity of attitudes between the two groups at the beginning of the research made it possible to objectively evaluate the effect of the educational game integration.

In addition, students' interest in the lesson, their use of information, and their evaluations of the lesson content can vary in direct relation to the form of educational activities (Bozkurt, 2014; Şahin and Karatekin, 2022). Therefore, the lack

of difference observed in the attitude scale results in the pre-test made the contribution of the experimental intervention more significant.

In conclusion, the fact that the experimental and control groups were at a similar starting point in terms of attitude levels provided a significant methodological advantage in evaluating the effectiveness of educational game-based teaching in the research process. This situation strengthened the validity and reliability of the findings obtained.

The findings of the sixth sub-problem show that the educational game-based teaching process resulted in significant and positive changes in students' attitudes towards Social Studies lessons. Analysis using the Mann-Whitney U test revealed significant differences in favor of the experimental group in interest, information usage, lesson content, reluctance, and total attitude scores. This result demonstrates that educational games increased affective engagement in students and positively changed their perceptions of the lesson. Educational games are methods that support students' active participation in the learning process, making the content more meaningful and enjoyable. The increased level of interest in the experimental group indicates that the game-based process created a more motivating learning environment for students. This supports the strong effect of educational game, particularly in increasing intrinsic motivation and participation, as highlighted in studies such as those by Bozkurt (2014) and Codish and Ravid (2014). Students believe that educational games are fun and beneficial (Özek & Çelik, 2025).

The improvement observed in the sub-dimension of using information shows that students not only acquire information but also develop the ability to relate it to social life. This finding is consistent with studies such as Çelikkaya (2011) and Deveci (2005); the effect of learning environments offered to students in social studies lessons on their ability to relate information to life can be increased with constructivist and interactive approaches. Finally, the significant increase in the total attitude score reveals that educational game-based teaching holistically changes students' general attitudes towards Social Studies lessons in a positive way. This finding coincides with local studies such as Sömen (2016) and Şahin and Karatekin (2022), as well as international research such as Dishon and Kafai (2022).

These results demonstrate that in subjects like social studies, which have strong cognitive and affective dimensions, game-based teaching is an important teaching method that not only imparts knowledge but also shapes students' attitudes towards the subject. According to the findings in the seventh sub-problem, there was no significant change in the attitudes of the students in the control group towards the Social Studies course throughout the experimental process. According to the Wilcoxon Signed-Rank test results showed no statistically significant difference between pre-test and post-test measurements in terms of interest sub-dimensions, information use, course content, and reluctance, as well as total attitude scores. This result indicates that the attitudes of the students in the control group towards the Social Studies course remained constant throughout the experimental period.

These findings indicate that traditional teaching methods have limited effects on student attitudes. Bozkurt (2014) states that interactive teaching strategies such as gamification support the development of motivation and positive attitudes towards the lesson in students. In contrast, the neglect of affective dimensions by traditional, teacher-centered approaches can lead to a lack of significant change in students' perceptions of the lesson (Şaşan, 2002; Demirel, 2003). The fact that the attitudes of the control group remained constant in this study reveals that affective development should be supported not only by content delivery but also by interaction, participation, and student-centered teaching processes. As emphasized by Akbaba and Aksoy (2019), the skill and value-oriented nature of social studies lessons necessitates that the learning process be presented in structurally active and gamified forms.

These findings indicate that traditional teaching methods have limited effects on student attitudes. Bozkurt (2014) states that interactive teaching strategies such as gamification support the development of motivation and positive attitudes towards the lesson in students. In contrast, the neglect of affective dimensions by traditional, teacher-centered approaches can lead to a lack of significant change in students' perceptions of the lesson (Şaşan, 2002; Demirel, 2003). The fact that the attitudes of the control group remained constant in this study reveals that affective development should be supported not only by content delivery but also by interaction, participation, and student-centered teaching processes. As emphasized by Akbaba and Aksoy (2019), the skill and value-oriented nature of social studies lessons necessitates that the learning process be presented in structurally active and gamified forms.

In conclusion, the fact that the attitudes of the students in the control group did not change during the experimental process reveals that attitude development is limited in classrooms where game-based teaching is not implemented, and that classical teaching methods are insufficient in this regard. This finding, when compared with the positive attitude development observed in the experimental group, shows that educational game applications should be considered an indispensable element in teaching environments. The findings of the eighth sub-problem show that educational game-based teaching significantly and positively affects students' attitudes towards Social Studies lessons. According to the Wilcoxon Signed-Rank Test results, a statistically significant increase was observed in all sub-dimensions of the attitude scale (interest, use of information, course content, reluctance) and in the total score level in the experimental group.The dominance of positive responses over negative responses indicates that the implemented educational game process increased students' interest in the lesson, reduced their levels of reluctance, and strengthened their cognitive connection with the content. The development of positive attitudes towards the course content indicates that games are integrated into the learning process in a more holistic and contextual way. Students had the opportunity to construct knowledge by interacting in a game environment, which strengthened their perceptions of the course content. Altınbulak, Emir, and Avcı (2006) drew attention to the effect of educational games on both the permanence of learning and the creation of positive perceptions towards the content. Similarly, Aksoy and Duman (2020) also revealed that game-supported teaching led to significant improvements in students' attitudes towards social studies lessons. Furthermore, the significant decrease in the reluctance sub-dimension indicates that students' sense of obligation towards the lesson has been replaced by voluntary participation. Pellegrini and Smith (2007) state that play environments support intrinsic motivation and make learning a more natural experience. Ayo Vaughan and Amosun (2016) argue that active learning and play-based applications positively influence children's attitudes towards learning, as well as their leadership skills and citizenship values.

Finally, the development of attitudes observed in students through the application of educational games is valuable not only in terms of classroom gains but also in terms of developing long-term learning habits and a sense of social responsibility (Themistokleous and Avraamidou, 2016; Dishon and Kafai, 2022). In disciplines that aim to develop both the intellectual and social aspects of the individuals, such as social studies, the widespread adoption of game-based learning strategies offers lasting contributions to both student achievement and affective development.

Suggestions

Educational games should be actively incorporated into social studies instruction. Research findings have shown that educational games increase students' interest in social studies, reduce their level of apathy towards the subject, and improve their understanding of information. Accordingly, teachers should pre-plan educational game activities related to learning objectives, contributing to achieving both the cognitive and affective goals of the course.

In-service training programs should be organized to improve teachers' skills in designing and implementing educational games. Educational games are not just a tool; they are also a part of effective teaching strategies. Therefore, teachers should develop the skills to select games for pedagogical purposes, adapt them to lesson content, and effectively manage the classroom during implementation. The Ministry and local educational institutions can organize workshops and certification programs in this area.

The Social Studies curriculum should be designed more flexible for educational game-based applications. Curriculum content can be structured in a way that is suitable for gamification and scenario-based learning, attracting student interest. Including dedicated spaces for educational games and providing examples of best practices in the suggested activities for the learning outcomes included in the curriculum will facilitate teachers' more effective use of these methods.

Educational games should be incorporated as a functional tool in teaching attitude, value, and social skills-based objectives. Social studies is not only a subject that transmits information; it also educates students in areas such as social awareness, values education, and civic responsibility. In this context, structuring educational games at the program level will facilitate students' internalization of social skills such as empathy, leadership, and teamwork.

The impact of educational games should be investigated across different age groups, grade levels, and disciplines. This study was conducted solely within the context of social studies lessons. A broader assessment of the field could be made by examining the effects and effectiveness levels of educational games in other subjects such as science, Turkish language, and mathematics.

Follow-up studies revealing long-term effects should be included. Educational games have positive effects on attitude and skill development in the short term; however, the permanence of these effects over time and the extent to which students use these skills in real life have not yet been sufficiently investigated. Therefore, longitudinal and mixed-methods studies should be encouraged.

References

Akbaba, B. & Aksoy, B. (2019). *Skill teaching in social studies education.* Ankara: Pegem Academy.

Aksoy, B. & Duman, A. (2020). The effectiveness of game-supported learning in teaching social studies. *Theory and Practice in Education 16(1), 45–60.*

Aktepe, V., Tahiroglu, M. & Sargın, S. (2014). The effect of attitude towards social studies course on student success. *International Journal of Social Science, 27, 83–92.*

Alabaş, C. (2018). *Examining the place of social participation skills in social studies course curricula (1968–2018).* (Unpublished master's thesis). Kastamonu University, Turkey.

Alpar, R. (2020). *Applied statistics and validity reliability.* Ankara*:* Detay Publishing.

Altınbulak, D., Emir, S. & Avcı, C. (2006). The effects of educational games on access and retention in social studies teaching. *Journal of Hasan Ali Yucel Faculty of Education,* (2), 35–51.

Ateş Aslan, I. & Tanınmış, G. E. (2022). Comparison of attitudes towards music lessons among primary school students attending state and private schools (Sakarya province example). In H. Şahin (Ed.) *Educational Sciences Studies* (295-310). Lyon: Livre De Lyon.

Ayan, S. & Dündar, H. (2009). The importance of preschool creativity and play in education. *Selçuk University Ahmet Keleşoğlu Faculty of Education Journal, 28*(1), 63-74.

Ayo Vaughan, A. F. & Amosun, P. A. (2016). Effects of two modes of active learning strategies on school-age children's civic competence in leadership value concepts. *Journal of Social Studies and Civic Education, 6(1), 102–116.*

Bozkurt, A. (2014). Homo ludens: digital games and education. *Journal of Educational Technologies Research 5(1), 1–21.*

Bozkurt, A., & Genc-Kumtepe, E. (2014). *Gamification, game philosophy and education: Gamification.* Academic Informatics Conference Proceedings*,* Mersin University.

Büyköztürk, S. Çakmak, E. K, Akgün. O. E., Karadeniz, S. & Demirel, F. (2008). *Scientific research methods.* Ankara: Pegem Academy Publishing.

Codish, D. & Ravid, G. (2014). Personality-based gamification: Educational gamification for extroverts and introverts. *Chais Conference for Innovation in Learning Technologies, 1(1), 36–44.*

Cohen, L., Manion, L. & Morrison, K. (2018). *Research methods in education.* London: Routledge.

Çelikkaya, T. (2011). The level of acquisition of skills in the Social Studies program: Teachers' views, *Kastamonu Education Journal, 19(3), 969–990.*

Çetinkaya, S. & Uçar, F. H. (2019). Examining the attitudes of 2nd stage primary school students towards social studies lessons: A scale development study. *Kastamonu Education Journal, 27*(1), 25-35.

Demirel, O. (2003). *Educational Dictionary.* Ankara: Pegem Academy Publishing.

Deveci, H. (2005). The use of newspapers in social studies lessons. *The Turkish Online Journal of Educational Technology, 4*(3), 159-166.

Dishon, G. & Kafai, Y. B. (2022). Connected civic gaming: Rethinking the role of video games in civic education. *Interactive Learning Environments*, *30*(1), 1–14.

Ertürk, S. (1984). *Curriculum development in education.* Ankara: Meteksan.

Eti, S. & Tepe, T. (2023). A comparison of the educational philosophy training of teacher candidates studying in faculties of education. *Bartın University Journal of Educational Research, 7*(1), 60-71.

Fraenkel, J. R. & Wallen, N. E. (2009). *How to Design Evaluate Research in Education.* New York: McGrawHill Companies.

Homana, G., Croninger, R. G. ve Torney-Purta, J. (2010). *Adolescent civic engagement in Australia and the United States: The role of communities of practice*. Center for Information and Research on Civic Learning and Engagement (CIRCLE).

Karasar, N. (2014). *Scientific research method: Concepts, principles, techniques*. Ankara: Nobel Publications.

Ministry of Education (2018). *Social studies course curriculum (5th, 6th, 7th grades).* Ankara: Ministry of Education Publishing.

Özek, A. & Çelik, H. (2025). Students' views on economic literacy activities with educational games in social studies course. *Turkish Studies - Education, 20*(2), 245-266.

Pellegrini, A. D. & Smith, P. K. (2007). *The nature of play: Great apes and humans,* New York: Guilford Press.

Sömen, T. (2016). *The status of social studies teachers in providing students with social participation skills.* (Unpublished doctoral thesis). Ataturk University, Turkey.

Şahin, U. & Karatekin, K. (2022). Classroom teachers' views on social participation skills. *International Journal of Social Science Education, 8(1.2), 375–412.*

Şaşan, H. (2002). Constructivist learning. *Education as we live, 74(75), 49–52.*

Tavşancıl, E. (2010). *Measurement of attitudes and data analysis with SPSS.* Ankara: Nobel Academic Publishing.

Tezbaşaran, A. (1996). *The concept of attitude and its measurement,* Ankara University Faculty of Education Publishing.

Themistokleous, S. & Avraamidou, L. (2016). The role of online games in promoting young adults' civic engagement. *Journal of Educational Media, 41(2), 87–103.*

Ünal, S. (2018). *Introduction to educational science.* Ankara: Pegem Academy.

Yayla, A. (2023). Investigation of school administrators' opinions on trends of educational philosophy by the q method. *Anatolian Journal of Educational Leadership and Instruction, 11*(1), 130-147.

Yılmaz Yıldız, S. B. (2026). The gift of play: Scenario-based games for nurturing turkish gifted students' challenged minds and emotions. *Participatory Educational Research*, *13*(1), 231-255.

Yurtdakal Gönülal, D. H. (2023). Theodore Brameld's anthropological education view. *Cumhuriyet University Faculty of Letters Journal of Social Sciences, 47*(1), 131-140.

7. Author Declaration

This study was produced from the doctoral thesis prepared by the first author under the supervision of the second author.

The authors declare that they have not received any financial support for this research from official or private organization.

This research was approved by the U. University Social and Human Sciences Ethics Committee (Decision 2024/04)

Authors declare no conflicts of interest.

Participants were informed about the purpose of the research, the procedures, and their rights. Informed consent was obtained from the participants. The confidentiality of the participants was protected throughout the research.