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The Effect of Teaching Based on ARCS Motivation Model in Social Studies Lesson on Academic Achievement, Persistence and Level of Motivation Against the Class**

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Abstract

This research aimed to examine the effect of teaching based on the ARCS (Attention, Relevance, Confidence, and Satisfaction) motivation model in social studies courses on academic success, learning persistence, and motivation and to determine students' views on the activities carried out during the application. An embedded design which is one of the mixed research designs was used. The study group of the research consisted of 46 fifth-grade students, 24 of whom were in the control group and 22 in the experimental group. SPSS 18.0 package program was used in the analysis of the quantitative data obtained in the research, and content analysis was used in the analysis of the qualitative data. The quantitative results of the study revealed that the ARCS motivation model is an effective approach to academic achievement, learning persistence, and motivation. According to the qualitative results, experimental group students stated that the activities facilitated learning, increased their interest in the social studies lesson, and the lessons were enjoyable.

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Introduction

Education, which is the first factor in the development of societies and reaching the desired level, is examined from different perspectives today, and the issue of what factors affect education deservedness to achieve the goals determined in the line with education policies becomes the focus of many scholars (Yildiz & Kilic, 2018). Individuals have many different characteristics such as talent, interest, intelligence, learning style, prior learning, and motivational factors. Education maintains its functionality if a common teaching scheme is implemented in which these features are to be considered. In this sense, teachers should create a suitable learning environment by knowing the value of students' differences, and internal and external motivational elements that support their learning habits effectively and efficiently (Aktepe, 2005; Kucuk & Yildirim, 2019). The importance of motivation in effective learning emerges critically (Sengul, 2017). Motivation is a power that determines the direction, severity, determination of student behaviors, and the speed of reaching the desired goals in the educational environment (Akbaba, 2006).

It is known that students with insufficient motivation are not ready for learning and they have more difficulty in learning a knowledge than students with sufficient motivation. Therefore, it can be said that motivation is one of the most effective elements for success and healthy learning (Oncu, 2004). Even if a motivated student has passed the most important stage in reaching the goals set by the education, the student's learning style should be determined first, and then various teaching strategies should be applied for the learning to be fully realized (Kucuk & Yildirim, 2020; Sengul, 2017).

The concepts that are aimed to be acquired by the students through the social studies course are mostly in abstract form. Due to the intensity of the content in the teaching programs, the duration of the lesson is insufficient for the effectiveness and use of materials. Because of these two general situations, teachers cause them to deliver their lessons classically. For this reason, the social studies course is put on the second plan compared to other courses. Since it is thought to contain only memorized information, it is seen as a boring and difficult course that does not attract the attention of the student and has no connection with real-life (Bilenen, 2010, Heafner, 2004, Saritepeci & Cakir, 2014; Yilmaz & Seker, 2013). This approach causes students to have a negative attitude towards the social studies course, reduces their motivation, and thus causes them to be unsuccessful. This negative thinking about the social studies course can be changed by using different instructional design approaches that include motivating teaching strategies in which activities and materials attract attention and curiosity to the lesson and make the students active, apart from traditional methods.

The instructional design includes a systematic educational process that consists of planning, development, evaluation, and maintaining success to reveal students' real influences and abilities to achieve and provide them with problem-solving skills (Fer, 2011). In the literature on motivation, which is perhaps one of the most important and necessary variables for learning, various motivation models including instructional design processes and strategies are encountered. One of these models is the ARCS (Attention, Relevance, Confidence, and Satisfaction) motivation model. When the studies on the use of the ARCS motivation model in education are evaluated, it is seen that the model is mostly made for computer-assisted teaching, language teaching, science, and mathematics courses. It is seen that it affects the motivation, academic success, attitude, and systematic learning process of the student positively (Goksu et al., 2014; Tezel & Soyturk, 2017; Yildiz et al., 2019).

The literature argues that the ARCS motivation model can be used as an alternative teaching model for the solutions to student motivation problems experienced in social studies

lessons. However, the limited number of such studies is one of the aims of this study, which may guide other studies to be conducted in the future. This research is important in terms of helping social studies teachers in making the classroom climate productive and motivating students, as well as the activity practices made with the lesson plans created during the research.

ARCS Motivation Model

ARCS motivation model, which was developed by John M. Keller based on previous research on the motivation sources of individuals, has three important features. First, the model consists of four conceptual dimensions that provide the link between learning and motivation; second, it provides a set of instructional strategies for motivation and maintenance; and third is that the model itself includes an instructional design process (Keller, 1987b). The ARCS motivation model includes solution methods on how motivation strategies can be used to activate individuals' willingness to learn and to ensure the continuity of this movement, and when the four dimensions of the model are considered holistically, the motivation required for learning is obtained at a sufficient level (Cetin & Mahiroglu, 2008). The four main dimensions of the ARCS motivation model, the sub-dimensions of these main dimensions, and the method questions are presented in Table 1 (Keller, 2000).

Table 1

ARCS Motivation Model Dimensions and Method Questions

Main Dimensions	Lower Dimensions	Method Questions
Attention	Perceptual arousal	How can I get students' attention?
	Inquiry arousal	How can I gather students' attention with a question?
	Variability	How can I maintain attention?
Relevance	Goal orientation	How can I meet the educational needs of students?
	Motive matching	How can I get students to make choices that fit their profile?
	Familiarity	How can I establish a relationship between students' background knowledge and what they will learn?
Confidence	Learning requirement	How can I inform students about the required pre-qualifications and what they will learn?
	Success opportunities	How can I encourage and support students in what they can achieve?
	Personal responsibility	How can I get students to increase their autonomy during education?
Satisfaction	Intrinsic reinforcement	How can I make students use the knowledge they have learned in their own lives?
	Extrinsic rewards	How can I reward students' success?

	Equity	How can I get students to have positive feelings about the lesson?

Keller (1999) stated that the model includes a systematic design process that can be used with typical instructional design and development models and discussed this process in the four stages. The stages and steps of the model are presented in Table 2 (Cited by Eren & Duman, 2016: 798).

Table 2

Keller's Motivational Design Process Stages and Steps

	Data collection for the course
Define	Gathering information about the targeted group
	Analyzing the targeted group
	Analyzing existing materials
	List behavioral goals and assessment methods and techniques
Design	List possible strategies and tactics
	Choosing and designing strategies and tactics
	Incorporating strategies and tactics into the teaching process
Develop	Selecting and developing materials
Evaluate	Evaluation and correction

In the first step of the identification, it is important to collect data from the course. In the second step, any information about the targeted group should be collected. In the third step, student analysis should be done to fill the motivational gaps in individuals. In the fourth step, the goals that will motivate the students should be determined. In the fifth step, points that require particular attention in the development of motivational strategies should be revealed. In the *design* step, a list of potential motivational strategies should be created for the main goals identified in the definition step. At this point, it is suggested to use the brainstorming approach to generate a wide range of strategy ideas. In the next step, the identified potential strategies should be reviewed, and appropriate strategies should be selected for the teaching to be carried out. In the develop stage, they should create special materials to be used in the teaching process; To ensure internal consistency and continuity, teaching materials should be revised according to course topics. The change in students' motivation levels in the evaluate step should be based on learning outcomes. In the teaching process, students' motivation and success are generally assessed according to the scores they get from the exams. This is not good practice because success is affected by many factors, not just motivation. In this context, while evaluating student motivation, the student's efforts, attitudes towards the lesson, and mood criteria should also be considered carefully (Keller, 1987a).

In line with this study, the effects of the use of the ARCS motivation model in social studies course on students are examined. The research questions are:

1. "Does teaching based on the ARCS motivation model in social studies courses influence students' academic achievement, motivation towards the course, and the permanence of learning?
2. What are the opinions of the experimental group students about the activities done during the application?

Method

Model of the Research

ARCS motivation model in social studies course on academic achievement, learning persistence, and motivation level was examined, and mixed-method research, in which quantitative and qualitative methods were considered together, was used. Based on the idea that the problem determined within the scope of the research can be examined from different perspectives, the research method that is based on the utilitarian approach is called mixed-method research. The use of data obtained by applying different methods to verify each other and thus increasing the credibility of the results obtained are among the most important features of these studies (Yildirim & Simşek, 2013).

In mixed methods, only one approach is not considered; quantitative and qualitative methods can be used together in different ways. While quantitative methods are dominant in some mixed research designs, qualitative methods may be dominant in some mixed research designs, and both methods can be used equally in some mixed research designs (Yildirim & Simşek, 2013). This research was designed according to the embedded design, which is one of the mixed research designs. In the embedded design, quantitative and qualitative data are collected simultaneously or sequentially and analyzed and interpreted separately. The purpose of this design is to explain and support the primary data type with the secondary data type. Looking at the literature, it is seen that qualitative data are mostly used to support quantitative data in studies using embedded design (Creswell, 2017). In this study, qualitative data were included in the process to support quantitative data. In this context, while the research was being designed, priority was given to the quantitative stage, while the qualitative stage formed the second dimension of the research by supporting the quantitative stage.

Experimental Design of the Research

In this study, the quasi-experimental design, which is one of the experimental design methods commonly used in the literature of quantitative research, was used. It is called a quasi-experimental design to randomly decide that one or more of the previously formed groups will be the control group and one or more of them will be the experimental group (Ozmen, 2016).

In the qualitative part of the research, content analysis was used in the analysis process of the data obtained from the students' opinions about the activities prepared based on the ARCS Motivation Model. Content analysis is the creation, organization, and interpretation of certain concepts and themes based on similar data. The main purpose here is to reach the concepts and relationships that can explain the collected data. Content analysis: coding of the data is carried out in four stages: finding the themes, organizing the codes and themes, defining, and interpreting the findings (Yildirim & Simsek, 2013).

The Study Group

The study group of the research consisted of 46 fifth-grade students, 24 of whom were in the control group and 22 in the experimental group, studying at a middle school in Rize Cayeli District in the 2017-2018 academic year. Before starting the research, three public schools were determined, and the positive attitude of the social studies teacher, who was interviewed with the administrative officers from these three schools to carry out the implementation process of the research, was an important factor in the choice of the school chosen by the researcher. The academic achievement test developed by the researcher for the

fifth-grade students was determined in line with the information obtained from the school selected within the scope of the research and the social studies course motivation scale developed by Kırmızısiz and Kan (2012) was used as a pre-test, and a personal information form developed by the researcher to determine the equivalence status in terms of demographic characteristics of the students. As a result of the analyzes made, two classes with equivalent academic achievement tests, social studies course motivation scale score averages and demographic characteristics were determined as experimental and control groups.

Data Collection Tools

The academic achievement test and semi-structured interview form and the social studies course motivation scale developed by Kırmızısiz and Kan (2012) were used as data collection tools. The purposes of using the data collection tools are given in Table 3.

Table 3

Data Collection Tools Used in the Research

Data collection tool	Purpose of usage	Research Stages		
		Pre-Test	Final Test	Permanence
Academic Achievement Test (ABT)	Measuring academic success and learning retention	x	x	x
Social Studies Lesson Motivation Scale	Measuring student motivation level	x	x	_
Semi-Structured Interview form	Obtaining the opinions of the experimental group of students about the activities carried out within the scope of the ARCS Motivation Model	_	_	_

Academic Achievement Test (ABT)

To measure the success of the experimental and control groups in the social studies course, it was developed by the researcher to cover all the acquisitions of the "Production, Distribution, Consumption" learning area of the 5th-grade social studies course. Before the test was prepared, a pool of 41 questions was created by making use of many different sources such as the social studies textbook and different question books prepared by the Ministry of National Education (MEB), internet sites related to the social studies lesson, and the theses that were previously studied on these achievements. Afterward, a pilot test with 35 questions was created by taking the opinion of 6 experts in their fields, including 1 social studies teacher, 3 social studies education lecturers, 1 social studies education research assistant, and 1 Turkish education lecturer working in the Ministry of National Education. The pilot application of the 35-question test was carried out on a total of 122 sixth-grade students in two secondary schools in the Çayeli district of Rize; 117 test papers, for which all questions were answered, were

analyzed using the item analysis method based on the difference between the bottom and top 27% group averages. In the light of item analysis data, the final academic achievement test consisting of 27 questions was obtained.

Persistence Test

In the research, the academic achievement test developed by the researcher was applied to the experimental and control groups as a post-test 5 weeks after it was applied as a permanence test to determine the permanence level of the knowledge about the acquisitions contained in the "Production, Distribution, Consumption" learning area, which was processed for 5 weeks.

Social Studies Lesson Motivation Scale

In the research, the social studies course motivation scale developed by Kırmızısiz and Kan (2012) was developed to measure the motivation of the students toward the social studies course before and after the application process. The scale consists of a total of 23 items, 8 of which are negative (3rd, 5th, 6th, 8th, 10th, 11th, 13th, and 23rd items), 15 of which are positive, and "Totally Agree", "Agree" It consists of five Likert's: "Partly Agree", "Disagree", "I strongly disagree". As a result of the reliability calculations they made, Parlak and Kan (2012) found the Cronbach Alpha value for the whole scale to be .792. As a result of the reliability calculations made by the researcher, the Cronbach Alpha value for the whole scale was found to be .864. If the reliability value of a scale used in academic research is in the range of .81-1, the scale is considered highly reliable (Ozdamar, 2004). In this context, it can be said that the social studies course motivation scale used in the research is quite reliable.

Semi-Structured Interview Form

In the research, a semi-structured interview form was developed by the researcher to determine the opinions of the experimental group of students about the activities used in the social studies lesson and the way the lesson was taught based on the ARCS motivation model. While creating the interview form, the previously developed interview forms were examined. As a result of this examination, an interview form consisting of 5 questions was developed. In line with the opinions received from 3 social studies education lecturers and 1 social studies teacher, corrections were made to the roots of the questions and the language used, and the final interview form was created. After the application process of the interview form was completed, it was applied to all the experimental group students (n=22).

The Intervention Process

According to the 2017 social studies curriculum, the "Production, Distribution, Consumption" learning area consists of 6 acquisitions and 4 weeks (12 lesson hours) are allocated for these acquisitions (MEB, 2017). For the activities prepared within the scope of the research to be implemented more healthily without experiencing time anxiety and for the students to understand the purposes for which these activities are carried out, the acquisition periods were planned and implemented to fill 5 weeks. Before the application, two equal classes were determined as the experimental and control groups, taking into account various criteria (the opinions of the teachers at the school, the closeness of the education levels of the classes, the demographic characteristics of the students, etc.), and before the application process, the social studies lesson developed by Temizsiz and Kan (2012) was developed by the

motivational group. scale and the academic achievement test developed by the researcher were applied to the groups as a pre-test. In line with the literature review conducted by the researcher, lesson plans suitable for the "Production, Distribution, Consumption" learning area were created based on the ARCS motivation model. A course based on the ARCS motivation model was taught for 5 weeks with the experimental group. In this process, the researcher participated in the experimental group lessons as an observer, attention was paid to the balanced progress of the social studies lessons in the experimental and control groups, and in this context, the subjects of the "Production, Distribution, Consumption" learning area were completed in 5 weeks in the control group.

During the lesson, care was taken to ensure that all students participate in the activities and that the student's attention is not distracted during the lesson. In this context, positive feedback and corrections were given to the students during the lesson, and attention was paid to keeping the students' motivation towards the lesson high by using various reinforces. After the teaching process, that is, the 5th week was completed, the social studies course motivation scale and the academic achievement test was applied to the experimental and control groups as a post-test, and the opinions of the experimental group students about the activities were taken with a semi-structured interview form. 5 weeks after the post-test application was completed, the academic achievement test was applied to the groups as a retention test and the application process was completed in this way.

Data Analysis

In the research process, the quantitative data obtained from the data collection tools named *"Academic Achievement Test"* and *"Social Studies Lesson Motivation Scale"*, which were applied to determine the effect of teaching based on the ARCS motivation model on academic achievement, motivation and learning persistence levels of the students, benefited from the SPSS 18 package program. As a result of the normality test performed to determine the analysis type of quantitative data, it was determined that the skewness and kurtosis coefficient values of both data collection tools were between -1.32 and +1.64 and were in a normal distribution. If the skewness and kurtosis values obtained from the data of a study group subjected to the normality test are between -1.96 and +1.96, the distribution can be accepted as normal (Can, 2014). For this reason, independent groups t-Test from parametric analysis techniques was used in the analysis of the pre-test and post-test scores of all quantitative data collection tools applied to the experimental and control groups.

After the implementation process of the research was completed, a semi-structured interview form developed by the researcher was applied to the students to determine the opinions of the experimental group students about the activities applied during the teaching process based on the ARCS motivation model and the course teaching process. Content analysis was used in the analysis of the qualitative data obtained from this form. To ensure reliability while creating categories and codes during the analysis of qualitative data, the data were coded separately by one expert lecturer and the researcher, and both codings were compared with each other. As a result of the reliability calculation made by using the *Consensus ÷ (Agreement + Disagreement) × 100 formula* created by Miles and Huberman (2015), the percentage of agreement between the data obtained from both encoders was found to be 83%.

Results

Under this heading, the findings regarding the quantitative and qualitative data obtained from the experimental and control groups are presented below.

Academic Achievement Test Results

Experimental and control group students in the academic achievement pre-test are given in Table 4.

Table 4

Independent t-Test Results of Experimental and Control Group Academic Achievement Pre-Test Scores

Groups	N	$\bar{X}$	s	sd	t	p
Experiment	22	14.81	2.77	44	-1.297	.201
Control	24	16	3.34			

As shown in Table 4, there is no significant difference between the scores obtained from the academic achievement pre-test applied to the experimental and control groups before the application process [$t_{(44)}$ =-1.297, p>.05] and the control group ($\bar{x}$=16) students in the experimental group ($\bar{x}$= 14.81) academic success according to students. It was determined that the pre-test mean scores were slightly higher. In line with these findings, the groups can be considered equal in terms of academic achievement test mean scores before the application process.

Table 5

Independent t-Test Results of Experimental and Control Group Academic Achievement Post-Test Scores

Groups	N	$\bar{X}$	s	sd	t	p
Experiment	22	20	2.74	44	2,179	.035
Control	24	17.41	4.89			

As shown in Table 5, there is a significant difference between the scores obtained from the academic achievement post-test applied to the experimental and control groups after the application process [$t_{(44)}$=2.179, p<.05] and the students in the experimental group ($\bar{x}$=20) in the control group ($\bar{x}$=17.41) academic success post-test mean scores were found to be higher than students. Based on these findings, it can be said that teaching based on the ARCS motivation model had a positive effect on the academic success of the experimental group. The scores of the experimental and control group students in the academic achievement permanence test. The results of the independent group's t-Test performed are given in Table 6.

Table 6

Independent t-Test Results on Academic Achievement Retention Test Scores of Experimental and Control Groups

Groups	**N**	**$\bar{X}$**	**s**	**sd**	**t**	**p**

Experiment	22	20.68	2.41			
				44	4.212	.000
Control	24	17.54	2.62			

As shown in Table 6 there is a significant difference between the scores obtained from the academic achievement permanence test applied to the experimental and control groups [$t_{(44)}$=4.212, p<.05] and the students of the experimental group ($\bar{x}$=20.68) and the control group ($\bar{x}$=17.54). It has been determined that the academic achievement permanence test average score is higher. Based on these findings, it can be said that teaching and activities based on the ARCS motivation model applied to the experimental group are effective in learning retention.

Social Studies Lesson Motivation Scale Results

Experimental and control group students in the social studies course motivation scale pre-test are given in Table 7.

Table 7

Independent t-Test Results of Experimental and Control Groups Social Studies Lesson Motivation Scale Pre-Test Scores

Groups	N	$\bar{X}$	s	sd	t	p
Experiment	22	97.45	7.25			
				44	1,186	.242
Control	24	93.29	14.91			

As shown in Table 7 there is no significant difference between the scores obtained from the social studies course motivation scale pre-test applied to the experimental and control groups before the application process [$t_{(44)}$=1.186, p>.05] students in the experimental group ($\bar{x}$=97.45) and the control group. ($\bar{x}$=93.29) students, it was determined that the pre-test mean score of the social studies lesson motivation scale was slightly higher. In line with these findings, before the implementation process, the groups can be accepted as equivalent in terms of social studies course motivation scale mean scores.

Table 8

Independent t-Test Results of the Experimental and Control Groups Social Studies Lesson Motivation Scale Post-Test Scores

Groups	N	$\bar{X}$	s	sd	t	p
Experiment	22	102.95	6.99			
				44	2,528	.015
Control	24	95	13.14			

As shown in Table 8 there is a significant difference between the scores obtained from the social studies course motivation scale post-test applied to the experimental and control groups after the implementation process was completed [$t_{(44)}$ = 2.528, p<.05] and the control

group ($\bar{x}$=102.95) students. It was determined that the social studies course motivation scale post-test mean scores were higher than the students of the group ($\bar{x}$=95). Based on these findings, it can be said that teaching based on the ARCS motivation model had a positive effect on the motivation levels of the experimental group for the social studies course.

The Semi-Structured Interview Form Results

Were there any differences from your previous social studies courses in which the subjects of "Production, Distribution, Consumption" were covered? If so, what are these differences? Please explain." to the question The categories, codes, and frequencies determined based on the answers given by the students in the experimental group regarding the subject are given in Table 9.

Table 9

Findings Related to the Differences in Social Studies Courses Based on the ARCS Motivation Model

Category	Codes	Repeating Students	f
There is a Difference	Doing lots and lots of activities	S1, S3, S4, S5, S7, S9, S10, S12, S13, S16, S17, S18, S19, S20, S21, S22	16
	don't be fun	T2, T8, T11, T12, T14, T15 T18	7
	Lessons go faster and better	S6, S18	2nd
No Difference	–	–	–

As shown in Table 9, all the experimental group students (n=22) expressed their opinion as "There is a difference" regarding whether the social studies lessons taught during the application are different from the previous social studies lessons. "Doing many and frequent activities" is one of the codes created based on these views. S4: *"Yes, according to me there are differences. We didn't do a lot of activities in the previous lessons; Now, we do activities in almost every lesson."*, "Don't be enjoyable" Regarding the code S8: *"We don't do much activity in other lessons. Our teacher was making and bringing something out of cardboard, and we were having a lot of fun. In other lessons, we mostly took tests."*, Regarding the code "Lessons pass better and faster" S18: *"Yes. Because we were having less fun and doing fewer activities in other lessons. Now we are having more fun and doing more activities. Thus, the lesson is both fun and passes quickly."* expressed an opinion.

Above findings are evaluated, it can be said that the teaching based on the ARCS motivation model and the activities carried out during the application make the social studies lesson fun, it passes too quickly for the student to understand how the lesson ends, and all these factors make the social studies lesson different.

Did the activities make it easier for you to learn about "Production, Distribution, Consumption"? Please explain the reasons. The categories, codes, and frequencies determined based on the

answers given by the students in the experimental group regarding the question *are given* in Table 10.

Table 10

Findings Regarding the Facilitation of Learning the Social Studies Lesson of the Activities

Category	Codes	Repeating Students	f
Made it easy	Learning with fun	S1, S3, S4, S5, S7, S13, S8, S10, S11, S15, S16, S18, S21, S22	14
	Being an educator	S4, S6, S7, S9, S13, S14, S15, S17, S18, S19, S20	12
Didn't make it easy	being active	S2, S12	2nd
	–	–	–

As shown in Table 10, all the experimental group students (n=22) made the social studies lesson "Production, Distribution, Consumption" easier. expressed their opinion. Regarding the code "Learning with fun", one of the codes created based on these views, S21: *"It made it easier. Because I learn more by having fun by doing activities and I never get bored in the lessons.",* Regarding the code of "being an educator" S13: *"It made it easier. Because the activities were both fun and educational. I enjoyed these activities."* and S12 regarding the code of "being active": *"It made it easier. Because we started to be more active. So, I understood more easily."* expressed an opinion.

When the above findings are evaluated, it can be said that the teaching based on the ARCS motivation model and the activities carried out during the application are educational, encouraging students to learn by having fun and making them active during the course are effective in facilitating learning the social studies course.

"Would you like to apply similar activities to other subjects in the social studies course? Explain the reasons." The categories, codes, and frequencies determined based on the answers given by the experimental group students regarding the question are given in Table 11.

Table 11

Findings Regarding the Application of the Activities to Other Social Studies Course Subjects Outside the "Production, Distribution, Consumption" Learning Area

Category	Codes	Repeating Students	f
Yes, I would like	Fun and beautiful teaching	S1, S3, S6, S7, S8, S10, S11, S14, S15, S16, S17, S19, S21, S22	14
	memorability	S2, S6, S7, S9, S15, S17, S20, S21, S22	9

	Easy and fast learning	S4, S5, S12, S13	4
	Increasing motivation and feeling happy	S18	one
No, I do not want to	_	_	_

As shown in Table 11, all the experimental group students (n=22) said, "Yes, I would like to." expressed their opinion. Regarding the code "Fun and good teaching", one of the codes created based on these views, S16: *"I would like to. I would have liked to have the activities done on this subject and for which I had fun being held on other subjects as well.",* Regarding the "Rememberability" code, S17: "I would *like to. My time is both more fun and more permanent in our minds. S5 regarding the* "Easy and fast learning" code: *"I think it should be applied. We reinforce the topics and learn the topics faster."* Regarding the code of "increasing motivation and feeling happy", S18: *"Yes. Because we are having fun. Our motivation is increasing. We are happy to enter other classes as well."* expressed an opinion.

When the above findings are evaluated, it can be said that the teaching based on the ARCS motivation model and the activities carried out during the application make the social studies lesson fun and enjoyable, and provide easy and fast learning, thus increasing the retention of the information, increasing the motivation, and making the student feel happy.

"Do *you think that the activities carried out increase your interest in the social studies course? Explain the reasons."* The categories, codes, and frequencies determined based on the answers given by the experimental group students regarding the question are given in Table 12.

Table 12

Findings Related to the Status of Activities to Increase Interest in Social Studies Lesson

Category	Codes	Repeating Students	f
Yes, I think	Enjoyable lesson	S2, S3, S8, S9, S10, S11, S13, S14, S17, S18, S19, S20, S21, S22	14
	Being effective and understandable	S1, S6, S7, S13, S16	5
	Active lesson process	S5, S12, S15	3
No, I do not think	_	S4	one

As shown in Table 12, 95.4% (n=21) of the students in the experimental group stated that "Yes, I think." expressed their opinion. Regarding the code "Enjoyable course process", one of the codes created based on these views, S17: *"My interest has increased. Our time is more fun, it becomes a more enjoyable lesson."* Regarding the code of "being effective and understandable" S16: "I think. Because the social studies lesson started to be more effective.", Regarding the

code "Active lesson process" S15: *"I think it increased my interest. Because it is more active."* expressed an opinion.

"No, I don't think so", stated that the activities carried out during the application did not increase their interest in the social studies lesson and did not give any reason for this situation.

When the above findings are evaluated, it can be said that the teaching based on the ARCS motivation model and the activities carried out during the application create a pleasant lesson environment, make the social studies lesson more effective and understandable, and save students from being passive thanks to a more active lesson environment.

"Do *you think there are aspects of the activities that you think are unnecessary? If so, what are your suggestions for eliminating these deficiencies? The* categories, codes, and frequencies determined based on the answers given by the experimental group students regarding the question are given in Table 13.

Table 13

Findings Regarding the Unnecessary Sides of the Activities

Category	Codes	Repeating Students	f
No there is not	be good and beautiful	S2, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S21	13
	_	S1, S3, S4, S5, S17, S18, S20, S22	8
Yes, there is	Increasing knowledge	S19	one
	_	_	_

As shown in Table 13, all the students in the experimental group (n=22) expressed an opinion of "No, there is no" about whether the activities have unnecessary aspects or not. Regarding the code "Being good and beautiful", one of the codes created based on these views, S15: *"There are no aspects that I think are unnecessary. I like the activities."*, "On the code of increasing knowledge S19: *"None. Because I think activities are necessary because they increase our knowledge and stay in our minds better"* and without giving any justification, only about the situation that the events do not have an unnecessary side. S3: *"I do not think that the activities are unnecessary."* expressed an opinion.

When the above findings are evaluated, it can be said that the teaching based on the ARCS motivation model and the activities carried out during the application are liked by the students in the experimental group and that they increase knowledge, therefore they are necessary for social studies.

Discussion and Conclusion

In this section, discussion and results are presented based on the findings obtained from the research under the headings of academic success and learning retention, motivation towards the course, and student opinions.

Academic Success and Learning Persistence

The primary purpose of the study is to determine the difference between the teaching and activities based on the ARCS motivation model in social studies courses, in terms of academic success and learning permanence. Before the application process, the academic achievement test was applied to the experimental and control groups as a pre-test, and it was seen that there was no significant difference between the mean scores of the groups and it was accepted that they were equivalent to each other. After the implementation process, it was completed, the academic achievement test was applied to the groups as a post-test, and it was determined that there was a significant difference between the groups in favor of the experimental group. This result regarding the effect of the ARCS motivation model on academic achievement shows similarities with other research results in the literature regarding the model in terms of academic achievement (Kurt, 2012; Dede, 2003b; Karsli, 2015; Balantekin, 2014; Tahiroglu, 2015). From this point of view, it can be said that the ARCS motivation model increases academic achievement in general. It is thought that the reason for this situation is that the application process of the model is arranged in a way that will increase the interest and curiosity of the students towards the lesson and that learning with fun is easier and more understandable, as expressed in the students' opinions. In the study carried out by Çaliskan (2017) in the science course, it was determined that, contrary to the results of this research, the ARCS motivation model did not influence academic achievement. It is thought that various problems encountered in the application process of the research (inadequate classroom environment for activities, inability to adapt the ARCS motivation model to the determined subject sufficiently, time constraints, etc.) may cause this result to be obtained.

ARCS motivation model on learning retention, the academic achievement test was applied to both groups as a retention test 5 weeks after the post-test was applied; As a result of the comparison, it was determined that there was a significant difference between the retention test scores of the two groups in favor of the experimental group. In other studies, in the literature on the effect of the ARCS motivation model on learning persistence, it is seen that the opposite of this research was reached (Cengiz, 2009; Çetin, 2007; Gokcul, 2007; Kayak & Mahiroglu, 2010). From this point of view, it can be said that the ARCS motivation model is not effective on learning permanence in general. It is thought that this situation may be caused by keeping the implementation process in the research short and not allocating enough time to the activities. In this study carried out by the researcher, it was determined that the ARCS motivation model created a significant difference in learning permanence in favor of the experimental group. It is thought that the reason for this result is to keep the students active throughout the lessons, to enable them to share the information they have learned with other friends through activities by using different techniques, and so to create opportunities for all students to learn.

Student Motivation for the Lesson

The second aim of the research is to determine the effect of teaching and activities based on the ARCS motivation model on the motivation levels of the students in the social studies course. For this purpose, before the application process, the social studies lesson motivation scale was applied to the experimental and control groups as a pre-test; As a result of the comparison, it was seen that there was no significant difference between the motivation pre-test scores of the two groups, and it was accepted that the groups were equal in terms of their motivation levels for the social studies course.

After the implementation process was completed, the social studies course motivation scale was applied to both groups as a post-test; As a result of the comparison, it was

determined that there was a significant difference between the post-test scores of the experimental and control groups in favor of the experimental group. This result is like other studies in the literature in terms of motivation (Balantekin, 2014; Coban, 2012; Colakoglu, 2009; Gunyel, 2018; Karsli, 2015; Kurt, 2014; Lacinbay, 2018; Ocak & Akçayir, 2013; Tahiroglu, 2015). From this point of view, it can be said that the ARCS motivation model increases student motivation in general. In this situation; it is thought that the ARCS motivation model includes some teaching strategies for student motivation, ensuring the active participation of all students in the lesson depending on these strategies, making all students feel that they can succeed by given various responsibilities, and in this context, keeping student morale always high, and the use of motivation-enhancing feedback and reinforcers.

ARCS motivation model, which concluded that the model is not effective on motivation (Çaliskan, 2017; Dede, 2003a; Dede, 2003b). It is thought that the fact that the teachers who carry out the implementation process do not have sufficient knowledge about the model, that there are internal and external factors affecting student motivation outside the classroom environment, and that the schools where the application is made are insufficient for the activities.

Student Opinions

The third aim of the research is to determine the students' views on teaching and activities based on the ARCS motivation model in the social studies course. For this purpose, after the implementation process was completed, a semi-structured interview form consisting of 5 open-ended questions prepared by the researcher was applied to the experimental group. The obtained data were subjected to content analysis; frequency calculations were made by creating categories and codes.

Students in the social studies lessons taught during the implementation period have differences compared to previous social studies lessons such as doing more activities, the lesson being enjoyable, the process of teaching the lesson, and the activities made it easier to learn the subjects of the social studies lesson and they wanted it to be applied to other subjects. They expressed positive opinions that it is necessary for the information course.

It is seen that the qualitative results obtained from this study are similar to the results of other studies conducted at the secondary school level in the literature. In Karsli's (2015) study, students stated that the ARCS motivation model supports active learning, increases their motivation towards the lesson, the lessons are fun and enjoyable, increases the desire to learn easily, and they feel safe due to all these factors. In Kurt's (2012) study, students expressed positive opinions depending on factors such as frequently using materials in the lesson, informing students about the objectives of the lesson in advance, and concretizing the concepts. Similarly, San and Ibrahimoglu (2017) found that the use of activities in the social studies lesson was effective in the students' views about the lesson. In the studies conducted at the high school and university level in the literature (Asiksoy & Ozdamli, 2016; Buyruk et al., 2018; Kutu, 2011), it is seen that the results obtained from the students' opinions are similar to the results of this research.

In this research, based on the findings obtained from the students' opinions, the activities carried out based on the ARCS motivation model during the application, the materials used (photographs, videos, animations, cartoons, puzzles, etc.), the opportunities for the students to participate in the lesson and the attitude of the teacher towards the students' social studies course. It has been concluded that it has a significant effect on the thoughts they have.

When these research results obtained from student opinions are evaluated, the ARCS motivation model; can be said that it is an effective set of strategies that enable students to be active during the course and have a positive attitude towards the course, increase their willingness to learn, create a classroom environment where they learn by having fun and can be used at all levels of education. It is understood that the qualitative findings of the research support the quantitative findings, especially since the students express their opinions, emphasize that the social studies lessons are more fun, the effect of being active in the lesson on learning, and the information becomes more memorable with activities.

In the light of the findings obtained in this study, in which the effect of teaching based on the ARCS motivation model in the social studies course on academic achievement, motivation level, and learning persistence, and the results obtained from these findings, the following suggestions can be made to researchers and teachers.

For Researchers

When the results obtained from this research are evaluated, it is seen that when the course is supported with appropriate materials in the teaching process based on the ARCS motivation model, it is effective on academic success, learning permanence, motivation towards the course, and the student's thoughts about the course. For this reason, it is recommended to conduct research on different grade levels and subjects for the effectiveness of the model.

In this study, the effect of the ARCS motivation model of the students on the motivation level of the social studies course was examined and findings in favor of the experimental group were obtained. From this point of view, research can be conducted on the effect of the model on the level of motivation towards school, class, or teacher.

When the studies are examined, it has been concluded that the ARCS motivation model does not predominantly influence learning persistence. In this study, it is seen that the model is effective in learning permanence. For this reason, it is recommended to conduct more comprehensive studies on the effect of the model on learning retention.

For Teachers

The ARCS motivation model has a structure that requires time in practice due to its content. For this reason, the possibilities of the classroom (size, seating arrangement, material space, suitability for individual and group work, suitability for technology use, etc.)

Considering how important motivation is for education, factors that motivate students (use of activities and materials, appropriate teaching methods-techniques, use of reinforcers and rewards, etc.) should be determined, and lesson plans should be created considering these factors.

As a result of the observations that the researcher gained from all the lessons they attended as an observer during the implementation process of this research, it was determined that the arrangement of the activities while teaching based on the ARCS motivation model in such a way that all students could participate in the course enabled the students, who were passive at the point of participating in the lesson, to be more active by getting rid of the worry of " *I am afraid of giving the wrong answer"* and *"I can't do it "*. has been done. For this reason, materials that will attract students' attention, increase their motivation, and contain difficulty

levels that each student can easily participate in should be created by the teachers in the teaching process; activities that can be perceived as games should be carried out during the lesson.

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Appendix 1

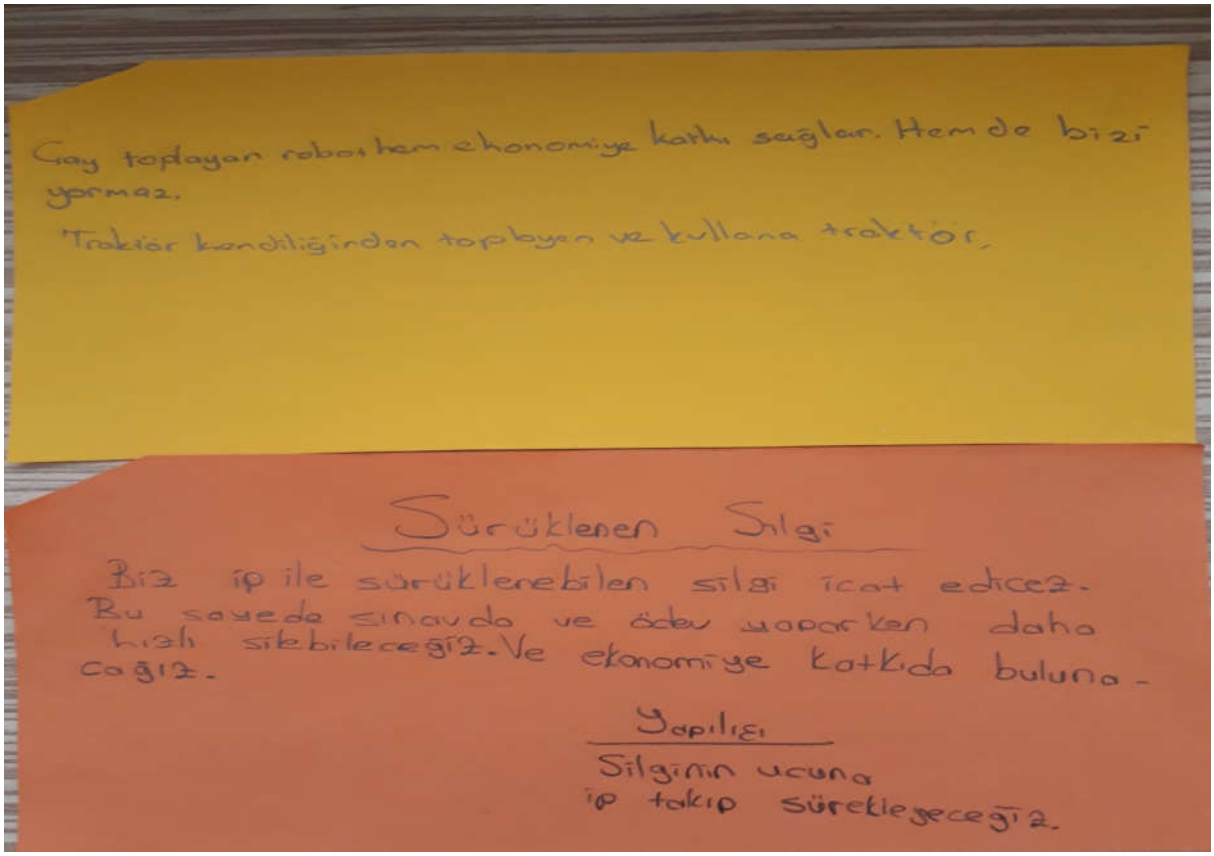
Example of Lesson Plans

Lesson		Social Studies
Class		5
Learning Area		Production, Distribution, Consumption
Duration		40+40+40
GAINS		5.5.3. It analyzes the production, distribution, and consumption network of the basic products it uses. 5.5.4. Collaboratively develops new ideas based on production, distribution, and consumption.
Entrance	Caution	Perceptual Arousal Pure copper untreated with processed copper, maize flour with corn kernels, unprocessed tea and processed tea are brought into class; Students are asked to examine these products. Questionable Arousal Students are asked what kind of a connection there is between the initial and final versions of these products. Variation A video about the transformation adventures of these products is shown to the students, and it is ensured that the students realize what stages they have passed from the first to the final versions of the products.
Learning Process	Relationship	Target Orientation By explaining the stages through which the basic products used in daily life reach them and how they can develop ideas to produce these products, students are provided to gain awareness about the target causes. Motive Compliance The class is divided into small groups. Colored A4 paper is distributed to each group. Each group is asked to choose a product and to produce an idea that will contribute to the country's economy for the production, distribution, and consumption stages of this product. Proximity-Familiarity Students are asked to give examples about which products are mostly produced in their environment and to share with the class if they have had a previous trip to the production places of these products.
	Trust	Need for Learning Groups are asked to share their ideas with the class, and students are encouraged to develop each other's ideas by receiving comments from other groups regarding the idea produced by each group. Opportunities for Success The papers on which the names of some products and their raw materials are written are pasted on the board in a mixed manner. Students are asked to match these products and raw materials on the board prepared by the teacher. Complementary feedback is given to students who make mistakes or make mistakes. Personal Responsibility The activity in the opportunities for success step is carried out individually, ensuring that each student takes responsibility.

Evaluation	Satisfaction	Natural Results Students are asked how they will use the knowledge they have learned in their lives and its benefits. Positive Results Students who actively participate in the lesson and are successful in the activity are appreciated in a way that encourages other students and a well-done printed sticker is given. Equality It is ensured that all students participate equally in activities aimed at gains.

Appendix 2.

Examples of Ideas Produced by Groups in the Motivation Appropriateness Step



Raw Material-Product Matches Used in the Opportunities for Success Step

ANNUAL	→	PINE
TREE	→	PAPER
CHICKPEAS	→	ROASTED CHICKPEA
GRAPE	→	GRAPE MOLASSES
COTTON	→	THREAD
SESAME	→	Tahini
MILK	→	BUTTER
TOMATOES	→	TOMATO PASTE
OLIVE	→	OLIVE OIL