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Students' social studies-oriented academic risk-taking behaviours and autonomous learning skills

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Abstract

The learning process, defined as behaviour change, does not only involve learning; the individual is also expected to take an active role in this process and an academic risk in uncertain situations. In this study, descriptive survey model was utilised. Participants were secondary school students (11–13 years) from Turkey. 'Social Studies-Oriented Academic Risk Taking Scale', 'Autonomous Learning Scale' and personal information form were used for data collection tools. Students' social studies-oriented academic risk taking levels and autonomous learning levels were determined. The results show a moderate-level correlation between autonomous learning skills and academic risk-taking behaviours. The results also indicate that there is a difference in favour of female students, parental attitudes have no effect on autonomous learning and maternal attitude is effective only in the 'Avoiding Academic Risks' sub dimension. The students who perceive themselves to be successful take more academic risks and have more efficient autonomous learning skills.

Keywords: Academic risk, academic risk-taking behaviour, autonomous learning skills, secondary school students.

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1. Introduction

'Learning without thinking is useless; thinking without learning is dangerous'. With this sentence, Confucius obviously drew attention to the link between thinking and learning. Learning is the change that occurs in an individual's behaviour (Baynur, 1994). In the present century, the individual is expected to think and take responsibility in this behaviour change process. Control and responsibility in the learning process can be expressed as autonomous learning. According to Meyer (2001), autonomous learning is a form of learning, involving a conscious learning effort. According to Benson (2001), autonomous learning takes place when the individual assumes the responsibility of learning. Long (1989), on the other hand, stated that the longer the student maintains the control of his/her learning, the more autonomous learning will occur.

The student needs to learn how to learn. The student who knows how to learn can choose the necessary tools and equipment, can take responsibility, can determine the needs and goals, can edit the working method, can make decisions about his/her learning and can make plans (Aydogdu, 2009). The development of autonomy is a process that requires labour and time, and the creation of such an efficient environment requires strength and risk-taking (Oktar Ergur, 2010).

An autonomous student is expected to show most, if not all, of the following behaviours: identifying learning objectives, developing strategies to achieve these objectives, developing working plans, thinking deeply on their own learning, identifying methods for identifying problems, identifying relevant sources, assessing their own progress and setting their own criteria for learning and evaluating performance (Chan, Spratt & Humphreys, 2002, cited in: Yurdakul, 2016). According to Confessore (1992), 'impulse, resourcefulness, initiative, and persistence' are the basis for autonomous learning. Therefore, students' willingness, urge and persistence to attempt and their attempt to address uncertain situations in the learning environment bring about the concept of academic risk-taking. According to Strum (1971), academic risk-taking behaviour consists of sharing ideas whose accuracy is not certain in a classroom. According to Clifford (1988), academic risk-taking behaviour reflects the student's tendency to prefer difficult questions to easy questions even if there is a chance of failure and how calmly he/she can act against failure. Despite the differences in definitions, academic risk-taking behaviour involves not fearing to make mistakes, asking questions and taking initiative as a result of the willingness to learn. This initiative can vary from course to course and can be influenced by the individual's interest in the course and his/her academic success and previous experiences.

The studies investigating the interest of the students towards the courses place the Social Studies course in the first place. 'Social studies is a primary education course that reflects Social Studies and citizenship, such as history, geography, economics, sociology, anthropology, psychology, philosophy, political science and law to help the individual to realise his/her social existence, integrates learning areas under a unit or theme, examines the interaction of human beings with the social and physical environment in the context of past, present and future and consists of collective education' (Ministry of National Education (MoNE), 2005).

According to the research of Ozturk and Kece (2015), 25% of the students in the research group stated that the Social Studies course is an easy, entertaining and informative course. Moreover, 81% of the students who participated in the study conducted by Akengin, Saglam and Dilek (2002) stated that they liked the Social Studies course. Although Social Studies course is a popular course, it is not seen as an easy course. This may be because the course is perceived as an abstract course and that the proper teaching methods are not used in the teaching of the course (Akengin et al., 2002). It is essential to determine the academic risk taking levels of students in the Social Studies course, which is a popular course among students, according to various variables and to determine the correlation between these behaviours and autonomous learning. Students who can overcome the problems between life and learning are autonomous students (Little, 1995). Learning environments may include

situations that the student may perceive as a problem and may feel worried about. In this environment, individuals can be expected to take academic risks.

According to Gomleksiz and Bozpolat (2012), students should actively participate in the decision-making process for more effective learning. Besides, teaching programmes expect the active participation of the individual in the learning process. Competence, expressed as learning to learn, seems to be related to academic risk and autonomous learning. 'Autonomous learning is the competence of an individual to pursue and insist on learning to organise his/her learning action individually or as a group, including effective time and knowledge management. This competence includes the ability of the individual to be aware of the learning needs and processes by recognising present opportunities and the ability to cope with challenges for effective learning' (MoNE, 2017).

Students taking academic risks do not usually feel emotions such as fear of being negatively evaluated (Cetin, Ilhan & Yilmaz, 2014), learned helplessness (Esen Kiran, 2005; Neihart, 1999) and stress related to academic expectations (Ilhan & Cetin, 2013). Also, other research on academic risk-taking behaviour has investigated the relationship of academic risk-taking behaviour with problem-based learning in science education (Cinar, 2007), project-based learning in Social Studies course (Ciftci, 2006) and studying skills (Ilhan, Cetin, Oner Sunkur & Yilmaz, 2013). In the framework of the reviewed literature, no studies have been reached investigating the correlation between the Social Studies-oriented academic risk-taking behaviours of secondary school students and their autonomous learning skills in the sense that the individual takes control and responsibility for his/her own learning process.

1.1. Purpose of the research

The present study aims to examine secondary school students' Social Studies-oriented academic risk-taking levels and their autonomous learning skills and to determine whether there is a correlation between these two. To this end, answers to the following questions were sought.

1. What are secondary school students' Social Studies-oriented academic risk-taking behaviour levels?
2. Do the secondary school students' Social Studies-oriented academic risk-taking behaviours differ significantly according to gender, grade, perceived achievement levels and attitudes of parents and teachers?
3. What are secondary school students' autonomous learning skills?
4. Do the secondary school students' autonomous learning skills differ significantly according to gender, grade, perceived achievement levels, and attitudes of parents and teachers?
5. Is there a significant correlation between secondary school students' Social Studies-oriented academic risk-taking behaviours and their autonomous learning skills?

2. Method

2.1. Research model

In this study, descriptive survey model was used. Descriptive research aims to investigate the current situation in a subject. Descriptive research provides in-depth information on any subject, and an excellent descriptive study can be the basis of explanatory research with the question of why (De Vaus, 2001).

2.2. Sample

The random sampling method was used in the study. To select a representative sample, the valid and best way is random sampling. If the sampling unit is an element, the process is called element sampling, and if it is a group, then it is called cluster sampling. The sampling unit was determined by the cluster sample (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz & Demirel, 2016). The sample

of this study consists of 388 (190 female, 198 male) students enrolled in the secondary schools in a city of Turkey. The distribution of the students according to their grade is Grade 5 (*N* = 75), Grade 6 (*N* = 100), Grade 7 (*N* = 138) and Grade 8 (*N* = 75).

2.3. Data collection tools

To collect data, Personal Information Form, the 'Autonomous Learning Scale' developed by Macaskill and Taylor (2010), adapted to Turkish by Arslan and Yurdakul (2015), and 'Social Studies-Oriented Academic Risk Taking Scale (SSOARTS)' developed by Gezer, Ilhan and Sahin (2014) were used. The SSOARTS consists of two sub dimensions: 'Taking Academic Risks (TAR) and Avoiding Academic Risks (AAR) '. The Cronbach's alpha value of SSOARTS, consisting of 21 items, was found as 0.78. In this study, on the other hand, Cronbach's alpha value of the scale was calculated as 0.80. The 'TAR' sub dimension consists of 16 items, and the 'AAR' sub dimension consists of five reverse items. The 'TAR ' sub dimension includes items such as 'I like to discuss issues that are difficult to understand in the Social Studies course', and 'It is fun to study the topics of the Social Studies course that require a different way of thinking'. On the other hand, the 'AAR ' sub dimension includes items such as 'When I give a wrong answer to a question in the Social Studies course, I feel discouraged', 'Nothing makes me happy when I fail in the Social Studies course'. Autonomous Learning Scale, consists of 12 items. The Cronbach's alpha value of the scale was 0.80, and it was calculated as 0.84 in this study. The scale consists of two sub dimensions: 'Independent Learning' (the first seven items) and 'Study Skills' (the final five items).

2.4. Data analysis

The data were analysed by Statistical Package for the Social Sciences 22.0 package program. To determine if the data are normally distributed, the Kolmogorov Smirnov test was performed, and it was found that Skewness values of both scales were found to be between +1 and −1 and Kurtosis values were between +2 and −1. These Skewness and Kurtosis values are acceptable as normal distribution according to Huck, 2008, cited in: Secer, 2015. For this reason, independent samples *t*-test and one-way analysis of variance (ANOVA) were performed. Correlation analysis was also used to determine whether there is a correlation between autonomous learning skills and Social Studies-oriented academic risk-taking behaviours.

3. Results

In this section, findings related to secondary school students' Social Studies-oriented academic risk-taking behaviours and their autonomous learning skills are presented, respectively, as headings in accordance with the sub-problems.

3.1. Findings related to the first sub-problem

The analysis result to answer the first sub-problem (What are secondary school students' Social Studies-oriented academic risk-taking behaviour levels?) is given in Table 1.

Table 1. Secondary school students' social studies-oriented academic risk-taking behaviour levels

	N	Mean	SD
Taking Academic Risks	388	61.32	10.12
Avoiding Academic Risk	388	15.70	4.67
Academic Risk (Total)	388	77.10	11.13

The Social Studies-Oriented Academic Risk Taking Scale is a five-point Likert type scale (strongly disagree/strongly agree). The highest score that can be taken from this 21-item scale is 105, and the lowest score is 21. The median of the scale was 62. The average score of secondary school students was calculated as 77.10. According to this score (*M* = 77.10; SD: 11.13), academic risk-taking levels are above the moderate level.

3.2. Findings related to the second sub-problem

The analysis results to answer the second sub-problem (Do the Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to gender, grade, perceived academic achievement and attitudes of parents and teachers?) are as follows.

3.2.1. Social studies-oriented academic risk-taking behaviour—gender

Table 2 shows the independent samples *t*-test results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to gender.

Table 2. *T*-test results of secondary school students' social studies-oriented academic risk taking behaviours according to gender

	Gender	*N*	Mean	SD	df	*t*	*p*
Taking Academic Risks	Female	190	62.85	10.05	386	2.945	0.003*
	Male	198	59.85	10.00			
Avoiding Academic Risk	Female	190	15.73	4.65	386	0.120	0.905
	Male	198	15.67	4.70			
Academic Risk (Total)	Female	190	78.81	11.34	386	2.989	0.003*
	Male	198	75.46	10.69			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by gender revealed a significant difference in terms of female students in the 'Taking Academic Risks' ($t_{(386)} = 2.945$, $p < 0.05$) sub dimension and Total Academic Risk ($t_{(386)} = 2.989$; $p < 0.05$).

3.2.2. Social studies-oriented academic risk-taking behaviour—grade

Table 3 shows the one-way ANOVA results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to grade.

Table 3. One-way ANOVA results of secondary school students' social studies-oriented academic risk taking behaviours according to grade

	Grade	*N*	Mean	SD	df	*F*	*p*	Meaningful difference
Taking Academic Risks	5th grade	75	63.14	10.98	3–384	3.134	0.026*	5–6
	6th grade	100	58.91	10.78				
	7th grade	138	62.22	9.63				
	8th grade	75	61.06	8.69				
	Total	388	61.32	10.12				
Avoiding Academic Risk	5th grade	75	16.51	4.60	3–384	2.212	0.086	
	6th grade	100	14.78	4.40				
	7th grade	138	15.74	4.73				
	8th grade	75	16.05	4.86				
	Total	388	15.70	4.67				
Academic Risk	5th grade	75	80.24	10.67	3–384	5.547	0.001*	5–6

(Total)	6th grade	100	73.69	11.53	6–7
	7th grade	138	77.90	10.96	
	8th grade	75	77.05	10.31	
	Total	388	77.10	11.13	

*Significant at $p < 0.05$ level.

One-way ANOVA performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by grade revealed a significant difference in the 'Taking Academic Risks' ($F_{(3.384)} = 3.134$, $p < 0.05$) sub dimension and Total Academic Risk ($F_{(3.384)} = 5.547$, $p < 0.05$). The results of the Scheffe test performed to determine the significant difference among the grades showed a significant difference in favour of the fifth grade in the 'Taking Academic Risks' sub dimension and the whole scale.

3.2.3. Social Studies-oriented academic risk-taking behaviour—perceived achievement levels

Table 4 shows the independent samples *t*-test results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to perceived achievement levels.

Table 4. *T*-test results of secondary school students' social studies-oriented academic risk taking behaviour according to perceived achievement levels

	Achievement Levels	*N*	Mean	SD	df	*t*	*p*
Taking Academic Risks	High	161	65.60	8.87	386	7.489	0.000*
	Medium	227	58.28	9.87			
Avoiding Academic Risk	High	161	16.51	4.83	386	2.904	0.004*
	Medium	227	15.12	4.48			
Academic Risk (Total)	High	161	82.05	10.51	386	7.940	0.000*
	Medium	227	73.59	10.20			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by perceived achievement levels revealed a significant difference in terms of students have high achievement levels in the 'Taking Academic Risks' ($t_{(386)} = 7.489$, $p < 0.05$) sub dimension, 'Avoiding Academic Risk' sub dimension ($t_{(386)} = 2.904$, $p < 0.05$) and Total Academic Risk ($t_{(386)} = 7.940$, $p < 0.05$).

3.2.4. Social studies-oriented academic risk-taking behaviour—mother attitude

Table 5 shows the independent samples *t*-test results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to mother attitude.

Table 5. *T*-test results of secondary school students' social studies-oriented academic risk taking behaviour according to mother attitude

	Mother Attitude	*N*	Mean	SD	df	*t*	*p*
Taking Academic Risks	Democratic	360	61.40	10.16	386	0.543	0.587
	Authoritarian	28	60.32	9.73			
Avoiding Academic Risk	Democratic	360	15.84	4.63	386	2.053	0.041*
	Authoritarian	28	13.96	4.99			
Academic Risk (Total)	Democratic	360	77.32	11.10	386	1.393	0.164
	Authoritarian	28	74.28	11.28			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by mothers' attitudes revealed

a significant difference in favour of democratic mother attitude in the 'Avoiding Academic Risks' ($t_{(386)}$ = 2.053, p < 0.05) sub dimension.

3.2.5. Social studies-oriented academic risk-taking behaviour—father attitude

Table 6 shows the independent samples *t*-test results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to father attitude.

Table 6. *T*-test results of secondary school students' social studies-oriented academic risk taking behaviour according to father attitude

	Father Attitude	*N*	Mean	SD	df	*t*	*p*
Taking Academic Risks	Democratic	345	61.51	10.21	386	1.026	0.305
	Authoritarian	43	59.82	9.39			
Avoiding Academic Risk	Democratic	345	15.86	4.65	386	1.919	0.056
	Authoritarian	43	14.41	4.72			
Academic Risk (Total)	Democratic	345	77.47	11.19	386	1.855	0.064
	Authoritarian	43	74.14	10.22			

*Significant at p < 0.05 level.

The independent samples *t*-test performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by fathers' attitudes revealed no significant difference between students.

3.2.6. Social studies-oriented academic risk-taking behaviour - social studies teacher attitude

Table 7 shows the independent samples *t*-test results, to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly according to teacher attitude.

Table 7. *T*-test results of secondary school students' social studies-oriented academic risk taking behaviour according to social studies teacher attitude

	Teacher Attitude	*N*	*M*	SD	df	*t*	*p*
Taking Academic Risks	Democratic	355	61.81	9.60	386	2.340	0.025*
	Authoritarian	33	56.07	13.78			
Avoiding Academic Risk	Democratic	355	15.79	4.68	386	1.189	0.235
	Authoritarian	33	14.77	4.56			
Academic Risk (Total)	Democratic	355	77.60	10.94	386	2.926	0.004*
	Authoritarian	33	71.73	11.89			

*Significant at p < 0.05 level.

The independent samples *t*-test performed to determine whether Social Studies-oriented academic risk-taking behaviours of secondary school students differ significantly by the attitudes of Social Studies teachers revealed a significant difference in favour of democratic teacher attitude in the 'Taking Academic Risks' sub dimension ($t_{(386)}$ = 2.340, p < 0.05) and the 'Total Academic Risk' ($t_{(386)}$ = 2.926, p < 0.05).

3.3. Findings related to the third sub-problem

The analysis result to answer the third sub-problem (What are secondary school students' autonomous learning skill levels?) is presented in Table 8.

Table 8. Secondary school students' autonomous learning skill levels

	N	Mean	SD
Independent learning	388	27.95	4.78

Study Skills	388	19.70	3.61
Autonomous Learning (total)	388	47.75	7.65

The Autonomous Learning Scale is a five-point Likert type scale (strongly disagree/strongly agree). The highest score from this 12-item scale is 60, and the lowest score is 12. The median value was determined as 36. The average score of the secondary school students from the scale is 47.75. According to this score (M = 47.75; SD: 7.65), students have a moderate level of autonomous learning skills.

3.4. Findings related to the fourth sub-problem

The analysis results to answer the fourth sub-problem (Do the autonomous learning skills of the secondary school students in the Social Studies course differ significantly according to gender, grade, perceived achievement levels and attitudes of parents and teachers?) are presented below.

3.4.1. Autonomous learning skills—gender

Table 9 shows the independent samples t-test results, to determine whether autonomous learning skills of secondary school students differ significantly according to gender.

Table 9. *T*-test results of secondary school students' autonomous learning skills according to gender

	Gender	*N*	Mean	SD	df	*t*	*p*
Independent learning	Female	190	28.93	4.37	386	4.00	0.000*
	Male	198	27.01	4.98			
Study Skills	Female	190	20.68	3.21	386	5.44	0.000*
	Male	198	18.75	3.72			
Autonomous Learning (total)	Female	190	49.72	6.77	386	5.12	0.000*
	Male	198	45.85	7.98			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether autonomous learning skills of secondary school students differ significantly by gender revealed a significant difference in favour of female students in the 'Independent Learning' ($t_{(386)} = 4.00$, $p < 0.05$) and 'Study Skills' ($t_{(386)} = 5.44$, $p < 0.05$) sub dimensions and in the 'Total Autonomous Learning' ($t_{(386)} = 5.12$, $p < 0.05$).

3.4.2. Autonomous learning skills—grade

Table 10 shows the one-way ANOVA results, to determine whether autonomous learning skills of secondary school students differ significantly according to grade.

Table 10. One-way ANOVA results of secondary school students' autonomous learning skills according to grade

	Grade	*N*	Mean	SD	df	*F*	*p*	Meaningful difference
Independent learning	5th grade	75	29.25	4.15	3–384	6.552	0.00*	5th–6th
	6th grade	100	26.27	5.16				6th–7th
	7th grade	138	28.22	4.75				6th–7th
	8th grade	75	28.39	4.37				
	Total	388	27.95	4.78				
Study Skills	5th grade	75	20.86	3.24	3–384	5.420	0.01*	5th–6th
	6th grade	100	18.69	3.88				
	7th grade	138	19.71	3.55				
	8th grade	75	19.86	3.36				
	Total	388	19.70	3.61				
Autonomous Learning	5th grade	75	50.29	6.48	3–384	7.379	0.00*	5th–6th

(total)	6th grade	100	45.07	8.37	6th–7th
	7th grade	138	48.03	7.57	6th–7th
	8th grade	75	48.26	6.89	
	Total	388	47.75	7.65	

*Significant at $p < 0.05$ level.

One-way ANOVA performed to determine whether autonomous learning skills of secondary school students differ significantly by grade revealed a significant difference in the 'Independent Learning' ($F_{(3.384)} = 6.552$, $p < 0.05$) and 'Study Skills' ($F_{(3.384)} = 5.420$, $p < 0.05$) sub dimensions and in the total scores obtained from the whole scale ($F_{(3.384)} = 7.379$, $p < 0.05$). The results of the Scheffe test performed to determine the significant difference between the grades revealed a significant difference in favour of the fifth graders in the 'Independent Learning' and 'Study Skills' sub dimensions and the whole scale.

3.4.3. Autonomous learning skills—perceived achievement levels

Table 11 shows the independent samples *t*-test results, to determine whether autonomous learning skills of secondary school students differ significantly according to perceived achievement levels.

Table 11. *T*-test results of secondary school students' autonomous learning skills according to perceived achievement levels

	Achievement Levels	*N*	Mean	SD	df	*t*	*p*
Independent learning	High	161	29.84	4.31	386	6.957	0.000*
	Medium	227	26.61	4.65			
Study Skills	High	161	20.96	3.27	386	6.067	0.000*
	Medium	227	18.80	3.57			
Autonomous Learning (total)	High	161	50.86	6.83	386	7.166	0.000*
	Medium	227	45.54	7.44			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether autonomous learning skills of secondary school students differ significantly by the perceived achievement levels revealed a significant difference in terms of the students have high achievement levels in the 'Independent Learning' ($t_{(386)} = 7.489$, $p < 0.05$) and 'Study Skills' ($t_{(386)} = 7.489$, $p < 0.05$) sub dimensions and in the 'Total Autonomous Learning' ($t_{(386)} = 7.489$, $p < 0.05$).

3.4.4. Autonomous learning skills—mother attitude

Table 12 shows the independent samples *t*-test results, to determine whether autonomous learning skills of secondary school students differ significantly according to mother attitude.

Table 12. *T*-test results of secondary school students' autonomous learning skills according to mother attitude

	Mother attitude	*N*	Mean	SD	df	*t*	*p*
Independent learning	Democratic	360	27.98	4.77	386	0.443	0.658
	Authoritarian	28	27.56	5.01			
Study Skills	Democratic	360	19.77	3.53	386	1.426	0.155
	Authoritarian	28	18.76	4.40			
Autonomous Learning (total)	Democratic	360	47.88	7.57	386	1.206	0.228
	Authoritarian	28	47.07	8.53			

The independent samples *t*-test performed to determine whether autonomous learning skills of secondary school students differ significantly by mothers' attitudes revealed no significant difference in the sub dimensions and the whole scale.

3.4.5. Autonomous learning skills—father attitude

Table 13 shows the independent samples *t*-test results, to determine whether autonomous learning skills of secondary school students differ significantly according to father attitude.

Table 13. *T*-test results of secondary school students' autonomous learning skills according to father attitude

	Father Attitude	*N*	Mean	SD	df	*t*	*p*
Independent learning	Democratic	345	28.05	4.77	386	1.225	0.221
	Authoritarian	43	27.11	4.89			
Study Skills	Democratic	345	19.78	3.51	386	1.238	0.217
	Authoritarian	43	19.05	4.31			
Autonomous Learning (total)	Democratic	345	47.93	7.54	386	1.381	0.168
	Authoritarian	43	46.23	8.38			

The independent samples *t*-test performed to determine whether autonomous learning skills of secondary school students differ significantly by fathers' attitudes revealed no significant difference in the sub dimensions and the whole scale.

3.4.6. Autonomous learning skills—social studies teacher attitude

Table 14 shows the independent samples *t*-test results, to determine whether autonomous learning skills of secondary school students differ significantly according to social studies teacher attitude.

Table 14. *T*-test results of secondary school students' autonomous learning skills according to social studies teacher attitude

	Teacher attitude	*N*	Mean	SD	df	*t*	*p*
Independent learning	Democratic	355	28.14	4.60	386	2.587	0.010*
	Authoritarian	33	25.90	6.13			
Study Skills	Democratic	355	19.93	3.38	386	4.292	0.000*
	Authoritarian	33	17.17	4.90			
Autonomous Learning (total)	Democratic	355	48.16	7.26	386	3.573	0.000*
	Authoritarian	33	43.26	10.04			

*Significant at $p < 0.05$ level.

The independent samples *t*-test performed to determine whether autonomous learning skills of secondary school students differ significantly by the attitudes of Social Studies teachers revealed a significant difference in favour of democratic teacher attitude in the 'Independent Learning' sub dimension ($t_{(386)} = 2.587$, $p < 0.05$), 'Study Skills' ($t_{(386)} = 4.292$, $p < 0.05$) sub dimension and the 'Total Autonomous Learning' ($t_{(386)} = 3.573$, $p < 0.05$).

3.5. Findings related to the fifth sub-problem

The analysis result to answer the fifth sub problem (Is there a significant correlation between secondary school students' Social Studies-oriented academic risk-taking behaviours and their autonomous learning skills?) is presented in Table 15.

Table 15. The correlation between autonomous learning skills and Social Studies-oriented academic risk-taking behaviours

		Independent learning	Study skills	Autonomous Learning (total)	Taking Academic Risks	Avoiding academic risk	Academic risk total
Independent learning	*r*	1	0.688**	0.937**	0.699**	0.058	0.659**
	p		0.000	0.000	0.000	0.252	0.000
	n	388	388	388	388	388	388
Study skills	*r*	0.688**	1	0.877**	0.609**	0.028	0.549**
	p	0.000		0.000	0.000	0.584	0.000
	n	388	388	388	388	388	388
Autonomous Learning (total)	*r*	0.937**	0.877**	1	0.697**	0.050	0.656**
	p	0.000	0.000		0.000	0.326	0.000
	n	388	388	388	388	388	388
Taking Academic Risks	*r*	0.699**	0.609**	0.697**	1	0.027	0.895**
	p	0.000	0.000	0.000		0.594	0.000
	n	388	388	388	388	388	388
Avoiding academic risk	*r*	0.058	0.028	0.050	0.027	1	0.442**
	p	0.252	0.584	0.326	0.594		0.000
	n	388	388	388	388	388	388
Academic risk total)	*r*	0.659**	0.549**	0.207**	0.895**	0.442**	1
	p	0.000	0.000	0.000	0.000	0.000	
	n	388	388	797	388	388	388

The Pearson correlation analysis performed to determine whether there is a correlation between the scores of Social Studies-oriented academic risk-taking behaviours and autonomous learning skills revealed a moderate, positive and significant correlation ($r = 0.656$, $p < 0.01$).

4. Discussion, conclusion and recommendations

It was determined that the students' control over their learning process and their ability to take risks in learning situations with uncertainty in this control phase were related to each other. In the present study, autonomous learners obtained higher scores from the sub-scales of 'Study Skills' and 'Independent Learning'. Also, autonomous students engage in academic risk-taking more frequently. Social Studies-oriented risk-taking levels and autonomous learning skills of the students were found to be above the moderate level. The study conducted by Hark Soylemez, Dokumaci Sutcu and Sutcu (2014) on Graduate Students' Perceptions of Autonomous Learning Skills revealed that graduate students also have autonomous learning skills. It can be thought that students develop autonomous learning skills at a younger age. The present study has also found that there is a significant difference in autonomous learning skills and Social Studies-oriented academic risk-taking behaviours in favour of female students. Similarly, Ponton and Hall (2003) reported that female students have higher levels of autonomous learning skills than male students.

According to the research of Imre (2015), female students tend to be more autonomous than male students. The study conducted by Yurdakul (2016) to investigate the relationship between autonomous learning skills and lifelong learning reported a significant difference between autonomous learning skills and gender in favour of female students. There was not a systematic difference in Social Studies-oriented academic risk-taking behaviours and autonomous learning among the grades, whereas it was found that the fifth graders are more likely to take academic risks and have more autonomous learning skills than the sixth, seventh and eighth graders. Yurdakul (2016) reported a significant difference in autonomous learning skills and grade level variable in favour of the lower

grade students. While parental attitudes do not affect autonomous learning skills, the attitudes of Social Studies teachers affect them. A significant difference was found only in the 'AAR' sub dimension of the Social Studies-oriented Academic Risk-Taking Scale in favour of those who thought they had democratic mothers. It was also found that fathers' attitudes did not affect Social Studies-oriented academic risk-taking, whereas democratic attitudes of Social Studies teachers affected both autonomous learning and academic risk-taking. Moreover, it was determined that the students with better grades perceived themselves to successful, had more efficient autonomous learning skills and took more academic risks in their Social Studies course.

The correlation analysis performed to investigate the correlation between autonomous learning and Social Studies-oriented academic risk-taking revealed a correlation between the two scales. The correlation between autonomous learning skills and Social Studies-oriented academic risk-taking was found to be significant in favour of female students, those who had democratic teachers, who perceived themselves to be successful, who had higher grades and the fifth graders. When the effect levels are examined, it is seen that perceived academic achievement and better grades have a wide impact on the academic risk-taking dimension.

Ilhan et al. (2013) reported that academic risk-taking behaviour increased as the study skills increased. The present study is consistent with that of Ilhan et al. (2013) since in the present study, a correlation was found between the 'Study Skills' sub dimension of the 'Autonomous Learning Scale' and academic risk-taking.

Therefore, we recommend that teachers consider this correlation, include activities that will let students take responsibility, create a positive classroom environment that will encourage students to take academic risks and give students heartening feedbacks. Furthermore, since autonomous learners take more academic risks in the learning process, teachers, when designing classroom activities, should bear in mind that an increase in the autonomous learning skills will improve academic risk-taking behaviours and vice-versa. Finally, Social Studies-oriented academic risk-taking behaviours and autonomous learning skills can be discussed in detail through qualitative research techniques such as observation and interview.

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